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Understanding Social Upheavals: Beyond Conspiracy Theories

Sociological explanations frequently serve as a counter point to popular conspiracy theories. Historically sociology evolved as a subject that tried to prove that social reality cannot be reduced to the separate actions of the individuals who make up that society, such individual motivations or what was understood as the standard way persons think and behave in given situations being the dominant analytical frameworks in other social science subjects like economics, psychology, and political science. A key founder of the discipline of sociology, Emile Durkheim tried to identify the social as external to and in some ways imposed from outside upon the individuals who are included in the social reality. In his unique way, he demonstrated the validity of the social by explaining how even a deeply personal and emotional matter such as suicide must be seen as a socially determined phenomenon. Of course, these views have been interrogated by many critics over the years for his single-minded preoccupation with the social by deemphasizing its natural linkages with the psychological and also for his denial of the agency of human beings.

Sri Lanka has always been a hotbed of conspiracy theories. Matters of national importance whether we are talking about collective uprisings against the state such as the JVP uprisings in 1971 and 1987-1989 and the LTTE uprising from 1980s until 2009 or public decisions such as signing of a peace accord between the Government of Sri Lanka and the LTTE in 2002 were explained by certain observers in terms of conspiracy theories of one kind or another. A secretive nature and lack of transparency often added to public confusion about these events. However, nearly always conspiracy theories are ways of explaining away the compounded social and political reality by parties with vested interests in keeping with their own political and ideological moorings rather than satisfactory objective explanations of the complex reality we are dealing with. As a professional social science journal, it is our duty to explain that conspiracy theories in circulation are seriously flawed when it comes to explaining the complex realities fraught with multiple challenges we are dealing with in contemporary Sri Lanka. Conspiracy theories come forward to oversimplify matters, interpret a complex phenomenon in ways that conform with preconceptions and suspicions and deny an evidence-based analysis that is likely to go against popular assumptions and preconceived ideas and the popular need to find a culprit who can be fully blamed for a public disaster that has unfolded. While key decision makers responsible for poor public decisions must be certainly identified and appropriate action taken against them, it should not end up with untenable conspiracy theories as valid explanations for macro social processes with a complex etiology.

Fredric Jameson (1999) considered conspiracy theories as 'the poor person's cognitive mapping in the postmodern age' characterized by insecurities and related paranoia. In other words, conspiracy theories are a questionable way of speculatively making sense of many seemingly unexplainable
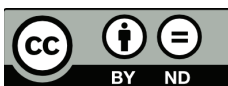
issues in the postmodern world. However, conspiracy theories often involve blaming an identified wrong doer without investigating his or her specific liability within a larger macro environment characterized by resource constraints and diverse challenges. What is equally problematic is the complete ignorance or blatant neglect of relevant social science perspectives in trying to explain complex social realities attributing them to assumed conspiracy plans of one or more actors to account for events that engage the agency of a multitude of related or unrelated actors as well as the unintended consequences of their action that is social or group generated rather than an aggregated outcome of individual decision making. This is why conspiracy theories are always suspect in social sciences and seen as an epistemological frontier responding to emergencies in a populist manner without going through the rigors of systematic social analysis.

Several social upheavals that happened in Sri Lanka during the past five years can be used to illustrate the resort to conspiracy theories in ways that take attention away from larger social context relating to these mobilizations that need further exploration and systematic investigation. We select the Easter attacks by a cluster of Islamic extremists on April 21, 2019 to illustrate the specific role of conspiracy theories. In this upheaval the country was shocked and taken by surprise with different conspiracy theories looming large in the minds of various segments of the population. This event involved a serious breakdown of the law-and-order situation in the country. The conspiracy theories tried to understand the attack as the work of some hidden hands that mobilized and instrumentalized the persons involved for achieving their ulterior motives, left unelaborated in these populist explanations.

From what is reported in the media, the Easter attacks were conducted by an apparently religiously motivated secret group of armed actors who were part of a closely knit network. Several official investigations have already been carried out including an enquiry by a parliamentary select committee, two presidential commissions and a judicial investigation. These investigations tried to understand why the police and the security forces failed to prevent the attack while prior information about a potential attack had been received from intelligence sources outside Sri Lanka, who is accountable for the observed security lapses and how the attackers escaped the attention of the intelligence network in Sri Lanka. These are important and valid questions particularly from the law enforcement and national security angles. What

is missing, however, is an investigation into the social background of the attackers, how and under what circumstances they became radicalized to the point of having a tunnel vision to end their lives and lives of others and what can be done to prevent a recurrence of such violent outbreaks in future.

Apart from a cluster of anti-Islamic conspiracy theories reporting Islamic fundamentalist mobilizations in Sri Lanka for some time, many independent observers were puzzled by an Islamic terror cell targeting their attacks on Christians involved in an important religious congregation on Easter Sunday in April 2019 and some key tourist hotels in Colombo. The deliberate targeting of Christian places of worship was particularly problematic in the light of the absence of any prior history of tension between Islam and Christianity in Sri Lanka. On the other hand, tensions between Buddhists and Muslims had been escalating with effect from 2012 due to the propaganda work of some anti-Islamic Sinhala nationalist outfits that provoked mob violence against Muslim communities and Muslim-owned businesses in areas like Aluthgama, Ampare and Digana (Haniffa, Amarasuriya, Wijenayake, and Gunatilleke 2014). A potential clue to solve the puzzle about the chosen targets of the Easter violence was reportedly provided by the ISIS itself when it made an official declaration through its Amaq news agency on April 23, two days after the Easter attack. It stated that the attackers involved were Islamic state fighters who targeted citizens of coalition states (meaning western tourists staying in the hotels attacked) and the Christians (Amarsingham 2019: 2). This suggested that the Easter attack was connected with an ISIS global campaign targeting suspected agents of westernization in the non-western world rather than any local triggers of conflict in Sri Lanka. The authenticity of this declaration, however, has not been verified or confirmed by any subsequent investigations.

It also raised important questions as to how an Islamist nucleus prepared to die and kill on behalf of the aims of ISIS was formed in Sri Lanka with an overall history of Islamic tolerance and support for peaceful coexistence though increasingly challenged by infiltrations of Islamic fundamentalism. On the other hand, the Catholic establishment in the country predictably disturbed over many church goers who were killed, mimed and who lost their dear family members during the attack wanted to identify the mastermind (*mahamolakaru*) behind the attack presumably considering him to be someone other than those who sacrificed their lives during the attack and

probe him about why the attack was made and why innocent civilians were targeted. While this is certainly a legitimate concern, the conspiracy theories that go with it do not help understand the larger social context that produced the network of attackers and why they turned their violence towards a completely innocent party unconnected with them. The view that the attack was strategically designed by yet another third party for its political advantage has been in circulation since the national political crisis unfolded in 2019. While this cannot be ruled out completely, how far such a master plan can instrumentalize religious sentiments connected with an established religion remains a major challenge to such a claim. These contradictory conspiracy theories leave many questions unanswered not only about the Easter attack itself, but also about the larger social context connected with the upheaval, including the global scenario where ISIS had been cornered by pro-American alignments and the local scenario of one political crisis followed by another.

There are some unresolved social issues related to the formation of an Islamist extremist group bent on violence in Sri Lanka. Why and how a nucleus of Muslims including some members of a very affluent business family in Colombo became so radicalized during a short period of time to be prepared to kill and die collectively for an externally determined cause apparently unconnected with their day-to-day existence in Sri Lanka. Why they targeted innocent civilians who are by no means accountable for the atrocities caused to ISIS is part of a larger puzzle connected with what one analyst referred to as "the ambivalence of the sacred", particularly after 9/11 (Appleby 2020). While religion continues to remain a key driver of global peace, the tendency on the part of certain religiously motivated actors to carry out violent attacks on identified targets is something that requires a systematic social science enquiry outside the purview of individual religious perspectives.

It is also important to note that some of the attackers were well-educated people with established professional careers. For instance, according to media reports there was an aerospace engineer, a lawyer and two leading businesspeople in Colombo among the inner core of attackers who carried out the attack on April 21, 2019 (Srinivasan 2019). Not only do these facts go against the secularization thesis where people are expected to become less religious as they gain education and more engaged in technical and business enterprises. It also problematizes any simplistic assumptions about possible connections between economic disadvantage and radicalism. These concerns highlight the need to go beyond simplistic assumptions and popular analytical framings including conspiracy theories in understanding what factors triggered the Easter mayhem.

How this small group of faith actors became radicalized possibly through their exposure to ISIS online propaganda, powerful command Sahran was supposed to have on colloquial Sri Lankan Tamil and Islamic religious symbols coupled with periodic physical and virtual congregations of the group need to be examined using available empirical evidence also considering potential importance of the wave of anti-Muslim violence escalated since 2012 as a trigger for this mobilization in order to understand the social and ideological parameters that contributed to their progressive radicalization of the nucleus of the attackers (Keethaponcalan 2019, Imitiaz 2019).

Finally, in addition to pinpointing security failures contributing to the Easter attack, understanding the underlying social factors and group dynamics is necessary for preventing a possible future recurrence of Islamic radicalization leading to violence. These are some issues calling for thorough social research on the part of social scientists in and outside Sri Lanka. Conspiracy theories of various kinds merely serve to accuse some potential evil doers without providing any reliable evidence. Social sciences need to bring out the social and ideological factors that account for upheavals like the Easter attack using empirical evidence and sound analytical frameworks to support their explanations. Instead of providing adequate explanations of the subject under consideration, the conspiracy theories merely serve to reinforce prejudices of one kind or another at a time of uncertainty and anxiety. Often such theories add to the existing aura of anxieties and prevailing conflict dynamics. Conspiracy theories are something to be explained in social analysis rather than a satisfactory framework for explaining an organized violent attack that shocked the whole country. In some ways conspiracy theories are an inherent aspect of the crisis environment where affected people as well as the key stakeholders in society are constantly looking for answers that suit their interests and deep seated prejudices. Just like gossip and rumour, conspiracy theories serve to spread fake news and false alarms during civil disturbances in ways that divert public anger towards identified targets and contribute towards reinforcing conflict dynamics. This is why debunking conspiracy theories becomes an important challenge for social sciences at times of social upheavals and mass panic. In the official investigations carried out

so far, this is a dimension relatively unexplored, and much work needs to be done regarding filling in the gaps.

As usual, the current issue of Sri Lanka Journal of Social Sciences brings out an array of review articles and research articles and a book review covering important policy issues and research findings relating to Sri Lanka and the South Asia region at large. These contributions fall under three broad areas, namely South Asian social issues, economic and labour market parameters and education. South Asian social issues covered include male dominance and domestic violence, knowledge, attitudes, and practices relating to COVID-19 pandemic in India and the rise of identity and patronage politics in Nepal. Articles dealing with economic and labour market issues are wide ranging. Social values relating to employment, changing mobile phone use, willingness to pay for admission to a national park are among the specific issues covered under this theme. Further the policy issues related to international labour migration in and out of South Asia are addressed in the book review published in the current issue. Education issues covered include a welcome addition of a research article on early childhood acquisition of mother tongue in Jaffna. There are also two important contributions relating to university education, one relating to strategic planning in the university system in Sri Lanka and the other focusing on job stress among female academics in India.

We do encourage social scientists in and outside Sri Lanka to continue their research and publications on important social, economic, and political challenges currently being encountered with their suggestions about any innovative approaches towards addressing them. This is the only way we can possibly counter superficial populist, but problematic positions encapsulated in conspiracy theories.

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Kalinga Tudor Silva

Job stress amongst female faculty members in higher education: an Indian experience from a feminist perspective

Purnima Venkat¹, Shreemathi S. Mayya¹*, Lena Ashok² and Veena Kamath¹

¹Department of Data Science, Prasanna School of Public Health, Manipal Academy of Higher Education & T A Pai Management Institute, Manipal Academy of Higher Education, Manipal, India.
²Social Work Programme, Prasanna School of Public Health, Manipal Academy of Higher Education, Manipal, India.

Abstract: Women academicians in higher education in India have a more rigorous path to follow than their male counterparts in achieving their due professional status. There are several factors that hinder their progress, including patriarchal concepts in certain role expectations from women; stereotyping of women in certain roles; and non-acceptance of women in certain others. The notions about women that have thus got embedded in the higher education sector in India have a negative impact on their career progress. There is also the need to understand the phenomenon of the glass ceiling that women are faced with in their career promotion efforts in higher education and the inequalities they often encounter under male chauvinism. Against this backdrop, the present paper strives to study the factors that contribute to the job stress and dissatisfaction of women in higher education in India, using the constructs of feminism. The paper concludes that understanding these constructs enables the members of the academia to rationally navigate the experiences of women in higher education and to create supportive policies that ensure a sustainable future for academic women with job security, satisfaction, and dignity.

Keywords: Women, academicians, feminist theory, job stress, higher education.

INTRODUCTION
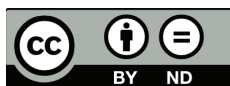
Globally, as development parameters emphasise, women have more access today to education, health, and public services and resources than they used to about two decades ago (Max Roser, 2020). Yet, the ground realities are different; women in many contexts and geographies still struggle to have access to the basics. Feminists look at the inequalities implied by this situation from varied lenses and consider that a detailed study of the nature, causes, and effects of such inequalities is essential to make any progress in their optimal mobilisation for national development. In this scenario, this paper looks at the experiences of women in higher education in India through the lens of feminist literature to understand the stress and dissatisfaction of women in the higher education sector of India.

Feminism evolved into a theory through the work of a group of feminist ideologists, including Mary Wollstonecraft (Wollstonecraft, 2014), Simone de Beauvoir (Beauviour & Parshley, 1949), Judith Butler (Butler, 2002), Vandana Shiva (Mies & Shiva, 1993) and Sharmila Rege (Rege, 1998) that focuses on the personal experiences and lifestyles of women, living in various circumstances. Ideas and concepts such as patriarchy, objectification, violence, discrimination, stereotyping, and inequality are explored in feminist theory concerning the agonies of women. Within this, there is also cognisance given to the intersectional experiences of women of colour, women belonging to vulnerable castes, religious minorities, and the like. In this study, the constructs of inequality, discrimination, patriarchy, and gender-based stereotyping are investigated in interpreting the discriminatory experiences of women in terms of feminism.

Traditionally, women have to deal with the double burden that they are expected to play at home and on the job front. Social expectations as a homemaker and as a caregiver and personal ambitions as a career woman often led to their increased stress, difficulty in prioritisation of their wants and needs, and an overall impact on the

*Corresponding author (shreemathi.mayya@manipal.edu) https://orcid.org/0000-0003-0753-9490

quality of their personal and work life. There are, of course, women who need to become breadwinners in situations when the income of the family solely rests on their shoulders. No matter whether their decision to formally work is by choice or by compulsion, it adds to the roles that women need to play in their day-to-day lives. Its impact remains a hard-hitting realisation about the expectations of women. A telling fact substantiating this truth is the report by the Harvard Business Review found that over 87% of Indian women feel stressed at all points of time (Rashid, 2011). The impact of this scenario, especially with the growing numbers of women who are choosing to be educated and entering the workforce is a major concern. The 2011 report by Nielsen also shows that while women report globally higher feelings of empowerment, the management of their dual roles also leads to increased stress, a feeling of overwork and little time to relax and recoup (Nielsen, 2011).

In the specific context of India, although, over the past two and a half decades, as per the World Bank data presented by Das *et al.*, (2015) on women's participation in the labour force has reduced from 35% to 27% (% of the female population 15+ years of age). Even the meagre percentage of women who manage to enter formal employment, the barriers (seen and unseen) are critical and numerous. There is, of course, a sizeable dichotomy in the Indian scenario when it comes to women's empowerment and involvement in the workforce. While urban India seems to be seeing an increase in the education levels of women, rural India (the majority in the Indian context) sees a large exodus of women and men alike to urban locations for involvement in informal/ unorganised labour at daily wage contracts. Such informal work often sees a lack of basic amenities for women, a lack of safety and equal pay as well as a lack of social security measures.

Certain sectors such as academia and nursing are traditionally considered women's strongholds. Yet within these sectors the glass ceiling is real creating a significant hindrance to women's path to economic independence. The glass ceiling is a phenomenon that prevents minorities from climbing the ladder to senior roles and achieving their potential. Even in these sectors, women are again, typically, relegated to 'caring' job roles and women are often not seen in roles requiring leadership and decision making. A recent study by the University Grants Commission, India, also mentions those phenomena such as 'glass ceiling' and 'fears over promotions' need to be examined critically since they indicate widespread discriminating practices against

women in India's higher academia (University Grants Commission, 2013).

The Indian higher education sector is one of the fastest-growing entities, globally accounting for almost 91.7 billion US$ in the 2018 financial year (India Brand Equity Foundation, 2020). With a fast-growing youth population, the country caters to the higher education needs of almost 37.4 million students. There is a considerable foreign direct investment in the sector in the recent years as well. Over the past few decades, the number of women students enrolling in higher education has also exponentially increased. The All India Survey in Higher Education (AISHE) Report 2015 mentions that there has been a significant increase in the number of female enrolment in higher education in the last decade alone (Ministry of Human Resource Development, 2015). This is to be viewed in light of the earlier statement on the reduction of women's participation in the labour force. Studies, of course, argue that women's labour force participation acts as a U-shaped curve where educated women will eventually enter the workforce with reinforcements in the form of advanced qualifications (Lahoti and Swaminathan, 2016). Yet, if the atmosphere is not suited for them to advance, their struggle continues to be the same.

The higher education sector also employs a large number of individuals who pursue advanced degrees in various subjects. Advanced degrees include doctoral studies and India shows a significant increase in enrolment in doctoral studies over the past few decades. The dichotomy lies in the fact that while India accounts for a high number of women in its higher education student enrolment and women in the lower ranks of the professorship, women are not represented in the leadership ranks of higher education. Recent data from the All India Survey on Higher Education (Ministry of Human Resource Development, 2015) shows that women are severely underrepresented in ranks of academic leadership with women occupying less than 30% of Principal positions, 20% of Director roles and less than 10% of Vice-Chancellor roles in universities across the country. It is also visible that women do not advance past middle-management roles to obtain more senior leadership positions partly because the higher education environment may not be conducive to supporting women in pursuing their leadership aspirations.

While women constitute 44% of the 27.4 million student population of the Indian higher education institutions, they constitute only 1.4% of the body of professors and 3% of the body of vice-chancellors of the

Indian universities (Morley & Crossouard, 2015). With huge demand for experienced and interested candidates for senior managerial roles in academia (Marshall, 2010) and a great need for young talent (Gupta, 2014) women are supposed to deal with job stress and gain leadership roles in the higher education sector as well. There is a case for increasing the number of women in colleges to attract more numbers of women students. India, in recent years, has seen a positive increase in the number of women students enrolling in higher education. The National Institutional Ranking Framework (NIRF) encourages having a representative number of women faculty in each college for its ranking. Colleges that provide better facilities for women, better safety and security, tend to attract more women faculty members and, as a result, larger numbers of women students. Hence retaining women faculty for colleges across the country makes sense from a business perspective (Aithal & Suresh Kumar, 2016). This finding is mirrored in other studies as well and is explicitly stated in a Government of India commentary on the education sector in India (All India Survey on Higher Education, 2016). But with increasing reports of job stress and dissatisfaction in the higher education sector, there is a need to understand the factors contributing to such stress and addressing the issue urgently.

Purpose

The purpose of this review is to use feminist theory to try and better understand the factors contributing to the job stress of the female faculty in Indian higher education sector. The feminist constructs of inequality, discrimination, stereotyping and patriarchy are used for this review. There are studies that look at the factors impacting job stress on faculty members in varied contexts, but a comprehensive review of these factors through the lens of the feminist theory, especially in the higher education sector in India, is missing. Therefore, the purpose of this study is to identify the specific contributors to their stress in light of feminist literature.

METHODOLOGY

The research uses peer-reviewed studies from 2000-2020 that respond to keywords including job stress, gender, women, faculty, patriarchal role, patriarchy, stereotyping, gender inequality, discrimination, feminism, work-life balance, job satisfaction, teaching staff, and higher education institutions gathered from databases including Springer Link, PubMed, Sage Journals, Emerald Publishing, and Scopus. Studies specific to the Indian/ South Asian contexts and specific to the higher education sector, focusing on the job stress faced by faculty members in the higher education sector are included, but with no focus on the stress of administrative staff in the higher education sector. The constructs of patriarchal roles/ norms, stereotyping, gender inequality and discrimination are used for the analysis of this review. From feminist literature, the broader themes, as mentioned, are chosen and specific codes within the same are analysed as represented in Table1.

Studies on job stress faced by the teaching staff in higher education across India

Job stress is a major area of concern and research focus amongst the organised labour force across the globe. The higher education sector is no exception to the effects of job stress on its teaching staff and women, especially, deal with the job stress considering the dual role they play at the work and home front in their lives. Multiple studies look at the impact of job stress on the lives of women in the higher education sector. The literature review is divided into broad themes as given in Table 1. patriarchy, stereotyping, gender inequality and discrimination.

Patriarchy

A unique study was conducted amongst teachers from the universities in the north-eastern states of India with a sample of 508 participants (254 dual-career teacher couples) to understand the relationship between work role stress (amongst other variables) and the job

Table 1: Tabular representation of quality review analysis

	Themes	Codes
Feminist Theory	Patriarchal norms	Role expectations, double burden, caregiving responsibilities
	Stereotyping	Lack of authority, avoidance of conflict and assertive roles
	Gender Inequality	Lack of representation in leadership positions, lack of representation in prominence, imposter syndrome
	Discrimination	Unequal exposure to opportunities, lack of leadership possibilities and promotions

satisfaction of the dual-career teacher couples in India hypothesises that females have a higher amount of stress compared to their male counterparts. This is specific to areas such as work-family conflict, family role stress, and work role stress that indicate the increasing stress of the female teachers concerning the management of their dual responsibilities of work and home. The study further suggests that those experiencing low levels of stress report a higher job satisfaction level (Singh 2014; Singh & Singh, 2012) but the same study finds that women have higher job satisfaction than men, presumably because of the positive impacts of the economic independence due to participating in the formal labour force. This is especially true in a country like India, where having the opportunity to step out of the house, work and earn money increases the sense of self-worth in women and therefore, reflects higher job satisfaction even if it comes at the cost of increased stress due to the management obligations of the dual roles (Singh, Singh & Singh, 2012). In the feminist literature, this phenomenon is widely documented where women seem to express gratitude for having employment and economic independence in a phenomenon called the imposter syndrome. Imposter syndrome is the feeling of not belonging to a particular space and feeling like an outsider. Parkman (2016) in her study talks about how this syndrome is found amongst the women faculty, students and management in the higher education sector and the need for supportive policies to help address the same. Laux (2018) talks about the imposter syndrome and its effect on the career advancement of women in the higher education sector and on promotion processes(Laux, 2018).

One can also presuppose that increased job commitment, even with subtle unequal practices may be higher amongst women affected by the imposter syndrome. Meimanat Tabbodi (2009) collects data from 93 faculty members in the Humanities Departments of Mysore University, India, on studying the impact of leadership on their commitment. Having investigated whether there is a positive relationship between the organisational commitment and the gender of the faculty members, the study shows that women have a higher organisational commitment than their male counterparts in similar circumstances. The study also finds a significant relationship between institutional leadership and the commitment of female faculty members and claims that, with supportive organisational policies, women are more committed to their roles in the workplace than men (Tabbodi, 2009). Whether this is due to having an imposter syndrome or true to all women in general, needs to be further researched.

In order to find the levels of occupational stress and the relationships between such stress and work-life balance amongst the female faculty members in two central universities in the city of Delhi, India, Zaheer et al. (2016), using a self-administered questionnaire to collect data from 90 female faculty members from the two universities and analysing the correlation of the data, find that their occupational stress level included in the study is as moderate as their work-life balance. Another significant finding of the study is that there is a significant negative relationship between work-life balance and occupational/job stress of the women faculty in two central universities in Northern India. The study finds that an increase in occupational stress has a significant positive impact on the work-life imbalance of faculty members. This means that an increase in occupational stress will lead to further work-life imbalance. Hence, such studies can be used for policy-level changes and contribute to the literature on women and their job stress in India (Zaheer et al., 2016).

The role of the institution in supporting the work lives of women also needs to be understood. It is found that a lack of clarity of roles leads to furthering the sense of dissatisfaction amongst women in the higher education sector. In a comparison of the job satisfaction levels of the faculty members in India and those in Saudi Arabia, it is perceived that the faculty members in the Indian context report a moderate amount of occupational role stress. The study aims to compare the organisational role stress and organisational commitment amongst female faculty members across two countries, Saudi Arabia and India. The total sample consists of 245 randomly selected faculty members of which 90 are from Saudi Arabia and 155 were from India. It is noticed that the inability of being able to divide the time between the workplace and home is among the most significant contributors to stress among the faculty members in the Indian scenario. This feeds into the patriarchal role narrative of the Indian woman from a feminist perspective. The lack of clarity in the job role and varied expectations about the job role among varied individuals also causes stress among female faculty members. This is followed by a lack of recognition for roles played and a lack of resources to enable one to play one's role, all contribute to role stress. When compared with the Saudi Arabian scenario, the faculty report that role erosion was a major stressor, meaning that the credit for their work was taken by someone else in the organisation leaving them frustrated. This was followed by a conflict in their specific role within themselves and amongst others in the organisation depicting a lack of clarity in the procedure of role allocation.

It was noticed that the organisational role stress among the Indian faculty members was significantly high compared to the Saudi Arabian faculty members.

The study also tries to look at the differences between the two countries from a gender lens and finds that there is a significant difference when it comes to the Indian women faculty members' perceptions of organisational stress. The study finds that, in the Indian scenario, women faculty members report higher stress due to the lack of resources to complete their roles and responsibilities while those in the Saudi Arabian context show a high organisational commitment; this could be due to the high costs of living in the university. The study concludes in the Indian context women faculty members have a high commitment to the organisation as they are morally obliged to remain committed to their organisation (Qazi & Nazneen, 2016).

Stereotyping

The need to understand stereotyping in the context of higher education institutions has been explored by researchers such as Gupta and Sharma who have looked at the role of women in four reputed science and technology institutes in India. They find that stereotyping and patrifocal approaches give women scientists a disadvantage. This is further aggravated by the fact that women do not have a critical mass in such institutions to make their presence felt (Gupta & Sharma 2002). The impact of gender career patterns on the professions of women in an Indian university has also been explored by Chanana who finds that the limited visibility of women in positions of power and the constructs of passivity amongst women have a negative impact on the appointments and governance of women in higher education (Chanana, 2003).

Morley & Crossouard (2015) find that women in the higher education sector in South Asia are often not identified for leadership in the sector. They try to determine whether women are absent from leadership positions due to discriminatory practices or whether women themselves chose to stay out of such positions. The study finds that the reasons are a complex maze of multiple issues including socio-cultural norms and expectations from women, under-representation at leadership levels, and a lack of training and development of women in higher education. Concerning the socio-cultural expectations, the role attributed to women through patriarchal norms seems to be critical. Women are still identified only within the domestic sphere and are believed to be solely responsible for caregiving duties. Social roles that further stereotype women as not suitable to have authority over men, also partly play in the absence of women in higher education leadership.

The study also finds that women in privileged elite classes report a higher degree of cultural acceptance and family support while those in vulnerable sections of class and caste categories report a lower degree of such advantages. This also brings to light the intersectional conversation in feminist theories (Sabharwal et al., 2019). Patriarchal expectations from women have also influenced their decisions to become leaders in higher education as is found in another study by Morley & Crossouad (2016) They reveal that women do not find leadership a desirable option since it is associated with women leading men and exertion of authority which is seen as unacceptable in the patriarchal setting of the South Asia. The researchers believe that this leads to a series of 'ugly' emotions and a reduction of their well-being as well (Morley & Crossouard, 2016).

Gender inequality

As early as 2002, Gupta & Sharma (2002) researched the issues faced by women scientists in India in career and the challenges faced by them on the ladder. Data was collected using the triangulation method of data collection including questionnaires, interviews, case studies and such alike. Four recognised Indian institutions of national repute were selected and all women faculty members (a total of 96) were included in the study. The women reported three major issues faced by them including a feeling of isolation, male dominance in the workplace and feelings of conflict about being a woman and a scientist. Apart from the institutional issues faced by women in science, women in the study also mentioned the increased stress due to the dual role that they had to play as homemakers and as scientists. 92% of the respondents of the study felt that they had a double burden with 52% of the sample feels stressed out due to the same. 90% of the respondents also believed that marriage affected their careers because of social obligations and also due to the need to move from one location to another as per the patrilocal system that India follows (Gupta & Sharma, 2002). This again is an expression of the patriarchal roles that women are expected to follow in the Indian system and has been explored in various other studies as well (Chanana, 2020). Another study conducted by Rosemary Deem in 2003 amongst higher education faculty in the United Kingdom also finds that women's perceptions of their roles in higher education, their participation in management and their expectations from others are still marked by gender, even in a society that has progressed considering the South Asian context (Deem, 2003). Thus, the management of gendered norms is a reality for women across the globe.

Discrimination

In another study conducted in the state of Haryana in India, researchers set out to find the factors that influence the work-life balance of faculty members in technical

education institutes. The study includes 213 respondents from government and private institutions across the National Capital Region and Haryana. The study had an almost equal distribution of male and female faculty members as respondents, and they were asked questions to determine the factors that influence their work-life balance and job-related stress. The study finds that stress is the highest influencing factor on work-life balance amongst the respondents. This factor is followed by others including challenges in work life, attitude towards the work, and work environment. The respondents specifically mention that balancing between home and work needs causes stress and this affects their overall well-being. The women and men respondents differ in certain specific factors contributing to work-life balance. The women mention excessive household duties, responsibilities of a nuclear family and health-related problems as major contributors to lowered work-life balance. Men, on the other hand, mention a need to increase their income causing stress and that they are satisfied with the amount of time they have for themselves. The study thus concludes that stress is one of the main factors influencing the work-life balance of faculty members and that women and men have varied factors that affect their work-life balance (Rathee & Bhuntel, 2018). As is evident from the two previous studies, the dual roles of home and work responsibilities have an impact on the stress and job satisfaction of women faculty in higher education (Jacobs & Winslow, 2004). Similar findings are seen in studies conducted in other South Asian contexts such as the one conducted with women in the banking sector in Sri Lanka (Kodagoda, 2010). Further, in the context of Sri Lanka, studies have found that there is a positive correlation between the work-life balance of academics and their job performance, emphasizing the need to understand these areas of research (Vithanage *et al.*, 2017). Researchers Fazal *et al. (2019)* in their study based in Pakistan find that women in academia report stress in the management of dual roles of home and work as well as survival in a male-dominated academic scene. Balancing discrimination and inequality seems to be a cross-cutting theme when it comes to women's struggles in higher education (Fazal *et al.*, 2019). Balancing home and work fronts and the need for additional support from families in successfully managing careers have also been explored in the study by Amsaveni & Punitha (2019). This dual role and the need for support from the family are critical for women to survive in the competitive education sector. Similarly, Kumar and Deo also find that women deal with considerably larger amounts of role overload and inter-role distance in higher education than their male counterparts (Kumar & Deo, 2011).

DISCUSSION

This review has looked at the causes of job stress and dissatisfaction amongst women faculty members in Indian higher education sector through the lens of feminist literature. The feminist constructs of discrimination, gender inequality, patriarchy and stereotyping have been considered for this review. The study finds that women speak about all of these constructs through their experiences in the sector. One major construct that has been explored is that of patriarchal norms and expectations by society that hinder women in higher education. This includes the 'double burden' or the 'dual role' played by women in their work and domestic lives. This dual role causes additional stress to women since the management of child-rearing and home management responsibilities, coupled with a competitive and often unsupportive work environment, leave women susceptible to additional stress. Women, specifically in the STEM fields have mentioned that they face male domination in the workplace and experience a sense of isolation. Further, studies have found that women also do not feel a sense of accomplishment in exerting authority over men and becoming leaders in higher education. This is a further confirmation of the patriarchal expectation of women to remain docile and not be authoritative. Women have spoken about a sense of isolation in leadership positions and about the need for social relationships to provide a sense of meaning.

When it comes to gender inequality, women speak about the concept of the 'glass ceiling' which is an unseen barrier that women often have to face in higher education. Another study emphasised the feeling of 'powerlessness' faced by women when there is a lack of recognition is given to them for their work (Singh, 2014). Role conflict and personal inadequacy have also been mentioned by women academicians as conditions leading to increased stress along with the lack of resources to do their job. Studies also suggest that male faculty members have indicated a larger amount of stress when it comes to pay and benefits while women have shown a heavy stress when it comes to the management of their dual roles at the work and the home front. This seems to mirror the social expectations of the male and female faculty members. The male faculty members indicate stress when it comes to provide for the family and playing the role of the breadwinner while the women seem to experience stress if they are unable to perform their expected care roles. This furthers the patriarchal expectations set for men and women and also stereotypes their roles. Thelwall *et al.* (2019) also find that for every 2.8 male first authors in

India, there is only one female first author. While India is the fifth largest research generator in the world, gender inequality is promising in the field and is visible in the number of female first authors (Thelwall *et al.*, 2019).

Several studies have reported that increased family support has a better chance of providing work-life balance as well as better job satisfaction amongst female faculty members (Pattusamy & Jacob, 2017). Thus, family support and job stress seem to be in a cyclic conundrum with poor family support leading to chances of work dissatisfaction and increased job stress leading to reduced work-life balance. Supportive organisational policies and the freedom to determine their work schedules have shown a direct increase in organisational commitment amongst women faculty members (Tabbodi, 2009). Similar findings have been made in studies conducted by researchers in the Sri Lankan context where freedom at the workplace, ability to use their full potential at work, and knowledge of the job are reported to have a significant impact on the satisfaction of employees in Sri Lankan universities (Dias et al., 2018). These seem to indicate that proactive organisational policies, family support, and a reasonable degree of personal independence lead to a reduction in job stress and an increase in job satisfaction.

Another important aspect explored in this review is the phenomenon of imposter syndrome that multiple women in higher education seem to indicate. Though not specifically mentioned, women do not seem willing to negotiate for better salaries, dissatisfied with the basic amenities available to them, and wanting to exert authority within their workplaces. There is a further need to explore this aspect of women's experience in higher education. This review, as per its objective, thus finds that feminist constructs such as adhering to patriarchal expectations in the management of dual roles by women and gender stereotyping in the available roles and leadership causes job stress amongst women in higher education. The review also finds that unequal practices, the presence of the glass ceiling and a lack of support are proven to be major contributors to job stress among women in higher education. The review, thus finds that the constructs of feminist theory still hold relevance to Indian women and that this review can specifically identify the studies that highlight the same.

Conclusion & Implications

The studies included in the review reveal that women face patriarchal norms and expectations in the field of higher education in India today. They are governed by social and self-expectations which are a product of their socialisation since birth. Women often live with imposter

syndrome and find it difficult to assert themselves, even in situations of inequality. Though feminist literature has been used to understand these, there is a need to further understand the specific issues faced by women in sustaining themselves in the higher education sector. From leading a complete academic career to rising within the ranks and reaching higher positions of leadership and authority, women's paths, struggles and successes need to be understood further.

The above review was conducted to understand the factors that contribute to the job stress of women in the higher education sector in India through the lens of feminist theory. The review has looked at the primary studies that have delved into the specific experiences of women in the higher education sector in India. Experiences of female faculty members in the higher education sector have been explored and a specific focus has been laid on the factors that cause job stress and dissatisfaction. From the double burden to the pressure to fulfill social expectations and to the glass ceiling, women have expressed a range of issues that are specific to their journey as female academicians in the higher education sector in India. These issues are congruent with the feminist theory used for the review and the objective of identifying stress stress factors of women in higher education achieved.

This study has aimed to use a literature review as a tool to understand the issues faced by academics and specifically women in the higher education sector. There is also a need to understand the specific strategies used by women in higher education to enable them to lead satisfying careers, reaching senior positions and making their mark felt. The coping mechanisms, support systems and specific strategies used by women in higher education need to be further researched. These research gaps, in terms of specific strategies and solutions that women have adopted to be able to succeed in higher education, will enable practitioners and researchers alike to better the issue of women in the higher education sector.

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REVIEW ARTICLE

Job seeker value proposition conceptualised from the perspective of the job choice theory

Shan Jayasinghe[1*], Theekshana Suraweera[2], Dinesh Samarasinghe[3]

[1]*Department of Industrial Management, Faculty of Science, University of Kelaniya, Sri Lanka / Department of Operations and Logistics, Faculty of Business, NSBM Green University Town, Sri Lanka.*
[2]*Faculty of Business, Sri Lanka Institute of Information Technology, Sri Lanka.*
[3]*Faculty of Business, University of Moratuwa, Sri Lanka.*

Abstract: The job seeker value proposition (JSVP) can be defined as a set of benefits or values a firm promises its job seekers to deliver once they join it, signifying an indicator of its employer brand as well as focusing on job seeker attraction because it carries some information that helps the decision-making process of the prospective employees. In this concern, the job choice theory interprets the actual factors of a job seeker's decision-making process, and therefore, it could be effectively used in conceptualising the JSVP. However, it is claimed that, in most cases, the job choice theory is not considered the basis for developing the construct of the JSVP. Therefore, taking the job choice theory into consideration, this paper aims to develop a framework for conceptualising the JSVP from a new perspective. Thus, through a systematic literature review, eight factors that explain the conceptual domain of the JSVP are discovered and, on the basis of them, eight propositions are made in developing a measurement scale for the JSVP. This study discusses the theoretical and practical implications of the proposed factor-based structure for the JSVP. Subsequently, the limitations in the present research are discussed, and suggestions are made for future research concerning JSVP constructs.

Keywords: Job seeker value proposition, employer brand, job choice theory, job seeker attraction.

INTRODUCTION

It was reported that, by April 2020, the unemployment rate in the United States of America (USA) had risen up to 20% due to the COVID-19 pandemic (Montenovo *et al*., 2020). Similarly, today the unemployment rates have gone up in other parts of the world as well. However, there are certain industries where employers struggle to fill vacancies due to a shortage of talent. For example, in the American job market, there is a severe shortage of talent for cyber security professionals (Rogers & Spring, 2020). The demand for cybersecurity professionals has gone up considerably as companies have shifted from the traditional mode of working in the office to working from home. Prior to the pandemic, there was a prediction that by 2030, there would be a shortage of 4.3 million workers with digital talent and an unrealised business opportunity worth $450 billion in technology, media, and telecommunications (TMT) industries (Binvel *et al*., 2018). Therefore, although unemployment in general, might fluctuate due to the prevailing socio-economic conditions at the time, talent shortage can be a severe challenge for human resource management professionals regardless of the business environment.

In industries with a talent shortage, job seekers with the right competencies enjoy a demanding power because of the abundance of opportunities. Such a job market is called an employee's market (Armstrong & Taylor, 2014). In a situation where job seekers have demanding power, employers are deemed to maintain an information-rich employee value proposition (EVP) that can provide necessary inputs to the decision-making process of job seekers (Armstrong & Taylor, 2014). The EVP would help prospective employees understand fully the scope of the job and the firm, evaluate the job opportunity in their decision-making process before making an application for a job vacancy as well as at the point of accepting the offer (Pounder & Merrill, 2001).

*Corresponding author (shanj@kln.ac.lk https://orcid.org/0000-0001-8149-2999)

Thus, the EVP becomes a primary source of information for a job seeker.

In the past, several researchers tried to characterise EVP as a sub-component of the broader concept of employer brand that establishes the identity of a firm as an employer among job seekers and existing employees (Armstrong & Taylor, 2014; Backhaus & Tikoo, 2004). Furthermore, EVP is the instrument that differentiates a firm from its direct competitors by communicating its central message to persuade the prospective employees to apply for its job vacancies or accept its job offers and the existing employees to stay with the firm (Backhaus & Tikoo, 2004; Banerjee, Saini & Kalyanaram, 2020). However, some scholars (Berthon *et al*., 2005; Gowan, 2004; Sengupta *et al*., 2015) propose that instead of a single EVP, a firm should communicate one value proposition to the prospective employees and another to the existing employees. They argue that the psychology of a job seeker is completely different from that of an existing employee (Degbey *et al.,* 2021; Sengupta *et al*., 2015). This difference occurs due to the fact that the mood of a job seeker in making a job choice decision might be completely different from that of an existing employee in deciding to stay on or to leave the job (Sengupta *et al*., 2015).

In this backdrop, it can be argued that there are two types of value propositions embodied in an employer brand, not just one. One type focuses on the retention of the existing employees; hence, it can be referred to as EVP, and the other aims to attract prospective employees and is termed as a job seeker value proposition (JSVP). Thus, the JSVP is a set of benefits or values a firm promises to deliver once job seekers join the firm (Gowan, 2004). In an employee market, the JSVP is meant to carry certain information that becomes inputs to the decision-making process of prospective employees. Therefore, from a firm's standpoint, it is vital to have a clear understanding of the depth and breadth of the information to be included in a JSVP.

In the proposed factor structures for JSVP (Berthon *et al*., 2005; Gowan, 2004; Sengupta *et al*., 2015), a common weakness is that none of them have comprehensively studied any job choice theory research that suggests that job seekers engage in a goal-directed search process and evaluate each potential job relative to their alternatives. Their choice decisions are shaped by the attributes of various jobs and firms, and the job choice theory details what persuades job seekers to apply for a job and, if they are offered a job, to accept it (Pounder & Merrill, 2001). More importantly, most of the research on the job choice theory empirically tests the psychology of the actual job seekers. Hence, the relevant research outcomes provide evidence-based materials to the firms on the kinds of information the job seekers collect when evaluating a job during their decision-making process. When a firm could develop a JSVP with a proper understanding of the perspectives of the job seeker, its employment scheme would be optimal and unique (Srivastava & Bhatnagar, 2010). Therefore, the theorisation of JSVP without a comprehensive review of research on the job choice theory can be considered a limitation of its existing factor structures. Based on this background, to overcome the limitation of existing factor structures of the JSVP, this study presents a scholarly dialogue that critically examines the following research problem.

According to the job choice theory, what firm and job-related characteristics does a job seeker envision as benefits that would persuade him/her to apply and/or join a firm?

By exploring the research problem, this study proposes a factor structure for the JSVP from the perspective of the job choice theory. Furthermore, while broadening the understanding of the JSVP, this study synthesises two fragmented research areas, employer branding and job choice theory. Several studies have acknowledged the positive effect employer brand equity has on job choice (Banerjee, 2020). However, none of the past studies has gone to the extent of synthesising the two research areas and suggesting a way of utilising the existing research on the job choice theory to enrich research on the employer brand. The JSVP is embodied in the employer brand. Job choice theory has the potential to provide inputs for the creation of the JSVP before embodying it in the employer brand. Therefore, the job choice theory is a concept that can be used to develop a superior employer brand among prospective employees. While presenting the synthesis of the employer brand and the job choice theory which has so far drawn little attention in the previous research, this study makes a proposition for developing a factor structure for the JSVP from the perspective of the job choice theory.

Based on this background, this paper strives to discover a solution for the research problem, discuss implications, show limitations, suggest ideas for future research, and draw a conclusion. Since it was required to identify, appraise, and summarise the results of individual studies to identify the factor structure of JSVP with special emphasis on job seeker psychology, this study adopts a *systematic literature review* as the research methodology. At the end of the literature review, the postulated factor structure of JSVP is presented. The fourth section discusses the theoretical and practical contributions, limitations, and suggestions for future researchers, followed by the conclusion of the study.

LITERATURE REVIEW

The main objective of the literature review is to extract outcome data from the 58 shortlisted articles and summarise the best available evidence to address the review question (Jones & Evans, 2000). During the process, this study mainly focused on extracting and summarising firm and job-related characteristics that impact a job seeker's decision to apply for a job and, if offered, accept a job. According to the job choice theory, those are the two behaviours that a firm expects a job seeker to perform after acquiring firm and job-related information through various channels and evaluating them (Pounder & Merrill, 2001). Based on this background, the rest of the literature review is dedicated to discussing the findings of the systematic review.

Proposed factor structure of JSVP

As an initial finding, this study found that the research on the job choice theory can be grouped into four main categories: research on job attractiveness, firm attractiveness, career choice decision and job pursuit decision to identify factors that drive a job seeker's decision to apply for a job or accept a job or do both together. The reason is that research on job attractiveness, firm attractiveness and career choice decision has predominantly investigated the factors that impact a job seeker's decision to apply for a job, and research on job pursuit decision has investigated the factors that impact a job seeker's decision to accept a job.

After reviewing the four categories of studies, 18 firm and job-related factors were extracted that can impact the job choice decision of a job seeker. A summary of the 18 factors is given in Table 1 which summarises the studies that claim that each factor can impact job choice decisions and the contexts in which each factor has been empirically tested.

The following sections discuss each factor in detail and explain their impact on job seekers' choices.

Autonomy at work

Autonomy at work is the amount of discretion a firm allows its employees to determine schedules and work methods for achieving the required outputs (Williams *et al.*, 2020). A large body of extant literature on job choice theory suggests that this is a factor that contributes to driving firm attractiveness, job attractiveness, job pursuit decision, and career choice of a job seeker (Table 1). This finding suggests that job seekers acquire information related to the amount of autonomy a firm offers when deciding to apply and, if offered, accept a job offer.

Job seekers are aware that autonomy at work can increase job satisfaction and reduce work-related dissatisfaction (Dutta & Punnose, 2010). That is the main reason they seek information about the level of autonomy they are accorded at work. Therefore, when creating recruitment campaigns, firms should develop strategies to disseminate information among job seekers regarding the level of autonomy they offer their employees.

Pay

According to the Towers Perrin model of total rewards, the pay consists of base pay, contingent pay, cash bonuses, long-term incentives, stock ownership plans, and profit-sharing plans (Armstrong *et al.*, 2010) Of the 58 shortlisted research articles, 17 (Table 1) present findings to suggest that pay is a significant factor that affects the job choice decision of a job seeker. Recent literature on job choice decisions argues that pay is no longer the most dominant factor determining a job seeker's job choice decision (Lis, 2018). However, job seekers are not ignoring pay when evaluating a job opportunity and a job offer because they have the perception that pay is the most significant factor that determines their assurance of existence and quality of life (Uggerslev *et al.*, 2012). Therefore, any firm must communicate information related to pay through various channels as part of their recruitment strategies.

Job security

Job security is "a job situation which leads to assurance for continued employment, either within the same company or within the same type of work or profession" (Greenhalgh & Rosenblatt, 1984). Job seekers consider job security as a factor that impacts firm attractiveness, job attractiveness, job pursuit decision, and career choice (Table 1). Therefore, firms should develop strategies to broadcast positive stories regarding job security to the external environment where job seekers receive those stories as signals (Jain & Bhatt, 2015). According to the job choice theory, when signals are positive, the evaluation process of the job seeker will produce a positive result that will ultimately drive the job seeker to apply for the job and, if offered, accept the job (Celani & Singh, 2011; Pounder & Merrill, 2001). Therefore, this study considers job security as a potential indicator of the JSVP.

Table 1: Summary of the systematic literature review

Factor	Authors, year, and the category of each study	Contexts that the factor has been empirically tested
Autonomy at work	Dutta & Punnose (2010), job pursuit decision Phillips, Phillips & Cappel (1994), firm attractiveness Posner (1981), job attractiveness Wong, Wan & Gao (2017), career choice	USA, India and Macau
Pay	Appiah-Padi (2014), job attractiveness Baum & Kabst (2013), job pursuit decision Casper & Buffardi (2004), job attractiveness Cable & Judge (1994), job attractiveness Datta & Punnose (2010), job pursuit decision Feldman & Arnold (1978), job attractiveness Fisher & Yuan (1998), firm attractiveness Laker & Gregory (1989), job pursuit decision Lis (2018), firm attractiveness Mahony, Modello, Hums & Judd (2006), job pursuit decision Newton, Giesen, Freeman, Bishop & Zeitoun (2003), job pursuit decision Pounder & Merrill (2001), job attractiveness Boswell, Roehling, Lepine & Moynihan (2003), firm attractiveness Tong & Tong (2012), career choice decision Tetrick, Weathington, da Silva & Hutcheson (2010), job attractiveness Turban, Eyring and Campion (1993), job pursuit decision Yasmin, Mahmud & Afrin (2016), job attractiveness Williamson, Cope, Thompson & Wuensch (2002), job attractiveness Wong *et al*. (2017), career choice	USA, Germany, Bangladesh, India, Canada, China, and Macau
Job security	Choi (2016), career choice decision Jain and Bhatt (2015), firm attractiveness Phillips *et al*. (1994), firm attractiveness Posner (1981), job attractiveness Roehling & Winters (2000), job attractiveness, Turban *et al*. (1993), job pursuit decision Wong *et al*. (2017), career choice Word & Park (2015), job attractiveness	USA and India
Type of work	Boswell *et al*. (2003), job attractiveness Grund (2013), job pursuit decision Phillip *et al*. (1994), firm attractiveness Posner (1981), job attractiveness Turban *et al*. (1993), job pursuit decision Turban, Forret & Hendrickson (1998), firm attractiveness Wong *et al*. (2017), career choice	USA, Germany, and Macau
Career development opportunities	Agarwala (2008), career choice decision Baum & Kabst (2013), job pursuit decision Laker & Gregory (1989), job pursuit decision Tong & Tong (2012), career choice decision Williamson *et al.* (2002), job attractiveness Wong *et a*l. (2017), career choice Word & Park (2015), job attractiveness	India, USA, Germany, Macau and Malaysia
Benefits	Boswell *et al*. (2003), job attractiveness Choi (2016), career choice decision Laker & Gregory (1989), job pursuit decision Phillips *et al.* (1994), firm attractiveness Tetrick *et al*. (2010), job attractiveness Wong *et al*. (2017), career choice Yasmin *et al*. (2016), job attractiveness	USA, Bangladesh and Macau

Factor	Authors, year, and the category of each study	Contexts that the factor has been Empirically Tested
Learning and development opportunities	Agarwala (2008), career choice decision Baum & Kabst (2013), job pursuit decision Boswell *et al*. (2003), job attractiveness Dutta & Punnose (2010), firm attractiveness Laker & Gregory (1989), job pursuit decision Phillips *et al*. (1994), firm attractiveness Terjesen *et al*. (2007), firm attractiveness Wong *et a*l. (2017), career choice	USA, Germany, India, Macau, and UK
Responsibility at work	Dutta & Punnose (2010), firm attractiveness Pounder & Merrill (2001), job attractiveness Wong *et al*. (2017), career choice	USA, India, and Macau
Working conditions	Baum & Kabst (2013), job pursuit decision Dutta & Punnose (2010), firm attractiveness Fisher & Yuan (1998), firm attractiveness Phillips *et al.* (1994), firm attractiveness Turban *et al.* (1998), firm attractiveness Wong *et al*. (2017), career choice	USA, Germany, China, India, and Macau
Work-life balance	Baum & Kabst (2013), job pursuit decision Boswell *et al.* (2003), job attractiveness Casper & Buffardi (2004), job pursuit decision Jain & Bhatt (2015), firm attractiveness Stone, Johnson, Stone-Romero, and Hartman (2006), firm attractiveness Thompson & Aspinwall (2009), job pursuit decision Wong *et al*. (2017), career choice Word & Park (2015), job attractiveness	USA, Germany, India, and Macau
Company culture	Boswell *et al.* (2003), job attractiveness Judge & Bretz (1992), job attractiveness Tanwar and Kumar (2019), firm attractiveness Wong *et al*. (2017), career choice	USA, India, and Macau
Person-organisation fit	Cable & Judge (1996), firm attractiveness Judge & Bretz (1992), job attractiveness O'reilly, Chatman & Caldwell (1991), job choice decision Resick, Baltes & Shantz (2007), job choice decision Tanwar & Kumar (2019), firm attractiveness Van Hooft, Born, Taris, & Van der Flier (2006) - Job Choice Decision Wang & Chang (2019), job choice decision Wong *et al.* (2017), career choice	USA, Taiwan, UK, India, and Macau
Company reputation	Albinger & Freeman (2000), firm attractiveness Backhaus, Stone & Heiner (2002), firm attractiveness Cable & Turban (2003), job pursuit decision Dutta & Punnose (2010), firm attractiveness Gatewood, Gowan, &Lautenschlager (1993), job attractiveness Highhouse, Lievens & Sinar (2003), firm attractiveness Jain & Bhatt (2015), firm attractiveness Laker & Gregory (1989), job pursuit decision Lis (2018), firm attractiveness Lynne & Therese (2014), firm attractiveness Sohn, Sohn, Klaas-Wissing & Hirsch (2015), firm attractiveness Presley, Presley & Blum (2018), firm attractiveness Stone *et al*. (2006), firm attractiveness Turban & Cable (2003), firm attractiveness Turban Eyring, Campion (1993), job pursuit decision Williamson *et al*. (2002), job attractiveness Wong *et al*. (2017), career choice	USA, Germany, India, Australia, and Macau

Factor	Authors, year, and the category of each study	Contexts that the factor has been empirically tested
Co-workers (competent and sociable)	Posner (1981), job attractiveness Uggerslev, Fassina & Kraichy (2012), firm attractiveness Wong *et al*. (2017), career choice	USA, Canada, and Macau
Geographical location	Boswell *et al*. (2003), job attractiveness Lis (2018), firm attractiveness Mahony *et al*. (2006), job pursuit decision Phillips *et al*. (1994), firm attractiveness Rynes & Lawler (1983), job attractiveness Turban, Campion & Eyring (1995), job pursuit decision Turban Eyring, Campion (1993), job pursuit decision Williamson *et al*. (2002), job attractiveness	USA and Germany
Recruitment activities	Carless & Imber (2007), job attractiveness Madan & Madan (2019), firm attractiveness Rynes, Bretz & Gerhart (1991), job pursuit decision Turban & Dougherty (1992), firm attractiveness Turban (2001), firm attractiveness	USA and India
Diversity management	Lee & Zhang (2021), firm attractiveness Ng & Burke (2005), firm attractiveness Tanwar & Kumar (2019), firm attractiveness	USA, Canada, and India
Person-job fit	Acikgoz (2019), job and firm attractiveness Carless (2005), firm attractiveness and job pursuit decision	Australia

Type of work

According to the extant literature, the type of work determines the extent to which an employee's duties and responsibilities are challenging and interesting to the employee (Boswell *et al*., 2003; Posner, 1981). Therefore, when evaluating a job opportunity, job seekers investigate whether the type of work they must perform is challenging and interesting (Boswell *et al*., 2003; Turban *et al*., 1998). The reason for this is present-day job seekers are aware that, if the work is intrinsically motivating, the chances of them performing better on the job are higher, and as a result, the incentives will follow (Kuvaas *et al*., 2017). Hence, extant research on the job choice theory claims that the type of work is a factor that impacts job attractiveness, firm attractiveness, job pursuit decision and career choice (Table 1). This implies that job seekers collect information related to the type of work before deciding to apply for a job and in the event of accepting it. Therefore, it is claimed that the type of work is also a factor that should be in the factor mix of the JSVP.

Career development opportunities

According to the human capital theory, individuals develop a specific set of constituents of human capital (knowledge, skills, abilities, and other characteristics) with a career aspiration through personal, educational, and professional development strategies (Harris *et al*., 2015).. Since a considerable effort is made to develop the human capital, job seekers who possess the human capital necessary for a particular career evaluate whether the job opportunity that they are about to apply for or accept fits their career aspirations (Harris *et al*., 2015). The extant literature on job choice theory also confirms this by demonstrating that the information related to career development opportunities impacts job attractiveness, firm attractiveness, job pursuit decision, and career choice decision (Table 1).

Firms that offer career development opportunities possess the know-how to guide, support and encourage their employees to fulfil their potential and develop successful careers with the firm aligned with their talents and aspirations (Armstrong & Taylor, 2014). Since seekers are keen to receive information regarding a firm's know-how on guiding, supporting, and encouraging its employees to develop themselves and achieve career aspirations, firms should have a mechanism to communicate this information among prospective employees.

Benefits

According to the Towers Perrin model of total rewards, *benefits* consist of pensions, holidays, health care, other perks, and flexibility (Armstrong *et al.*, 2010). Job seekers collect information related to benefits when evaluating a job opportunity. Similar to pay, benefits also have become a component that determines an assurance of existence and quality of life (Yasmin *et al.*, 2016). The extant literature argues that when a firm offers time-offs (e.g., paid leave) or concessions (e.g., sharing the cost of personal insurance premium) to employees through benefits, it sends a positive signal to prospective employees (Tetrick *et al.*, 2010).

According to the extant literature on job choice theory, those signals can impact job attractiveness, firm attractiveness, job pursuit decision, and career choice (Table 1) of a job seeker. This implies that benefits are a factor job seekers consider when applying for a job or accepting a job offer. Therefore, firms should possess reliable recruitment strategies that could transmit positive signals regarding benefits among job seekers.

Learning and development opportunities

Learning and development (L&D) ensure that a firm has the knowledgeable, skilled, and engaged workforce it needs to perform daily operations and projects effectively and efficiently (Yadapadithaya & Stewart, 2003). It is a responsibility of a firm to train and develop employees. Therefore, prospective employees collect information related to L&D opportunities provided by firms when evaluating job opportunities. It is confirmed by the extant literature on the job choice theory that L&D opportunities are a factor that impacts job attractiveness, firm attractiveness, job pursuit decision, and career choice (Table 1). Job seekers use collected information regarding L&D opportunities in the decision-making process to decide whether to apply for a job vacancy or accept a job offer.

The rationale behind this behaviour is that job seekers expect that the firm they are willing to join would facilitate their desire to continuously develop human capital by offering continuous L&D opportunities (Gelens *et al.*, 2015). Therefore, firms have a responsibility to broadcast positive signals regarding their L&D programs among the prospective employees to make their decision-making process more manageable.

Responsibility at work

Responsibility at work can be defined as the pivotal power one possesses in performing the duties of a job while provoking or preventing subjectively crucial adverse outcomes within an organisation (Rhéaume *et al.*, 1995). The present-day job seekers understand that responsibility at work is a factor that augments their career development and human capital (Yadapadithaya & Stewart 2003). Therefore, they are keen to collect information on aspects such as job rotation, job enlargement, and job enrichment which determine the level of pivotal power one possesses to perform one's job effectively and efficiently (Williams *et al.*, 2020).

Based on this background, the extant literature on the job choice theory also proposes responsibility at work as a factor that impacts job attractiveness, firm attractiveness, and career choice (Table 1). There is hardly any evidence suggesting responsibility at work as a factor that impacts a job seeker's decision to accept a job offer. However, the extant literature on the job choice theory suggests that job seekers use information related to responsibility at work when deciding to apply for a job. Since the number of applications received by a recruitment campaign indicates success or failure, firms should take the necessary actions to disseminate information related to job design practices among job seekers.

Working conditions

According to the extant literature, job control, job complexity/variety, task-related stressors (Grebner *et al.*, 2003), employee health and well-being (Wilson *et al.*, 2004) are the components that define the working conditions of a firm. Job seekers perceive that a firm has a good work climate when the most working conditions are favourable (Baum & Kabst, 2013). For example, Lievens (2007) argues that the firms that promote teamwork are most likely to have favourable working conditions because teamwork reduces task-related stressors created by job complexity/variety and ultimately improves employee health and wellbeing. In addition to teamwork, firms do many other things to offer favourable working conditions to their employees, such as investing in infrastructure improvement projects, offering work-from-home opportunities, *etc*.

The extant literature on the job choice theory also implies that firms should broadcast information about their working conditions because it impacts their firm attractiveness, job pursuit decisions, and career choices (Table 1). In other words, job seekers use information on working conditions when deciding whether to apply for a job vacancy or accept a job offer. Therefore, firms should devise strategies to disseminate among prospective employees positive information regarding the working conditions their current employees are entitled to.

Work-life balance

If an individual maintains a work-life balance, it can be assumed that they are effectively dividing or coordinating matters pertaining to life and work respectively to accomplish a satisfying quality of life and less strain or worry about conflicting job requests (Blyton *et al.*, 2006). It is generally accepted that employees should receive the support of their firms to maintain their work-life balance (Armstrong & Taylor 2014; Schlachter *et al.*, 2015). Therefore, since a majority of job seekers are keen to maintain a work-life balance, they expect to receive more information on how firms ensure the work-life balance of their employees (Proost & Verhaest, 2018). Research on the job choice theory also confirms this behaviour of job seekers by revealing that information on the work-life balance impacts job attractiveness, firm attractiveness, job pursuit decision, and career choice (Table 1). This directly implies that job seekers use information regarding work-life balance when deciding to apply for a job vacancy or to accept a job offer.

Some studies indicate that modern-day firms are reluctant to reveal information related to work-life balance to their prospective employees (Proost & Verhaest, 2018). However, research on the job choice theory highlights the importance of rethinking this strategy and disclosing as much information as possible to job seekers regarding the work-life balance options offered to employees.

Organisational culture

Organisational culture is a set of key values, beliefs and attitudes shared by the employees within a firm (Williams *et al.*, 2020). The extant literature argues that firms with key values, beliefs and attitudes that promote adaptability, employee engagement, a clear vision, and consistency perform better than the rest (Williams *et al.*, 2020). Therefore, job seekers are keen on joining such firms (Armstrong & Taylor, 2014). To be more exact the job seekers are willing to join firms that have a dominant culture driven by two types of firm-level traits, namely, relationship-based traits (that promote open communication, equality, cooperation, and sharing) and responsive traits (that promote awareness of the external environment, competitiveness and realisation of new opportunities) (Jain & D'lima, 2017).

Willing to join a firm with a culture driven by the above traits, job seekers collect information on the organisational culture when evaluating whether to apply for a job vacancy (Table 1). This indicates that firms should possess recruitment strategies that can

potentially communicate vital information regarding the organisational culture among prospective employees.

Company reputation

Company reputation is a set of attributes imputed to a firm, deduced from the firm's previous activities and future prospects compared to close competitors (Weigelt & Camerer, 1988). Suppose a firm's reputation is comparably higher. In that case, it empowers a positive sentiment inside the brains of its clients, employees, prospective employees and all the partners associated with the firm (Chun, 2005). This implies that if a firm's reputation is higher, it can create a positive perception of the firm within the minds of job seekers (Auger *et al.*, 2013). Furthermore, the extant literature on employer branding reveals that company reputation is a factor that directly impacts the success or failure of a recruitment campaign (Auger *et al.*, 2013).

The question regarding this study is, does company reputation impact a job seeker's decision to apply for a job vacancy or accept a job offer? According to the extant research on the job choice theory, it impacts both decisions because company reputation impacts a job seeker's job attractiveness, firm attractiveness, job pursuit decision, and career choice (Table 1) because it is the aspect that provides credibility to other features communicated through the JSVP (Auger *et al.*, 2013). Therefore, it is mandatory for a modern-day firm to communicate information regarding its reputation to its prospective employees through the JSVP.

Corporate social responsibility activities

Corporate social responsibility (CSR) activities consist of the organisational activities intended to benefit society and the environment beyond the organisations' immediate financial interests or legal obligations (Williams *et al.*, 2020). It is a well-known fact that a majority of job seekers are interested in observing the CSR activities conducted by the firms because they are keen to join the firms that are ethical and socially responsible (Auger *et al.*, 2013). The job choice theory also discusses CSR activities as a factor that impacts firm attractiveness and career choice (Table 1). Therefore, it is possible to safely argue that CSR activities are a factor that impacts a job seeker's decision to apply for a job vacancy. However, the extant literature on the job choice theory does not suggest CSR activities as a factor that impacts job seekers' decision to accept or reject a job offer.

Despite the significance of CSR activities, this study does not consider it a factor that should be included in the factor-mix of the JSVP because the extant literature

captures CSR activities as an indicator that defines the multi-dimensional construct of a company's reputation (Auger *et al.*, 2013; Chun, 2005).

Person-organisation fit (P-O Fit)

Person-organisation fit refers to the compatibility between a person and a firm. It emphasises how a person and a firm share similar industrial interests or meet each other's needs (Kristof, 1996). Extant research on the job choice theory reveals that P-O fit impacts job seekers' job attractiveness, firm attractiveness, career choice decision, and job pursuit decision (Table 1). It implies that P-O fit is a factor that job seekers consider when deciding whether to apply for a job or accept a job offer. Therefore, the recruitment strategies of a firm should have provisions to communicate information that will support job seekers to evaluate and decide the extent of the P-O fit between a job seeker and the firm.

Based on this background, from a firm's perspective, they should be crystal clear on what they will share regarding the P-O fit with the prospective employees. Studies such as Lovelace and Rosen (1996), and Schneider, Goldstein, & Smith (1995) could assist firms in identifying the aspects of P-O fit that they should be communicating with job seekers. According to the extant literature, job seekers can capture the aspects of P-O fit by evaluating the information they receive about the company culture and work-life balance. However, that is not sufficient. There are some other aspects, such as goals and objectives, structures, processes, and corporate governance practices, that a job seeker needs to evaluate the P-O fit properly (Schneider *et al.*, 1995). Even though crystallising the components of P-O fit does not belong to the scope of this study, the authors decided to provide a heads-up to the topic because they felt that the concept is complicated compared to all the other concepts being discussed.

Co-workers (competent and sociable)

A competent and sociable co-worker is someone whom an employee works with, especially someone with a similar job or level of responsibility. Co-workers can assist an employee, either directly or indirectly, to enhance their job performance (Bowler & Brass, 2006). Job seekers are aware of this, and as a result, they are keen to join firms with competent co-workers who are dedicated to maintaining a fun-loving and enjoyable working environment. Therefore, job seekers seek information regarding the co-workers when evaluating a job opportunity and deciding whether to apply for a job vacancy or not (Table 1). However, there is not much evidence to support that job seekers collect

the information regarding co-workers when deciding whether to accept a job offer. Based on this background, firms should find innovative ways to share information with prospective employees on how competent and sociable their employees are.

Geographical location

The geographical location of a potential workplace is a factor that job seekers consider when evaluating a job vacancy and deciding whether to apply for or accept a job offer. The extant literature discusses various reasons for this behaviour of job seekers. Their awareness of that the firm is located near to other important firms (Lis, 2018) creates in them a sense of assurance. Also, their awareness that the firm is surrounded by amenities (e.g., cultural and leisure facilities) that will provide them some respite during their leisure time (Lis, 2018). Furthermore, it is argued that family-owned-firms tend to experience higher employment growth rates than non-family-owned ones in rural areas (Backman & Palmberg, 2015). Based on this background, it is possible to argue that firms should develop strategies to disseminate appropriate information on the geographical locations of potential workplaces among job seekers. Hence, this study considers it a factor that should be in the factor mix that conceptualises the JSVP.

Recruitment activities

According to the extant literature, the effectiveness and efficiency of the *recruitment activities* depend on the recruiter's behaviour and timing of communication with prospective employees, and the overall recruitment practices (impressive or unimpressive) (Rynes *et al.*, 1991) which is an important attribute of a recruitment campaign because the job seekers believe that it portrays the post-hire outcomes such as job satisfaction, on-the-job performance, and organisational commitment (Uggerslev *et al.*, 2012).

For example, the extant research provides evidence to support the fact that if the effectiveness and efficiency of the recruitment activities carried out by a firm are high, job seekers perceive that the employment experience with that firm would also be of high quality (Rynes, 1991). Therefore, the job choice theory argues that recruitment activities are a factor that impacts a job seeker's decision to apply for a job or to accept a job offer. In this background, firms must seriously take care of the effectiveness and efficiency of their recruitment activities across the various stages of a recruitment campaign because they are a source of information for job seekers on the firm's operational behaviour.

Diversity management

Diversity management is the process of managing "a variety of demographic, cultural and personal differences among a firm's employees and customers" (Williams *et al.*, 2020, p. 208). Managers should manage two diversity types; surface-level and deep-level diversity when dealing with employees.

The surface-level diversity factors such as race, age and gender can be identified by external observation. The deep-level diversity factors such as skills, abilities, knowledge, and personality types cannot be observed externally. Managers must interact closely with their subordinates for a considerable period of time to identify their deep-level diversity factors. The extant literature on diversity management reveals that firms that manage deep-level diversity factors have a higher possibility of performing better because it creates a high level of social integration (i.e., the psychological attractiveness between employees to work with each other to achieve team, divisional or organisational goals and objectives) (Williams *et al.*, 2020). Furthermore, proper diversity management promotes employee well-being and job satisfaction.

Due to the above aspects, the extant literature on the job choice theory proposes diversity management as a factor that job seekers evaluate when deciding whether to apply for a job. However, there are hardly any studies that suggest diversity management as a factor driving a job seeker's decision to accept or reject a job offer. Nonetheless, firms should have a strategy to disseminate information among prospective employees on managing diversity (especially deep-level diversity). In other words, diversity management should be a component of the JSVP that communicates the set of benefits or values a firm promises to deliver to prospective employees once they join it.

Person-job fit

Person-job fit is defined as "the match between the individual's knowledge, skills, and abilities (KSA) and the demands of the job" (Carless, 2005). It is argued that job seekers assess congruence between the KSA and the job requirements when evaluating a job opportunity (Breaugh & Starke, 2000). The level of congruence is a factor that determines a job seeker's job attractiveness, firm attractiveness and job pursuit decision (Table 1). Therefore, person-job fit can be considered a factor that impacts a job seeker's decision to apply for a job and accept a job offer. Hence, in their assessment process, employers should disseminate practical and accurate job information among prospective employees (Carless, 2005). Furthermore, the information disseminated

in advance should convince prospective employees that congruence exists between the KSA and the job requirements. Hence, the dissemination of information has to be done by incorporating person-job fit related information in the JSVP. Therefore, the person-job fit should be a component of the JSVP.

Total reward strategy

Armstrong Brown Reilly (2010) defines total reward strategy as a model incorporating all types of strategic rewards, including indirect and direct rewards and intrinsic and extrinsic rewards. They argue that it is possible to categorise autonomy at work, job security, pay, type of work, career development opportunities, benefits, learning and development (opportunities), responsibility at work, working conditions, work-life balance and company culture under the umbrella of the concept of total reward. O'Neal (1998) also presents a similar categorisation and lists the factors of total reward components. Furthermore, this categorisation is used in various studies on attraction, retention, motivation, and reward (Colvin & Boswell, 2007; Medcof & Rumpel, 2007).

Based on this background, it is suggested that job seekers envision eight different firm-related and job-related characteristics (i.e., total reward strategy, company reputation, P-O fit, competent and sociable co-workers, geographical location, recruitment activities, diversity management and P-J fit) as benefits and values that would persuade them to apply for and/or join a firm. In other words, from an employer branding perspective, a consumer (i.e., a job seeker) in an employee market might collect information related to 8 firm-related and job-related factors before actioning the purchase decision (i.e., applying for a job or accepting a job offer). Different audiences might have interests in different factor mixes. However, a seller (i.e., a firm) in an employees' market should possess strategies to disseminate information related to each of the eight factors through the employer brand. Then only the firm will be able to cater for all the segments in the job market and gain a competitive advantage. Against this backdrop, this study proposes the following eight propositions that future researchers could exploit in developing a measurement scale for the JSVP from the perspective of the job choice theory.

Proposition 1 – Job seekers envision total reward as a benefit or a value that would persuade them to apply for and/or join a firm.

Proposition 2 – Job seekers envision person-organisation fit as a benefit or a value that would persuade them to apply for and/or join a firm.

Proposition 3 – Job seekers envision company reputation as a benefit or a value that would persuade them to apply for and/or join a firm.

Proposition 4 – Job seekers envision co-workers (competent and sociable) as a benefit or a value that would persuade them to apply for and/or join a firm.

Proposition 5 – Job seekers envision geographical location as a benefit or a value that would persuade them to apply for and/or join a firm.

Proposition 6 – Job seekers envision recruitment activities as a benefit or a value that would persuade them to apply for and/or join a firm.

Proposition 7 – Job seekers envision diversity management as a benefit or a value that would persuade them to apply for and/or join a firm.

Proposition 8 – Job seekers envision person-job fit as a benefit or a value that would persuade them to apply for and/or join a firm.

Furthermore, the findings of this study can be used to synthesise research on the job choice theory and employer branding in a novel way. As discussed earlier, hardly any past study has suggested a method of utilising the existing research on the job choice theory to enrich research on employer branding. According to Backhaus and Tikoo (2004), both the JSVP and the EVP are embodied in the employer brand, and therefore, they should be components of the construct of the employer brand. In research that explores the job choice (i.e., intention to apply and accept an offer) of a job seeker, the JSVP should become dominant (Banerjee *et al*., 2018)

while in that explores employee retention, EVP should become dominant.

So, it is evident that the proposed factor structure of the JSVP has the potential to advance the existing research on employer branding that predominantly focuses on the job choice. However, considerable effort is required to understand the factors that characterise the JSVP in different contexts (countries, industries, professions, etc.) before using it as an indicator of the employer brand because the factors applicable in one context might not be applicable in another context.

RESEARCH METHODOLOGY

Since systematic literature review (SLR) is a method that similar past studies have employed (Macke & Genari, 2019; Sarfraz *et al*., 2018), this study also carried out an SLR to explore the answer to the research problem by identifying, appraising, and summarising the results of the previous studies on the job choice theory. When conducting the SLR, the following steps were carried out based on the recommendation of Jones & Evans (2000).

- Preparing a review question.

- Selecting criteria for inclusion of articles in the review.

- Systematically searching the published and unpublished literature.

- Determining which articles meet the predefined inclusion criteria.

Table 2: Criteria for inclusion

Characteristic	Inclusion Criteria
Publication medium	Peer-reviewed journal, conference, and book chapters
Language	English and Sinhala
Period	From 1978 to 2021 (inclusive)
Research design	Conceptual and empirical
Content	Any study that has used job choice theory to determine the factors that impacts job attractiveness, firm attractiveness, job pursuit decision, and career choice decision
Source	Scopus and Google Scholar databases

Table 3: A summary of the article search process

Step	Inclusion Criteria	Search Criteria	Search Criteria Determined by	Literature Source	Number of Articles Shortlisted
Step 1		Phrases, *job choice*, *job choice decision* and *job choice theory* were searched	Authors	Scopus database	n=5002
Step 2	Articles should be written in English	Articles that had *career choice*, *choice behaviour*, *job search*, *job choice* and *job finding* as keywords were searched	Two experts in management	Scopus database	n=855
Step 3	Journal articles, book chapters and conference papers should be peer-reviewed	The word *recruitment* was searched since this research falls under the broad category of recruitment research	Two experts in management	Scopus database	n=207
Step 4	Only empirical studies on job choice theory were considered	The abstract of each study was reviewed	Authors	Publisher databases	n=64
Step 5		All the studies were thoroughly reviewed. 18 factors were identified	Authors	Publisher databases	n=46
Step 6		Phrases, *job choice*, *job choice decision* and *job choice theory* were searched again with a separate search engine. 12 studies were identified	Authors	Google Scholar	n=58
Step 7		Newly identified studies were systematically reviewed. No new factors were identified. The review process was stopped due to the saturation of factors	Authors	Publisher databases	N=58

- Critically appraising the quality of the research, extracting outcome data from the research report.

- Summarising the best available evidence on the topic of interest.

The research problem was considered as the review question, on the basis of which, article inclusion and search criteria were determined as shown in Table 2 below:

When determining the inclusion criteria, this study decided to search articles written in English and Sinhala languages because the authors are not proficient in any other language like in several other review articles (Jayasinghe *et al*., 2022; Schlachter *et al*., 2018). The authors decided to shortlist only peer-reviewed journal articles, book chapters, and conference papers after observing this as an inclusion criterion in review articles published in top-tier journals (Jayasinghe *et al*., 2022; Lozano-Reina & Sánchez-Marín, 2020; Schlachter *et al*., 2018). Furthermore, the authors, based on the recommendations of Jayasinghe *et al*. (2022) and Lozano-Reina and Sánchez-Marín (2020), decided to consider job choice decision-related articles published between 1978 and 2021 to ensure discussions that use job choice theory to determine factors that impacts job attractiveness, firm attractiveness, job pursuit decision, and career choice decision.

Subsequently, the article search process was carried out as shown in Table 3.

- Step 1 – Scopus, which is considered the search engine capable of producing the most extended list of relevant references (Paul & Criado, 2020), was selected to systematically peruse the relevant literature. Through the understanding gathered from the preliminary literature review, searches were made under the phrases: job choice, job choice decision and job choice theory and for articles only from the three subject areas: business, management and accounting, psychology, and social sciences. Thus 5002 unique search results were obtained in step 1.

- Step 2 – From a massive bulk, the most relevant articles were shortlisted for reference as recommended by Bettany-Saltikov (2012) using the keywords option in the Scopus database. Accordingly, articles that had *career choice*, *choice behaviour*, *job search*, *job choice* and *job finding* were shortlisted, and 855 unique search results were obtained.

- Step 3 –Of the 855 search results, 207 journal papers and book chapters were returned as they did not have any explanation of the term *recruitment* to match the research paradigm.

- Step 4 – After reviewing the abstracts of the shortlisted articles, 133 articles were disregarded because they did not discuss firm or job-related characteristics that a job seeker might envision as benefits that would persuade him/her to apply and/or join a firm. Finally, only 64 articles were retained to review further.

- Step 5 – The 64 shortlisted articles were retrieved from publisher databases, and a detailed screening process was carried out. At the end of the screening process, 18 firm and job-related factors that a job seeker envision as benefits and values that would persuade his/her job choice were retrieved. Accordingly, 18 factors were retrieved from 46 articles, and as 18 articles did not provide any substantial insights related to a firm- or job-related factors that a job seeker envision as benefits and value, they were rejected.

- Step 6 – To ensure that this study captures a substantial collection of the articles on job choice theory, another keyword search (i.e., job choice theory, job choice decision, and job choice) was carried out with the Google Scholar search engine. Each phrase was searched, and results of up to 10 pages were screened. The screening process was carried out by reading the abstracts of each study. At the end of step 6, 12 more studies were considered for further review.

- Step 7 – The 12 shortlisted articles in step 6 were retrieved from publisher databases, and a detailed screening process was carried out. By reviewing ten articles, any new factors apart from the 18 factors identified in step 5. Couldn't found based on this background, article searching process was stopped since the process reached saturation.

A detailed discussion of the findings of the systematic literature review is presented in the following section.

DISCUSSION

This study broadened the view of the JSVP by proposing eight factors capable of conceptualising it from the perspective of the job choice theory. The research findings offer several important implications for both theory and practice. The rest of this section discusses the theoretical and practical implications of the study.

Furthermore, the limitations of the study and suggestions for future research are also discussed.

Theoretical implications

The previous research on the JSVP appears to have ignored certain significant firm and job-related factors that the job seekers envision as benefits that boost their job choice. For example, Berthon, Ewing, & Hah (2005) fail to capture P-O fit, P-J fit, diversity management and competent co-workers as components of the JSVP. Sengupta *et al.* (2015) fail to capture P-O fit, P-J fit, geographical location, competent co-workers, and diversity management as components of the JSVP. By proposing the above eight factors recommended for use while conceptualising the JSVP from the perspective of the job choice theory, this study strives to reinforce the existing understanding of the JSVP. For example, Saini *et al.* (2014) use components proposed by Berthon *et al.* (2005) to measure the JSVP. However, the conceptualisation of Berthon *et al.* (2005) does not cover certain aspects of the JSVP. Therefore, re-doing Saini *et al.* (2014) study together with the factor structure proposed by this study has the potential to generate novel outcomes.

This study further implies the importance of communicating a JSVP effectively and efficiently to target audiences. Gaining an understanding of the components of the JSVP do not guarantee the success of a recruitment campaign unless a firm has a clear strategy to disseminate the required information among the job seekers. It is well-known in the research fraternity on employer branding that prospective employees rarely have access to the perfect information about prospective employers and job vacancies (Wilden *et al.*, 2010). The findings of this study suggest that firms must think beyond the conventional methods of information sharing because disseminating information regarding multiple distinct aspects through one or two conventional channels are not possible. For example, how does a firm disseminate information regarding P-O fit? Some studies have investigated how signalling theory can be used to send perfect signals via an employer brand to prospective employees. However, there is hardly any study that has specifically proposed strategies to disseminate information regarding the P-O fit or any other JSVP indicators. This study highlights the components that should be communicated via employer branding. Future research should suggest information dissemination strategies that would be ideal for each component and how they could be disseminated among the prospective employees as an integrated message that is information-rich and easily understood.

This study also highlights the impact of the EVP on the JSVP. The main objective of the EVP is to retain talented employees by maintaining or improving the positive image of their employer among them (Wilden Gudergan & Lings 2010). The existing employees are a source of information for prospective employees. In other words, from the perspective of a firm, the existing employees are a channel of information dissemination. There is a high chance that a prospective employee might contact an existing employee to cross-check the information gathered through other channels (Cable & Judge, 1996). For example, Cable and Judge (1996) argue that when evaluating the P-O fit and company reputation, college students contact alumni and former interns to corroborate the information they gathered through various signals from the firm and other sources. Therefore, it can be argued that a sustained focus on the EVP and keeping it up to date with the latest information required to maintain the positive image of the firm among the existing employees are as important as designing an informative and well-focused JSVP for a recruitment campaign.

Practical implication

From a practical point of view, the proposed factor structure of the JSVP would be beneficial for recruiters in various industries. Recruiters can develop more focused recruitment campaigns using the proposed factor structure. For example, the benefits and values communicated to a data scientist in the Australian the context might not be suitable to attract a data scientist in the Indian context. Therefore, to get the maximum returns from a recruitment campaign, recruiters can carry out a market research project using the proposed factor structure to understand the psychology of the job seekers in the context where the recruitment campaign will be carried out before its designing phase. That will make future recruitment campaigns more focus-oriented and informative.

Limitations

While some valuable contributions are highlighted in this study, its limitations must be acknowledged. Firstly, despite the logical process adopted to select research papers using keywords, there may be a chance to overlook other relevant keywords. Secondly, it is observed that about 70-65% of the studies included in this literature review have been carried out by collecting data from US-based university student populations. Hence, the practitioners and future researchers are cautioned regarding the generalisation of the propositions.

Suggestions for future research

Firstly, the proposed factor structure could be empirically tested to validate and develop a measurement scale for the JSVP. Future researchers could do that by using the standard approaches presented by Churchill (1979), DeVellis (2021), and MacKenzie *et al.* (2011). This could be done in various contexts (e.g., countries, industries, job types, etc.) because the factors that drive job seekers' job choices in various contexts could be unique to each context and different from each other. Therefore, factors that should be embodied in an employer brand through the JSVP could be context-specific.

When selecting contexts, future researchers could focus on contexts outside the US too because, when observing Table 1, it is evident that the focus of a majority of the research has been on the US. For example, there is hardly any research on the job choice theory that has been carried out in the South Asian (except India and Bangladesh) context. Compared to the amount of research that had been carried out in the US context, even the amount carried out in the Indian and Bangladeshi contexts is not sufficient to comment on the job choice of the job seekers in those markets.

This study formally specified the conceptual domain of the JSVP from the perspective of the job choice theory. According to MacKenzie *et al.* (2011), before validating a scale, the relationship between the factors and the latent variable (i.e., JSVP) should be formally specified. This study has not gone into that. Therefore, future researchers could determine whether the relationships between the factors and the JSVP are reflective and/or formative before moving into the validation phase. Besides, generating items for each factor with the support of the existing scales and expert opinions and testing content validity are two other essential steps future researchers should conduct before moving into the validation phase (MacKenzie *et al.*, 2011). Once a scale is ready, future researchers can use it as an indicator of the employer brand to generate new insights related to a job seeker's job choice in various employees' markets.

Developing a JSVP and embodying it in an employer brand is only the first step in developing a successful employer brand (Backhaus & Tikoo, 2004). The second step is to communicate the JSVP among prospective employees and pursue their job choice. Therefore, the effectiveness of the information dissemination mechanism of each factor plays a vital role in developing a successful employer brand. Hence, future researchers should develop information dissemination strategies for each factor.

CONCLUSION

At present, in employee markets, the competition for talent is fierce. Therefore, modern-day firms need innovative solutions to successfully navigate the war for talent by attracting scarce talent. In the process of attracting new talent, communicating a job seeker's value proposition (JSVP) through an employer brand plays a significant role in determining the success or failure of the attraction process (Armstrong & Taylor, 2014) because job seekers evaluate a job vacancy through the information disseminated through the JSVP. Therefore, from a firm's point of view, a proper understanding of the concept of the JSVP is vital. Prior to this study, research on employer branding has proposed multiple conceptualisations to enhance the understanding of the JSVP. However, those studies are hampered by less attention to the job choice theory. This study identifies it as a gap in knowledge and tries to address it by conducting a systematic literature review of research on the job choice theory.

While addressing the research gap, this study offers a broadened view of the JSVP, founded on the research on the job choice theory, which emphasises the need to focus on eight factors when communicating a set of benefits or values a firm promises to deliver to its prospective employees once they join the firm. While expanding the view of the JSVP by proposing a factor structure that is distinct from the extant literature, this study brings several suggestions that will enrich research on the JSVP and the job choice theory in the future and ensure continuous corporation between the two research areas, employer branding and the job choice theory.

In summary, our conceptualisation helps identify and integrate the salient themes and concepts that assume considerable importance in formulating a JSVP. On the other hand, this study also reveals the important gaps in the understanding of the JSVP (e.g., context-based issue in research on job choice theory and how it impacts the proposed conceptualisation) and the potential future research on those issues. Based on this background, this study is meant to motivate further research on the job choice theory that will assist consulting firms operating in employee markets where the war for talent is extremely fierce to develop highly competitive employer brands.

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REVIEW ARTICLE

Influences on strategic functioning of the public universities of Sri Lanka: challenges and ground realities

Ramakrishnan Vivek[1]* & Yogarajah Nanthagopan[2]

[1]*Assistant Lecturer, Faculty of Business Studies, Sri Lanka Technological Campus, Sri Lanka.*
[2]*Senior Lecturer in Project Management, University of Vavuniya, Sri Lanka.*

Abstract: It is considered that the university system of Sri Lanka is less efficient in providing degree programs to suit contemporary societal, economic, and political needs and fails to face the current dynamic environmental changes precipitated by issues such as the COVID-19 pandemic. Researchers have realised that the recent pandemic highly affects the execution of universities in Sri Lanka. Simultaneously, experts have noted the severe lack of focus on identifying the causes of university administration failures. Amidst these claims, this study, as its primary objective, strives to explore the factors that affect the implementation of the strategic initiatives made by public universities in Sri Lanka, adopting a qualitative approach with a multimethod sequential design under a thematic model developed based on a detailed literature review. Accordingly, the first qualitative phase of the study was conducted using archival sources, and the second phase used in-depth interviews. The purposive sampling method was used to conduct the seven interviews with the Registrars and Strategic Directors of selected universities. As a result, the study explores and confirms sixteen factors that affect the implementation of strategic initiatives by public universities in Sri Lanka. The theoretical contribution expected from this exercise is to explore new factors that affect the strategic functioning of public universities, with the support of the Open System Theory (OST) and Resource-Based Theory (RBT) that have monetary value in institutional analysis mechanisms, and help to streamline the universities' decision-making processes with a focus on enhancing the strategic management practices.

Keywords: Strategic implementation, public sector university, multimethod, education.

INTRODUCTION

Public universities worldwide are expected to develop strategies to perform in rapidly changing environments (George, 2021). Technology runs a new world, creates opportunities for efficiency, growth, and scalability within our businesses, and assists in strategic execution (Mcgee & Sammut-Bonnici, 2015). Thus, the policies enforced and implemented in the face of various environmental challenges lay the foundation for an organisation's growth and development. To innovate, grow, and develop, every organisation requires a well-developed plan focusing on the strategies and its execution. However, globally, two-thirds the contemporary public-sector educational organisations fail to execute their strategic plans due to various factors (Elbanna *et al.,* 2016). As found previously, improper resource allocation, poor communication, and lack of administrative skills are common reasons for failure in executing strategic plans. Studies on the problems faced during the implementation of the strategic plans help understand the issues involved in strategic management.

Based on the understanding that the failure of many significant strategic initiatives taken by public universities are due to the lack of understanding of factors that contribute to failure. Gunawardena (2015) observes that the public sector of Sri Lanka needs to realign the

*Corresponding author (arvivek46@gmail.com https://orcid.org/0000-0001-5691-6825)
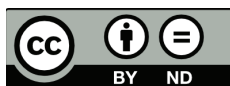
mission and operation of government agencies to meet the dynamic changes in the environment. According to Kasturiarachchi (2017), graduates recruited to lower-level administrative positions in the public sector and the low quality of academic publications by some academics are evidence to the failure of the public university system of Sri Lanka. Compared to the private sector, government institutions have created a monopoly on the job market in Sri Lanka (Amarathunga *et al*., 2022). However, the degree of acceptance and recognition for public university graduates are at a lower level in the private sector due to their inability to meet the expected skills and performance standards (Weligamage & Siengthai, 2003). This shows the importance and necessity of exploring the factors that affect the implementation of strategic initiatives.

Drawbacks of the Sri Lankan university system to provide degree programmes to suit the contemporary societal, economic, and political needs (Rameez, 2020), include outdated-faculty curriculums, the skill disparity identified among students, low-quality classroom management strategies used by teachers (Amarasuriya, 2015), an indefinite number of strikes/union actions by the academic and non-academic staff for extended periods, undue bureaucratic interferences made by the government in the administration of public universities (Weeramunda, 2008; Dushmantha, 2020), the dependence of the universities on the government for solutions for the issues of administration, setting timelines for activities, and clearing unrest in the system (Stork *et al*., 2018). The setbacks experienced by the Rajarata University of Sri Lanka to fulfil of quality requirements is one such evidence. Moreover, the most tragic element in the job market is the unavailability of suitable jobs for fresh graduates (Ariyawansa & Perera, 2005; Jayasingha, 2020). Overall, these problems create a bad image of public universities as an entity wasting government funds and losing opportunity costs. It is clear that to overcome these problems, proper strategies are required in the university system (Weligamage & Siengthai, 2003). Therefore, the main aim of this research is to explore the factors that affect strategy implementation in public universities in Sri Lanka.

Although there are many studies conducted to identify the factors affecting the strategy implementation in various public sector institutions in different countries (Rajasekar, 2014; Gachua & Orwa, 2015; Waithaka & Waiganjo, 2017; Bett, 2018), in the Sri Lankan context, there is a significant gap in the research concerned with identifying the factors that affect the strategy implementation in the public universities. Hence, this research may be advantageous in identifying the gap

through the theories brought from strategic perspectives on the failures and successes of the internal and external factors in accomplishing their strategic goals and expected performance indicators. The most important output of a university is the graduate, and the government expects the universities to produce high-quality graduates to develop the country and uplift the living status of citizens. Thus, it is critical to achieve the desired output equally from all public universities in Sri Lanka (Nickel, 2011; Weerasooriya *et al.,* 2014). Therefore, exploring the factors that affect strategy implementations in Sri Lankan public universities is necessary. Thus, the main question to deal with in this study is: "What are the factors that affect strategy implementation in the public universities in Sri Lanka?"

LITERATURE REVIEW

Strategy and strategy management

A strategy is a planned course of action designed to achieve long-term objectives. Strategy management means planning and marshalling resources for their most efficient and effective use in a changing environment (Johnson *et al.,* 2008). The strategy of a business enterprise consists of what management decides about the future direction and scope of the business in terms of planning, monitoring, analysing and assessing all that contribute to achieving the organisational goals and objectives (Mcgee & Sammut-Bonnici, 2015). It can be perceived through two approaches: the prescriptive approach, which reflects how strategies should be formulated, and the descriptive approach, which refers to how strategies should be put into practice (Mcgee & Sammut-Bonnici, 2015). Its implementation is studied under the strategic management or collective management approach of formulating, implementing, and evaluating cross-functional decisions that empower an organisation to accomplish its objectives (Fang & Chen, 2016). It systematically analyses the factors associated with the external and internal environments and attains an appropriate match between an organisation's environment and its strategy, structure, and processes (Charles *et al.,* 2015) to cope with it. Consequently, it helps achieve a better arrangement of corporate policies and strategic priorities in the three major steps: strategic planning, implementation, and evaluation.

Strategic planning concerns formulating strategies that give a holistic view of the organisation by adopting long-term vision goal analysis, and subjectively evaluating values, goals, and priorities (Bogers *et al.*, 2019). Further, it is a process in which organisational leaders determine their vision and identify their goals and objectives in a

sequence in which the organisation is enabled to realise the stated vision. Strategic intent involves determining the organisation's vision, mission, and objectives, and strategy formulation includes an environmental and organisational appraisal. Moreover, strategy implementation means converting a chosen strategy into a reality to accomplish the strategic goals and objectives in a series of activities and choices made in developing, utilising, and integrating the organisational structure, the management systems, and the cultural norms, focused on earning a competitive advantage (Mišanková & Kočišová, 2014). It consists of five steps: activating the strategy; designing the structure, processing and systematising the behavioural implementation, launching the functional implementation, and operationalising the strategy.

Strategy implementation also brings a change to the organisation by inculcating perseverance in the stakeholders as an essential in gathering all necessary resources, skills, and competencies relevant to execute decisions (Johnson *et al.,* 2011). The process followed is composed of operationalisation, institutionalisation, monitoring, and controlling (Vlcek *et al.,* 1997). Operationalisation emphasises to the responsible parties the nature of the organisational structure, which could either facilitate or hinder successful strategy implementation (Mintzberg & Waters, 1985). Through institutionalisation, strategy implementation aligns with the influential elements such as day-to-day operations, leadership, and the organisational culture (Ansoff *et al.,* 1990). Finally, mentoring and controlling are the processes that assure the realisation of the expected results while reviewing the gaps and changes in the environment (Yabs, 2007). Thus, strategy implementation includes an expansive scope of endeavours that energetically focus on changing vital goals (Lee & Miller, 1996). According to Noble (1999), strategy implementation is characterised by communication, adoption, interpretation, and depiction of strategic plans, and according to Wheelen & Hunger (2012), it comprises turning the ideas, plans, decisions, policies, objectives, and other features of the selected strategies into action.

In the strategic implementation process, the first step is to align the best formulated strategy with the organisational initiatives, while conducting the relevant activities (Mišanková & Kočišová, 2014). The second step is to streamline the budgets along with the relevant departments to utilise them wisely in implementing a chosen strategy. Synchronising the organisational structure to the strategy is the third step, where the organisation's structure will contribute towards the successful implementation of the strategy. Building awareness among the stakeholders and the workers

engaged in the implementation of the strategy is the fourth step. Finally, keep continuous monitoring of the implementation process until the final objectives are achieved. (Mišanková & Kočišová, 2014; Mcgee & Sammut-Bonnici, 2015).

The strategy evaluation process comprises three steps: evaluating, monitoring, and reviewing (Freeman, 2022). Strategy evaluation involves assessing the process followed and the successful implementation of the formulated strategies. Here it is required to realise the expected goals of the organisation with the fullest contribution of the management and employees (Freeman, 2022). It is also compulsory to determine the effectiveness of their activities and investigate whether the expected output is achieved.

Theoretical underpinnings in strategic management

The strategic perspectives successfully practised in the private sector improve their performance and ensure competitive advantage in the market (Kotler *et al.,* 2016). These perspectives may support public and non-profit organisations to sustain themselves and perform well for an extended period since they operate in similar competitive and complex circumstances in the current scenario (Rosenberg & Ferlie, 2016).

Over the past three decades, there has been a tremendous increase in the thinking about strategic management (Gibbons *et al.,* 2015). The evolution of strategic perspectives is drawn mainly from Penrose (1999), Ansoff (1965), Porter (1979), Shapiro (1989), Rosenberg & Ferlie (2016). Among them, two underpinning theories make it possible to study the factors affecting strategic implementation: the Open System Theory (OST) and the Resource-Based Theory (RBT).

The OST refers to creating an environment that deliberately impacts organisations (Balogun & Johnson, 2004).The OST explains that the survival of organisations depends on their relationship with the external environment (Kurendi, 2013). The OST is a recent development from the system-based management theory designed to create healthy, innovative, resilient communities and organisations in today's changing and unpredictable environments. Organisations are perceived as open systems where many actors exist, have a mutual relationship, and interact with each other (Freeman, 2022). Looking at the levels of organisational processes, mainly focusing on the input and the output processes, it is observed that the external environment influences its performance by providing resources and

absorbing the company's outputs (Waithaka & Waiganjo, 2017). In strategic management, the formulation and implementation of strategies are shaped significantly by the changes in the environment so that strategies can be achieved successfully.

The unique resources conducive to achieving superior performance and competitive advantage in an organisation include human resources, physical assets, unique processes, procedures, technology, intellectual resources, and finance (Johnson *et al*., 2011). The resource-based theory considers the firm a cognitive system with distinctive and context-dependent skills central to the strategic purposes. These skills are dependent upon hierarchical capabilities or routines which contribute to the management of the corporate core business processes that help create value. Competencies often allow specific expertise to be developed, so firms should adhere to short- to medium-term strategies that cannot be modified frequently (Andersén, 2010). The concept of RBT is that successful firms draw on their future productivity characteristics; they are often unique and different which also may be tangible and intangible. The competitive edge is the collection of knowledge, abilities, resources, and commercial properties that a business holds or the intelligent use of physical and intellectual capital as part of a company's core competence (Andersén, 2010).

Factors in strategic implementation in public sector universities

As strategic management has been identified as a crucial part of successful organisations, public sector universities have started paying attention to the applications of strategic management (Mišanková & Kočišová, 2014), considering that strategic implementation is a vital part of strategic management (Weerakkody *et al.,* 2009; Menike, 2016). In this context, the following factors have been identified by scholars as those that affect strategy implementation in public universities.

In Sri Lanka, politicisation in public universities is significantly high, with increased political stress. According to Samaranayake (2015), the education system in Sri Lankan universities encourages political activities. The situation becomes evident in the findings made by Weeramunda (2008) that politicisation and youth unrest greatly influence the political activities of university students and that affects functions.

It is also observed that in Sri Lanka, trade unions have a significant influence over university activities. A trade union is an association of employees whose intention is to achieve a common goal relating to working conditions

and to represent employees' interests to their employers (Gunawardana & Biyanwila, 2008).The activities of the trade union can have favourable or unfavourable influences on the organisations' performances (Anjani *et al*., 2021). In the Sri Lankan context, particularly in the public sector, trade unions are powerful and influence strategy implementation in the respective institutions (Amarasena, 2017). Every institution's human resource capacity is the most important factor influencing its strategic execution. That is why effective strategic initiatives are expected to lay the foundation for properly trained staff to execute the plan. Thus, appropriate training options should sharpen the employees' skills or provide new skills to work more effectively in an organisation (Joyce, 2004; Jiang & Carpenter, 2013).

It is also realised that the availability of funds, resources, and different physical conditions limit the strategic implementation capacities of organisations. The general experience is that in public universities, computers, education facilities, and the novelty of technology are poor (Chandasiri, 2020). Weak environment for teaching, lack of teaching aids, and lack of learning facilities cause the low quality of education in public universities (Weerasooriya, 2013). It is understood that language and communication should flow effectively in every university. Effective, transparent, honest communication is not the only factor determining an organisation's quality, but it is an essential factor possessed by the organisation. Lack of communication weakens the effectiveness of strategic implementation (Höglund & Svärdsten, 2015). Proficiency in the English language is poor in the students and academics in the Sri Lankan university system (Ariyawansa & Perera, 2005; Niresh & Arulvel, 2016). Most of the previous studies reveal that poor English communication is a serious obstacle that prevents students from getting the best out of their university education (Perera, 2013). Therefore, it is considered that language and communication play a crucial role in strategic implementation.

Operational efficiency is the ability of an organisation to reduce wastes of time and effort while still producing a high-quality service. Financially, operational efficiency can be defined as the ratio between the input required to keep the organisation moving and the output it provides (Jeong, 2001). That universities should produce graduates with high-quality competencies is hotly debated by scholars today. Many graduates are unemployed in Sri Lanka; on the other hand, employed graduates have mismatched skills. Additionally, the employability of Sri Lankan public university graduates in the private sector is low compared to those from

private and foreign universities (Ariyawansa & Perera, 2005; Jayasinghe, 2021; Vivek & Nanthagopan, 2020). Therefore, it is confirmed that public universities in Sri Lanka fail to produce competent graduates within the allocated resources. Based on the above literature, in the Sri Lankan context, seven initial vital factors have been identified that affect strategy implementation in public universities: organisational culture, politicisation, trade union activities, human resource capacity, fund and resource availability, communication and language, and operational efficiency. These seven factors are applied to the initial thematic model of this study.

RESEARCH METHODOLOGY

The present study thus selected a multimethod approach with a qualitative study adopting an interpretative paradigm, deemed appropriate as the study is meant to conduct an in-depth analysis of interviews with a group of strategic practitioners on their experiences achieved during the strategy implementation. Furthermore, since this study seeks to convey the participants' experiences in their own words, its structure is based on a narrative form. Thus, it tends to be exploratory and sees how the universities view the numerous aspects of their environments. To present an idea about the research format, Figure 1 illustrates the multimethod research approach.

The purposive sampling method was used in the archival data review and the in-depth interview phases. As per the availability of the respondents, the researcher selected
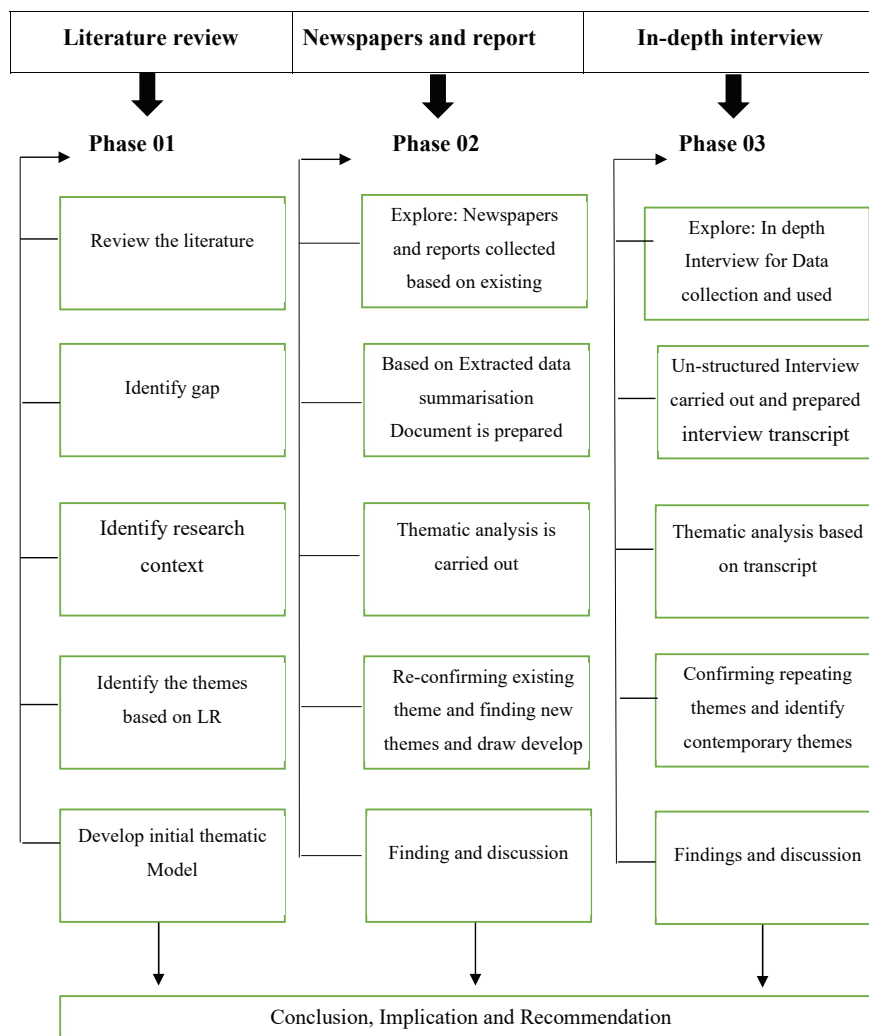
Figure 1: Multimethod study research process
Source: Author created

Table 1: Details of archival sources

Archival Sources	Number of samples	Authored by
Daily Mirror		University academics, government
Daily fit		ministers, administrative staff
Journals	30	
Lank first		
University Grants Commission, Sri Lanka (UGC website)		

Source: Researcher's data (2020)

Table 2: Participants

University	Participant role
University of Jaffna	Registrar
Rajarata University of Sri Lanka	Strategic Director
University of Colombo	Strategic Director
Eastern University	Registrar
Uva Wellassa University	Strategic Director
Open University	Strategic Director
University of Peradeniya	Registrar

Source: Researcher (2020)

seven participants from the top-level positions in the university system, as shown in Table 2.

The researcher made a thematic analysis of the data in an independent qualitative and descriptive approach because the thematic analysis is mainly effective for identifying, analysing, and reporting patterns (themes) within the data (Braun & Clarke, 2006).

FINDINGS

Qualitative study 1: a review of news sources and reports

The findings of the qualitative study are based on the initial data obtained to discuss the broader topic of strategic planning and implementation through the published archival sources. Table 3 shows the data sources of the study.

Table 4 shows the seven factors identified from the Sri Lankan archival sources, confirming that they have already been identified from the literature that affects the strategic implementations of the public universities in Sri Lanka. These seven factors are common to all public universities for configuring the strategic implementation system.

Table 5 shows the five new factors identified from the Sri Lankan archival sources that affect strategy implementation in Sri Lankan universities.

Twelve factors were identified in the qualitative study; of them, seven factors were reconfirmed with the factors found based on the initial thematic model; and five new factors were identified based on the news sources and reports. Finally, the initial thematic model is expanded based on the multimethod sequential qualitative study.

Qualitative study 2: in-depth interviews

Phase two is the project's qualitative phase and aims to explore the factors of strategy implementation in the public sector universities in Sri Lanka. This phase explores the relevant factors in depth through unstructured interviews. The data were collected from seven Sri Lankan public sector university staff interviews, as identified in Table 2. Twelve identified factors are confirmed, and four new ones are identified, as shown in Table 6.

Expanded thematic model

Combining the themes identified through the literature review (academic sources), the archival review (news

Table 3: Data sources

Author and Publisher	Year	Title
Sunil, W. A. World socialist web News	2019	Sri Lankan university unions threaten indefinite national strike over wages and benefits
Gunatilaka, H	2019	Ragging; its evolution and effects: a literature review with a special reference to Sri Lanka
Amarasuriya, H. Colombo Telegraph	2015	Current issues in university education
Priyadarshani, H.& Jesuiya, D.	2021	Teacher's perception of online teaching method during covid-19: Concerning school-level teachers at the faculty of education, the Open University of Sri Lanka
Weearsooriya R.	2013	Major problems and issues in the Sri Lankan university system
Arulvel K.	2016	A conceptual review on the strategic planning for universities in Sri Lanka

Table 4: Reconfirmed factors from the literature review in news sources and reports

No	Reconfirmed factor	Number of sources
1	Organisational Culture	5
2	Politicisation	7
3	Trade union activities	3
4	HR capacity	8
5	Fund and resource availability	4
6	Communication and language	2
7	Operational efficiency	2

Source: Researcher (2020)

Table 5: New factors identified from news sources and reports

No	New factor	Number of Sources
8	Strategic planning process	16
9	Student violence and ragging	4
10	Quality assurance	14
11	Stakeholder engagement	5
12	Digital infrastructure	6

Table 6: New themes based on interviews

New theme	Frequency
Project management applications	22
Media	10
Risk factors	8
Supportive management	10

Source: Researcher (2020)

Figure 2: Expanded thematic model

sources and reports), and the interviews (university staff), the thematic model is expanded, as shown in Figure 2.

DISCUSSION

Organisational Culture

The findings revealed that within the present organisational culture, many public universities do not directly support the successful execution of strategies (Perera, 2013). They perceive that the existing culture of the universities can be highlighted as a factor that impacts the effectiveness of their strategic implementations (Senaratne & Sivasegaram, 2012), while the organisational culture remains one of the predominant factors in strategic execution.

"Social harmony is important in the university level. It will reduce cultural issues in the university. Somehow, yes, we have been doing time to time. However, unbiased sound practices are required to work together" (Respondent 01, Organisational Culture).

The above response reveals that universities require significant cultural and psychological changes to make them succeed in their strategic execution. The employees are compelled to dedicate themselves to implementing strategic decisions. The university staff has highly adapted to the existing university culture, and the newcomers may automatically get used to it over time. Therefore, there is an excellent necessity for promoting a performance-based culture that the decision-making bodies could recognise for strategic implementations.

Organisational culture is characterised as underlying beliefs, assumptions, values, and ways of interaction that contribute to an organisation's specific social and psychological climate. While treating universities as organisations, there should be a serious procedure in managing them with an understanding of what universities should follow in terms of organisational culture in their context. The cultural stereotypes that bring into the universities by students of varied home environments pose barriers to strategic implementation. The students maintain a specific substitute culture with a registration-wise defined seniority order as one of the critical factors of its sustainability. Various rivalries and

protests occur due to the subculture behaviour within the university system. Despite the facilities and procedures provided within the university system, students are not willing to accept them and adapt to their ethos. The so-called student subculture has been created under the influence of various political parties, which needs to be evaluated along with culture, as culturally biased issues and arguments broadly impact strategic implementations within public universities. Fundamentally, cultural mismatches cause misunderstandings and hinder teamwork Implementing actions to mitigate ethnicity-based prejudices support controlling the negative impacts of the student subculture-created issues.

Politicisation

The political background of the students is another critical factor that needs to be addressed when taking action to enhance the quality of strategic implementation in public sector universities (Samaranayake, 2015). In the university system, internal and external politics plays a significant role in strategic execution.

> "When it comes to other factors, external politics play a major role in decision-making and execution" (Respondent 01, Politicisation).

Most of the respondents agree that politics play a significant role in the execution of strategies within universities but are not willing to explain. Political factors mainly affect the university system in decision-making and cadre recruitment. Violations such as unruly behaviour within the university premises always pave the way to less productivity, where the root cause is the political background of the students, which also provokes them to have aggressive confrontations rather than reaching an amicable solution.

Student politics in has been started in the early days of the university system. Although the students' unions were initially directly focused on protecting student rights, the present goals of such unions and students must be evaluated from a different angle to understand whether they genuinely address student rights. The findings indicate that the external political forces which manipulate student unions directly impact the process of implementing the strategic decisions of the universities. The students are often used for narrow political agendas by various political parties, which should be primarily identified by the responsible university authorities to prevent becoming victimised by various outsiders.

Trade union activities

Union strikes disrupt the smooth functioning of the public university system of Sri Lanka (Wijewantha, 2011) leading to the smooth of universities for short to long periods and decreasing their productivity (Sunil, 2019).

> "Degree programs are getting delayed due to strikes, and it is highly affecting university system" (Respondent 05, Trade Union).

The academic calendars and the timelines set for the degree programmes change due to trade union actions in the form of strikes led by the academic or non-academic staff. Such incidents directly cause poor efficiency within the overall procedure of the university system.

The contribution of trade unions is essential for the successful strategic implementation process within public universities. Academic and non-academic staff unions play a critical role within the university system and always show highly sensitive responses to new developments. The findings do not condemn the unions' operations within the university system but help streamline their growth and effectively improve strategic implementation within the existing system. The unions have contributed to staff well-being, and the presence of a strong union continues to support the staff within the working environment. Therefore, the findings suggest that their contribution should not be biased toward political agendas or parochial developments within the university systems.

Human resource capacity

Human resource management is needed to engage the skilled workforce efficiently and adequately. In the context of the public universities of Sri Lanka, the HR capacity is declining in different functions, such as training, recruitment process, and addressing employee shortages (Niresh & Arulvel, 2016). Training is the key requirement in an organisation's effort to improve its workforce's knowledge, skills, abilities, and attitudes.

> "Training should be given regularly for the academic and non-academic staff. Then only they motivate to work. It can increase the performance and sound execution" (Respondent 07, Human Resource Capacity).

In terms of training, the universities have to focus on modern technological applications, skill development

strategies, and performance-based training that are highly required in the academic and administrative aspects of the university system. In addition, the training should focus on enhancing the working attitudes of the staff with the expectation of a cultural change within the system.

The public universities in Sri Lanka are deemed failing in human resource planning:

"In most instances, most departments request for recruitment without a dire need, whereas another department is in real need" (Respondent 03, Human Resource Capacity).

Accordingly, HR departments within universities should pay more attention to recruitment policies to avoid strategy implementation issues. The importance of having proper recruitment processes is identified in this study. The HR capacity is directly impacted by the effectiveness of employee performance.

Fund and resource availability

It is universally understood that in the context of universities, fund allocation and resource availability determine the success of strategy implementation ventures (Weerasooriya, 2013). However, it is noticed that even the best strategies could fail in Sri Lankan public sector universities due to the lack of financial strength (Weerakoon, 2020), while the public sector universities face significant problems in generating funds.

"We have two types of finances. One is treasury allocation, and the other is generated funds. Treasury allocation is minimal. Some departments have been struggling due to this, and it plays a major role in execution" (Respondent 01, Funding Resources).

"When it comes to treasury funds, it is inadequate. Inadequate! If we move to plan! strategic planning! For example, we need to purchase certain goods, which are budgeted under treasury allocation. We are going to make a plan for the next year too. Every plan we carry out will be based on allocation. Hence, fund allocation is a critical factor affecting our actions" (Respondent 02, Funding Resources).

"We have building complexes in various locations, but I think these building spaces are not utilised for student purposes. The lecture hall could be shared within faculties, but they are not shared. In some faculties, even though ample spaces are

available, lectures are being cancelled due to unavailability of lecture halls in other facilities" (Respondent 04, Funding Resources).

"The main issue is inability release of funds on time. For instance, in the case of a project, the budget of the project is forwarded to the Cabinet of Ministers for approved. However, the funds have not been received in the specific time frame. Therefore, it affects our operations" (Respondent 06, Funding Resources).

The above responses reveal that inadequate funding and poor resource allocation create critical issues within the existing university system of Sri Lanka. The success and the continuation of their strategic implementation depend on the fund allocations they enjoy regularly. The effectiveness of the final output of public universities is directly challenged by the ineffectiveness of their strategic implementations, which are directly proportionate with the financial and other inputs. Overall, the real reason behind this is insufficient fund allocation.

Language and communication

The previous data sources mentioned in the literature review and the news sources contacted during the study confirm that language and communication significantly affect strategic implementation within Sri Lankan universities (Ariyawansa & Perera, 2005). Therefore, it is perceived that effective communication is a primary requirement for successful implementation (Peng, 2001).

"There is no proper support in schools for English language skills. How a child is expected to speak when most teachers cannot communicate in English properly? After completing their school education, they directly come to a university with a lack of language skills. Some students come to the university without having any basic knowledge of the English language, but the university gets the blame. Language skills play a major role in completing degree programmes" (Respondent 01, Language and Communication).

Neither the public university system, which provides higher education, nor the public school system in Sri Lanka, which provides primary and secondary education, focuses adequately on linguistic and communication skills in English; hence, the pressures from the secondary education system continuously affect the university system. Most often, language barriers badly affect the academic calendar of the universities by disrupting their timelines for the completion of their academic programs.

"Speaking in different dialects is difficult for me to understand, so I have to approach others for help. Therefore, communication becomes one of the main barrier for proper implementation of strategies" (Respondent 06, Language and Communication).

In the context of Sri Lanka, people communicate in different dialects, significantly affecting the working style and communication among the populace. Some universities face language barriers in this concern while working with different ethnic groups. Communication barriers that exist within public universities highly impact strategic implementation. To solve the problems arising from this situation, Language Skill Development Centres are established within the public universities across Sri Lanka to cater for the student and staff needs for English language competency. Additionally, as a preliminary course, the English language is taught to all undergraduates during the first year. The findings of this study further imply the need to evaluate these programmes' effectiveness.

Operational efficiency

The inefficiency of the existing operational mechanism is directly indicated as the barrier to implementing strategic decisions within the public university system of Sri Lanka (Ariyawansa & Perera, 2005).

"Graduate output does not match the job market expectation. Specialised degree courses do not match the actual requirement of the market. Therefore, we need to think about output efficiency. There are no chances for him or her to apply his/her knowledge in practice. As a year passes, he or she is unaware of the real subject matter. This is a critical situation when they are appointed to work under someone unqualified employees. Hence, high-level focus on producing efficient graduates to our county is essential" (Respondent 02, Operational Efficiency).

The ultimate aim of universities is to produce efficient graduates for society, but unfortunately, the graduate who passes out from a public university does not match the societal requirements of today. The issue of matching the existing job market requirement and the available degree programmes has not been adequately resolved. Students still face the issue of finding a job after completion of their higher education. They do not have the prerequisites to apply confidently for a preferred job. Based on the findings, one could conclude that operational inefficiency within the university system affects strategic execution within the university system.

Strategic planning process

The findings from various news sources and interviews reconfirm that the strategic planning process is a key theme that affects strategic implementation within the public universities of Sri Lanka. A well-communicated strategic plan gives access to productivity, culture, empowerment, and overall effectiveness. Conversely, when the strategic planning processes are unrealistic, it causes failures in the strategic execution within organisations (Dibrell *et al.*, 2014).

"I realise, in few universities and in my university, the strategic planning is done just to prepare the document, but we must do proper analysis on how to improve our strengths and weakness; how do we co-relate with mission and vision." But we do not do it hundred percent" (Respondent 01, Strategic Planning Process).

In the context of the universities, there is a lack of understanding about the strategic planning process and its intention.

"A strategic plan is only mandatory but not acting with proper commitment. To be frank. it is going only on face value and not an actual involvement. We do strategic planning for the sake of doing it and not for actual purposes. Here, most of them are unaware of the importance of the strategic plan; that's our major weakness" (Respondent 02, Strategic Planning Process)

It is clearly stated in the above response that the majority of the university staff has not clearly understood the purpose of strategic planning. In the context of the public universities of Sri Lanka, their strategic plans exist only in documents, and actual requirements are not appropriately updated.

"The top management, the council, and Vice-chancellor—are interested in the strategic implementation, but the planning process does not go well. As a result, a strategic plan is often not carried out successfully, as it is very tough and not realistic in a practical sense. Therefore, a strategic plan is not implemented in several areas but just kept in as an enveloped document as an image-building exercise" (Respondent 03, Strategic Planning Process).

Accordingly, the success of strategic implementations is highly dependent on how well they are planned, and it is surmised that the present failures in the strategic implementations can be reduced through a proper

strategic planning process. Therefore, it is necessary to enhance the staff with proper planning skills and motivate them to be dedicated to improving the planning process while implementing the strategies within the public university system.

Student violence and ragging

Student violence and ragging are significantly detrimental to the development of the state universities of Sri Lanka. Together they create a factor that adversely affects strategic implementation within the public universities of Sri Lanka (Gunatilaka, 2019).

> "When it comes to main factors, as I understand, I will say the misbehaviour of students during the ragging season play major challenge in execution" (Respondent 01, Ragging).

The previous studies based on various news sources and interviews confirm that ragging is a critical factor that affects strategic execution within the public university system of Sri Lanka.

The findings further reveal that most of the incidents of violence are precipitated by the students even provided with the facilities and technological solutions for their use within the university system. Therefore, although many actions are currently being taken to prevent violence, ensure the protection and continuity of the programmes and enhance their strengths further, new strategies are essential.

Quality assurance

It is confirmed that quality assurance is highly required in the public university system to prevent it from being outdated.

> "We have good internal quality assurances. Every aspect, such as teaching, feedback, learning, and examination, is going smoothly. Quality assurance can measure where we stand and what kind of corrective action we can take to improve further" (Respondent 07, Quality Assurance).
> "The curriculum needs to be revised according to the market needs. The curriculum has not revised. They are making minor adjustments. No major curriculum changes have been taken, which is also one major commitment of our staff" (Respondent 04, Quality Assurance).

The responses suggest that in terms of quality assurance, the universities are expected to revise their curricula as often as required to meet the current demands. Quality assurance does not materialise unless corrective actions are taken whenever necessary.

From the above responses, it is discerned that quality assurance involves the systematic review of educational programmes and the processes followed to maintain and improve the quality and efficiency. While the designs of the quality assurance mechanisms (tools, processes, actors) vary across national contexts, their common objective is to improve the teaching and learning processes to support the best outcomes for the learners. Various news sources reveal that both positive and negative signs emerge in the quality assurance mechanisms followed within the public universities of Sri Lanka.

Stakeholder engagement

The various types of individuals who benefit from the public university system of Sri Lanka are the stakeholders who play a significant role in its strategy implementation exercises

> "We should ask for contribution from outside, though it is not done from within. We are a little poor in interaction with the external bodies, but we keep focusing on it. Only if we interact with the stakeholders we understand sound requirements from the external environment" (Respondent 03, Stake Holder).

> "Each faculty has the freedom to prepare a sound strategic plan; inviting outsiders for discussions; however, comparatively, stakeholder involvement is low. However, we look forward to creating a good network with the outside world while making this strategic plan" (Respondent 07, Stake Holder).

For better implementation of strategic decisions, according to the above responses, it is essential to have a better contribution from the stakeholders. Their proactive behaviour and support directly bring a positive impact on the desired systemic improvements. Furthermore, adequate mobilisation of the stakeholders will support creating a more favourable environment for the strategic implementation processes to actualise within the universities. However, the findings reveal that many universities have not yet designed and implemented a practical methodology for increasing the stakeholder engagement.

Digital infrastructure

Digital infrastructure is developed in terms of enhancing the usage of technology to support efficiency (Kila, 2015) directly. It comprises the physical resources necessary to use data, computerised devices, methods, systems, and processes within the organisation. Today, digital infrastructure has become indispensable for society's functioning and for ensuring its members' quality of life (Fox, 2020; Suraweera, 2020). The challenges posed during the COVID-19 pandemic provided an opportunity to perceive where Sri Lankan public universities stand in the context of digital infrastructure.

> "Oh my god! Covid-19 came up with challenges but also gave opportunities. We have shifted from onsite lectures to online lectures. The issues with online lectures; some students will have technical challenges in terms of connectivity issues due to distance, purchasing compatible hardware devices, and paying subscriptions payments due to financial constraints... Thus, it becomes a serious concern" (Respondent 01, Digital Infrastructure).

Some operational issues were identified from the responses below:

> "Library e-sources available, but awareness is low, and not every student get access to it, especially in [three named] universities of Sri Lanka" (Respondent 02, Digital Infrastructure)

> "More than 60% of the students have no access to modern technologies" (Respondent 02, Digital Infrastructure)

Although documentation and data management are crucial within the university system, many universities still employ only manual work systems.

> "We have to change the performance appraisal system and document system. If it is digitalised, then it will be good. We should not be carrying any files" (Respondent 05, Digital Infrastructure).

Therefore, it is perceived that poor digital infrastructure facilities have slowed the strategy implementation process within the universities. Further, the respondents believe that this issue may emerge due to the lack of funding and allocating the available finances to various projects without a prioritisation mechanism within the university system to develop a hierarchy of needs in the event of purchasing goods and services.

Therefore, it is concluded that the establishment of a proper management information system within each university is essential for conducting a smooth strategic implementation process.

Project management applications

Organisations continuously face different challenges in the business world. Project management applications are essential in financial management, quality management, procurement, human resources, risk management, research, development, *etc.* They support completing tasks within the specified parameters of scope, time, budget, and quality and enhance the performance of an organisation (Kostalova & Tetrevova, 2018).

> "Project management applications pave the way for efficient and effective function of universities when implemented systematically. There should be project management tools and techniques in the strategic plans of the university" (Respondent 02, Project Management)

> "Project management skills and knowledge can ensure smooth operation and make university betterment. However, individuals connected with a strategic plan with implementation need project management application skills and knowledge" (Respondent 03, Project Management).

> "As far as my concerns are concerned," I was recruited to the post of Head of Project Management. With my experience and knowledge of project management supporting implementation, I had to study what project management is. How to finish it within the time frame, critical path analysis" (Respondent 06, Project Management).

> "One is identity, and people are committed to tasks. So they will most certainly perform, and we should accelerate, process, while agile project management application is required" (Respondent 07, Project Management).

The kind of awareness among university project managers about the conceptual understanding achieved, the preliminaries required, the acculturation issues invited, and the benefits enjoyed regarding project management can be traced from the above responses. Accordingly, an agile project management framework uses an empirical process that allows teams to respond

rapidly, efficiently, and effectively to change (Sliger, 2011).

Media

In a study aimed at assessing the effects of planned media interventions, including social media, on the business sector decision-making process, Bou-Karroum *et al.* (2017) point out that integrative systematic review media interventions can potentially play a significant role in influencing organisation policies and practices. In the present study, three respondents talk about the role of media in public university strategic implementation.

"In my view, public opinion about our universities is good, but the media conveys wrong messages about universities, which create bad impressions. For example, if you talk to someone outside the university, he will say good about the university and that may not as bad as people see it. Therefore, media intervention influences people's perception towards university" (Respondent 03, Media).

"It is good to organise the meetings with the press to avoid fake news. We have to speak about some matters with the press, and we can improve from it. Sometimes we may have faults, but we should approach with the media and not alone" (Respondent 03, Media)

It is realised from the above statements that the media could be lenient with universities when addressing issues related to those universities, as they are meant to produce sound graduates for society. However, media falsification can affect the strategic implementation.

"I do not like to comment 100% on media about this, but I can suggest to media that if they want to get any information from the university itself, it is available with the Registrar, where information should be verified and published. Information can be published ethically using media ethics and consulting the top authority, the Vice-chancellor, or the Registrar. So that we can keep a good image of the university. Media has great influence in the university system" (Respondent 07, Media)

"Yes, the media should concentrate on confirming the messages from the university officers. In line with this, at least the university should conduct the press meeting of what is happening inside the university" (Respondent 07, Media).

These responses confirm that media remains the main factor of strategic implementation within the public sector universities of Sri Lanka.

Risk factors

The uncontrollable risk factors are those that the organisation does not have any control over and that could affect operations: namely, political, economic, climate change and weather conditions, natural disasters, and human-made disasters and activities. Four respondents spoke about the uncertainty and uncontrollable situations that affect the strategic implementation projects within public universities.

"Covid-19 came up with challenges but also gave opportunities" (Respondent 01, Risk Factor).

"University education is delayed due to natural disasters, which play a major role in university execution" (Respondent 05, Risk Factor).

"External factors that affects actions in a university are out of our control; for example, a construction is being affected by heavy rain and landslide" (Respondent 06, Risk factor).

"There are different factors affecting execution. One is the schedule, time frame, and other factors in areas out of control, for example, Covid-19, tsunami, strikes, and several factors may be an influence" (Respondent 07, Risk Factor).

"The major problem is based on the change of government policies. It will affect the entire or at least parts of the strategic plan of the university" (Respondent 02, Risk Factor).

"Government policy changes are an external factor. When the government changes, higher education policies also change with the government changes. Accordingly, we have to change our strategic management planning. It is acceptable to have policy changes, but they should not be drastic. Drastic policy change is a major impact on strategic management implementation" (Respondent 04, Risk Factor).

The responses reveal strategic implementation failures due to various uncontrollable environmental situations. They also emphasise that political changes lead to policy changes in higher education, affecting the strategic implementation plans of public universities. When a new government comes to power, it changes the state policy, invariably influencing changes in the university system.

Supportive management

Experientially, it is realised that providing supportive management is critical to the success of an organisation's new and existing activities. The respondents all agreed that their respective working environments impact strategic implementation. For example, they claim that in public universities, strategic plan preparation and execution are highly affected due to the lack of support from management.

> "It will be a great achievement if they do the strategic plan with actual involvement. However, the entire team's support is needed, not one person, which is unacceptable. We lack a supportive environment and teamwork" (Respondent 03, Supportive Management).

Most obviously, having a strategic plan alone does not ensure the execution of it. Therefore, the lack of support is considered a significant burden to reaching expected levels of execution.

In strategic management, top-level intervention and participation is the key to success. But, unfortunately, in the public sector university system in Sri Lanka, top-level support is at lower level in most instances of strategic application practices.

> "There is a lack of coordination; the high-level individuals, such as Vice-chancellors and Deans who should be involved in the strategic plan, are not, which is my observation. In addition, there is no involvement from the Management" (Respondent 03, Supportive Management).

At the same time, the overall planning needs to be communicated to everyone within the system to obtain their support to achieve smooth execution.

> "When we prepare the strategic plan, academic or non-academic staff should be involved, but comparatively, lack of support from the top management weakens the planning and implementing process" (Respondent 07, Supportive Management).

Based on all the evidence, it is realised that one of the main factors that affect strategic implementation within public universities of Sri Lanka is (un)supportive management. It is surmised from all the responses above that even brilliant strategies fail due to the lack of support from the management.

CONCLUSION

Sri Lankan students face significant socio-economic challenges in receiving a university education compared to other countries (Priyadarshani & Jesuiya, 2021). The unemployment rate is significantly high among students having a degree from a public university. In this scenario, the major challenge for Sri Lanka is to provide employment to young people and meet their aspirations. The current educational system does not adequately provide updated opportunities in the face of rapid or continuous changes. This causes unwanted pressure on students by compelling them to work harder. However, when they enter the job market, factors such as age, skills, and experience make the job-hunting process more challenging for a graduate from a public university compared to a graduate from a private university. Eventually, a graduate from a state university must be satisfied with the position/s available in the public sector with limited opportunities, despite the massive competition in the job market (Sunil, 2019).

Against this backdrop, this study makes several contributions to research on strategic management. Broadly, it contributes to generating new knowledge about the strategic implementation experiences and the factors influencing the procedure. The following sections elaborate on this research's theoretical, methodological, and practical contributions.

Theoretical contribution

The study contributes to the field of strategic management from the point of an open system theory and a resource-based theory by analysing how internal and external factors affect the strategic implementation of public universities in general. In addition, the study specifically focuses on the Sri Lankan context. It identifies new factors affected by issues related to several conditions, such as anomalies in the strategic planning process, ragging, defects in quality assurance mechanisms, drawbacks in stakeholder engagement, inadequacies in digital infrastructures, weaknesses in project management applications, disparities in media behaviour, the gravity of the risk factors and the lack of supportive management which make a significant influence on the strategic implementations carried out by the public universities in addition to the factors of organisational culture, politicisation, trade union activities, HR capacity, fund and resource availability, language and communication, and operational efficiency which have already been explored in the literature.

Methodological contribution

While the previous studies are mainly focused on a single data source in exploring the factors of strategic functioning of the public universities of Sri Lanka, this study advances them by using qualitative multimethod analysis in its approach to the issues in question, and the multimethod study reconfirms the previous factors based on different sources and extends the results to new ventures of factor exploration.

Practical contribution

This research offers suggestions for key officials from the University Grants Commissions of different countries, decision-makers in public universities of respective countries, and policymakers in higher education in general to support their decision-making processes. It especially contributes to the universities in Sri Lanka. For the officials who wish to operate strategic planning functions in the university system, this study strives better to understand the existing strategic implementation issues and highlights. Therefore, using the research findings, the strategic planners can take appropriate steps to overcome the issues and use new methodologies for effective strategic execution, achieving the public universities' desired organisational objectives.

RECOMMENDATIONS

It is highly recommended that the university take a step in managing internal and external forces that could influence the execution of its strategic plan (David *et al.,* 2009). Thus, proper environmental scanning is required in the planning process to derive the appropriate strategies for implementation (Rahimnia *et al.,* 2009). The main focuses of the universities are to produce competent and compatible graduates for the job market, to undertake quality research projects to address national and global issues, and to create and effectively disseminate advanced knowledge among the relevant scientific communities. The universities also need to be prepared to adopt new technologies to provide a good education for students and provide graduates with innovative capabilities and incubator facilities for starting new ventures (David et al., 2009).

Creating an appropriate culture with decent values within the system, promoting harmony and ethnic and religious diversity, and making the universities free from political influences are necessary for effective strategic implementations (Shen & Tian, 2012). Furthermore, universities must focus on self-generating funds and obtaining foreign aid to enhance their resource capacity.

In addition expanding the stakeholder engagement in the universities will generate collaborative efforts for their successful operations. Finally, universities must be concerned with enhancing the staff's capacities in applying project management tools and techniques to achieve operational excellence (Pratt, 2015).

Overall, the university's top management has to play a significant role in supporting strategic implementation in the universities and needs to develop appropriate policies and regulations to manage their functions (Jaradat, 2013). In addition, the management should ensure a healthy interdepartmental relationship among the different units and departments for successful strategy implementation. At the same time, management should handle the external forces: media, trade union activities, political interventions, and external risks for smooth internal operations (Powell & Rey, 2015)

LIMITATIONS OF THE STUDY

This study was conducted with a few limitations. The researcher conducted a series of discussions to collect adequate data related to the established objectives. All the participants were university Strategic Directors and Registrars of public universities. However, Sri Lankan public universities have stakeholders other than the strategic Directors and Registrars. While conducting the data collection process, many respondents expressed their ideas freely about the political interventions from different political parties. Due to ethical considerations, the researcher maintains confidentiality within this study, which is a study limitation. Many trade unions in Sri Lanka are operated for various political purposes rather than for the well-being of their membership. Although such issues were revealed during the discussions, the researcher does not mention them here as these issues need to be further explored through other studies, allowing for situational ethical constraints.

DIRECTIONS FOR FUTURE RESEARCH

This study yields a theoretical contribution focused on creating a new understanding of strategy implementation in the public sector universities of Sri Lanka and presenting an idea about how to manage them more effectively, thus creating new directions for future research. For future researchers, it is recommended to conduct research at the level of the Vice-chancellor as the primary data collection source so that more issues and challenges can be identified and more general results can be generated. Moreover, future researchers can implement longitudinal studies to assess the behaviour of the respondents over a long period. A mixed study method

can be used for future studies. Further, future researchers can use more robust data analysis methods, including qualitative and quantitative methods. It will allow us to obtain a large sample and provide the opportunity to analyse the issues from a mathematical point of view. Further, the university networks in Sri Lanka have been expanded throughout the island, while only a few significant universities are established around the capital city of Colombo. Therefore, the study has a research gap as the university's strategic functioning issues vary from university to university.

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APPENDIX

University Name	Participant role	Respondent Identification
University of Jaffna	Registrar	R1
Rajarata University	Strategic Director	R2
University of Colombo	Strategic Director	R3
Eastern University	Registrar	R4
Uva Wellassa University	Strategic Director	R5
Open University	Strategic Director	R6
University of Peradeniya	Registrar	R7

REVIEW ARTICLE

Thicker than blood: political parties, partisanship, and the indigenous identity movement in Nepal

Isha Gharti

Chiangmai University, 239, Huay Kaew Road, Muang District, Chiangmai, Thailand.

Abstract: The Nepalese indigenous identity movement took the nation by storm during the tremulous politics of the 2000s and toppled the status quo, paving way for a series of legal changes in favour of Nepal's many minority communities. However, the movement has suffered setbacks since 2010 as various minority communities have denounced many of its objectives, including its most prominent demand for ethnic/identity-based federalism. The study draws on empirical observations and in-depth interviews with 21 participants to examine these setbacks. The findings reveal that partisanship has played a significant role in discouraging the indigenous movement. Partisanship has an inimitable presence in many Nepalese people's lives, as it provides emotional, ideological, and instrumental support and is a powerful source of self-esteem and self-identification. The indigenous movement, therefore, began to lose momentum when it pitched a strongly resistant partisan identity in direct opposition to the newly discovered/recovered indigenous identities.

Keywords: Indigenous movements, identity movements, political parties, partisanship, Nepal, Tamang.

INTRODUCTION

In 2007, Nepal became one of the only 22 United Nations (UN) member states, and the first South Asian member state, to sign the International Labour Organisation (ILO) Convention on Indigenous and Tribal Peoples, 1989 (No. 169) (ILO, 2007). Nepal is also a signatory to the UN Declaration on the Rights of the Indigenous Peoples (UNDRIP), and the International Covenant on Civil and Political Rights (ICCPR) (LAHURNIP *et al.*, 2017). Domestically, the Civil Service Act was amended in 2007 to introduce a quota system that reserves 45% of the civil service seats for the members of marginalised communities. The government took these steps to acknowledge and redress the centuries-old ethnic grievances in Nepal. Throughout a long period of Nepal's modern history, a caste-based hierarchy has divided the diverse Nepalese society into two groups: one with structural social privileges composed of the 'upper caste' Bahun-Chettri and Thakuri, and Kathmandu valley Newars and the other without any structural social privileges composed of the rest of the population, including the Dalit 'untouchables', Madhesi from the southern plains, Adivasi Janajati, *etc*. The caste system has thus served as a political instrument for control and oppression by the rulers, aristocracy, and the 'upper caste' throughout many epochs (Levine, 1987), which consequently instigated Nepal's ethnic or indigenous identity movement (Gellner, 2014; Adhikari & Gellner, 2016).[1] Although there have been sporadic episodes of ethnic resistance throughout the Nepal's history, until the early 1990s that the ethnic struggle did not become a powerful political force (Gellner, 2009). During that decade, the country's emerging democracy, the liberalisation of the economy, and global discourses of development and indigeneity merged together to give a new direction to the ethnic struggles. The movement fuelled the Maoist rebellion (1996–2006), contributed to the abolition of the 240-year-old monarchy in 2008, and became arguably the most potent political force of the last two decades.

The fall of the monarchy and the subsequent political changes provided the ethnic movement with an unprecedented mileage. The Maoist party, which

*Corresponding author (isha.gharti26@gmail.com orcid.org/0000-0002-9589-7951)

capitalised on caste and ethnicity-based issues to fuel its rebellion, emerged in 2008 as the leading party in the Constituent Assembly (CA). The government had significant representation from the minority groups and minority-focused articles were added to the interim constitution at a relatively brisk pace. Encouraged by these events, the ethnic/indigenous movement joined the Madhesi, Dalit, and other minority-based movements under the umbrella of the identity movement to exert stronger and more unified pressure on the CA. The identity movement, which claimed to represent over 60 per cent of the country's population (Lahurnip *et al*., 2017), demanded recognition and reparations for discrimination based on the caste and geography, which they declared could be guaranteed only if the country embraced the controversial ethnic/identity-based federalism (Lahurnip, 2016) that would prioritise a few ethnic groups and communities in an extraordinarily Cosmopolitan country. However, the two older parties, the Nepali Congress (NC) and Communist Party of Nepal United Marxist Leninist (CPN-UML), patently opposed this demand. Furthermore, as the movement progressed, it sparked bitter dissension among groups and communities throughout the country. The subsequent polarisation resulted in countless open confrontations that lasted over a decade, with violence in many places killing hundreds of people and displacing thousands as an overwhelming sense of insecurity engulfed the nation (South Asian Terrorism Portal; Asia Foundation, 2017). The situation reached an impasse as the Maoists and the two centrist parties failed to reach a consensus on a new federal model, even after four government reshuffles in little more than four years. Consequently, the first CA was dissolved, and the second CA election (2013) reinstated the NC and CPN-UML into power.

Following this second CA election, the identity movement lost its major political ally in the Maoists. The Maoists retracted their support for the ethnic/identity-based federal system, implying that the party's stand on ethnicity was the primary reason for its defeat as the party spokesperson relayed in a press conference (Gellner, 2014). Similarly, many ethnic-based parties that had emerged in the first CA failed miserably at the polls. The NC-UML coalition, with Maoist support promulgated the new constitution in 2015, declaring Nepal a federal state based on geography. The disapproval of identity-based federalism (indicated by the reinstatement of NC-UML to power) has prompted many – intellectuals and laypersons alike to assert a lack of support for the identity movement at the grassroots level. However, the issues that the movement thrust into Nepalese politics, such as the socio-cultural and politico-economic discrimination of minorities, remain a reality for a large part of the Nepalese society. It is therefore worthwhile to investigate why many people from minority communities did not vote in favour of an ethnic/identity-based federalism that might have been advantageous to their communities.

The studies on the indigenous identity movement of Nepal have largely focused on the role of various ethnic groups, activists, and even international communities in the progress of the indigenous identity movement in Nepal. These studies have overlooked the critical contribution of the political parties and partisans to the major social movements for over half a century including the recent indigenous movement. Likewise, most of the studies, international partners and activists identify the elite Bahun-Chettri Hindus hegemony as a pivotal obstruction to the movement as well as ethnic/identity-based federalism (Castillejo, 2017; Lahurnip, 2016). However, many have argued that the movement itself is not representative of the heterogeneous experience of the communities that cut across complicated economic, political, geographical, cultural, and other nuanced factors which could explain the setbacks that ensued (Upadhyay, 2013; Gellner, 2001). I argue that partisanship, which forms a crucial part of the everyday lives of many members of the ethnic communities, has been one such obstacle to the progress of the ethnic/identity-based federalism in Nepal. Although a few studies have directly implied the influence of political parties in the indigenous identity movement (Hangen, 2011, 2013; Shneiderman. 2009; Snellinger, 2010); Adhikari & Gellner, 2016), they have failed to recognise partisanship as an inseparable aspect of the political parties in Nepal, thus leaving a huge gap in the comprehensive understanding of the movement which the article attempts to address.

Recent studies have shown that partisanship plays direct and indirect roles in social movements by influencing the partisans' political and non-political behaviour (Westwood *et al*., 2018). Campbell *et al.* (1960) define partisanship as a set of beliefs and feelings that culminate in a sense of 'psychological attachment to a political party. Following Campbell's pathbreaking study, research has focused on two aspects of partisanship: one stream focuses on the emotional aspects that orient a partisan towards a party; the other, based on the rational choice paradigm views partisanship through the lens of instrumentalism (Huddy *et al*., 2018). According to the first approach the partisanship is an enduring identity strengthened by the emotional affiliations (identifying with some or many stereotypes associated with the party) and has psychological roots. The second approach stresses utility maximisation as the driving force behind the political decision-making and involvement. The partisans thinking to make a rational choice to recognise

how the affiliation to the party benefits them. Although most studies have focused exclusively on one approach or the other, partisanship is mostly a mixture of the two (huddy *et al.*, 2018). Furthermore, an increasing number of studies agree that partisanship has a social nature, generates strong emotions, drives behaviour, and is relatively stable over time. This has prompted many scholars to concur that partisanship is a form of social identity (Green *et al.*, 2004; Greene, 1999; Iyengar & Krupenkin, 2018).

Considering partisanship as a social identity can shed light on various aspects commonly associated with it, like strong attachment to a party, categorisation and factors that affect it, inter-party conflicts, bias and discrimination, conformity to party norms, and the conditions under which it generates collective action (Huddy, 2001). Interestingly, these are all traits of partisanship in Nepal (Snellinger, 2010; O'Neill *et al.*, 2020; Dahal, 2010). Furthermore, as a social identity partisanship provides a sense of self-esteem and a shared identity which explains its relative stability over time. Party memberships as identities prescribe and evaluate who the partisans are, what should they believe, and how should they behave (Hogg, 2016). This invariably leads to comparisons with those the group considers in-group or categorises as out-group based on group-specific traits, norms, or stereotypes (Hogg, 2016). These norms and traits are expressed through norm-specific behaviour (Hogg, 2016). Additionally, these categorisations lead to biased processing of information, favouring the in-group and discriminating against the out-group (Kunda, 1990). Studies also suggest that in-group favour is stronger than the out-group discrimination, but in situations where groups feel threatened there is an increased discrimination against the out-group (Mummendey & Otten, 1998). However, partisan loyalty is strong, finite and context-driven (Mummolo *et al.*, 2019): the recognised norms and behaviour typical to a party are differently internalised and expressed by different partisans according to a specific contexts. Additionally, if the established norm, or a new norm, conflicts with an individual's other preferences (policy views, instrumental benefits, *etc.*), it limits norm-related behaviours. These insights of shed new light not only on the parties and partisanship in Nepal but also on their implications for the identity movement.

The paper is an outcome of a field research conducted in the second half of 2018 for my doctoral studies, which was largely focused on the identity movement and dealt with political parties peripherally. During my field visits, I observed a pattern in many interviews and everyday practices of people directly reflecting the stance of the political party they supported. This prompted me to consider whether the political parties and loyalties affected the progress of the Nepal's identity movement, and this article is an effort to answer this question. The study adopted a qualitative mixed method as described by LeCompte & Schensul (2013), complementing empirical observation with the interviews and a rigorous literature review. The primary objective of the study was to determine how partisanship played out in a real-life scenario and how it is related to the broader indigenous identity movement at a time of political polarisation for which the method was appropriate for its flexibility and comprehensiveness. For my doctoral research, there were 73 purposely sampled individual participants, out of which 21 were selected as key informants for the current study as they were politically active, involved in many developmental works, and were the village 'know-hows', exhibiting influence in the focal municipality's socio-political landscape. All 21 informants were national or local members or leaders of one of the three political parties (8 NC, 7 CPN-UML, 6 Maoist) who were currently or had been involved in local government and developmental activities. The interviews were semi-structured with questions pertaining directly to the identity movement, such as views on the movement, Tamsaling, ethnic organisations, festivals, artefacts, views on various communities, political parties, *etc*. With these 21 participants, open interviews of biographical nature was followed the first. The empirical observation included daily interactions among the various partisans, festivals, life events, political activities, ethnic activities, displays of party loyalty and benefits, *etc*. Most of the interviews were recorded, but not the informal conversations and no photographs were taken.

The data were analysed using LeCompte & Schensul's (2013) toolkit, which includes the following steps:

1. Data reduction or crunching: Data were crunched into categories congruent with the conceptual framework and research questions. While the movement and parties agreed on many demands of indigenous peoples, there were significant differences on some issues concerning the identity movement. Hence data were categorised on the basis of the individuals' support or opposition to the movement and identity-based federalism, views on prime rights and Tamsaling, reasons for support or opposition, views on and practices of cultural activities, participation in ethnic activism, association with ethnic organisations, views and practices regarding the caste system, support for political parties and displays of loyalties, possible reasons for party association, interaction with other ethnic groups and political parties.

2. Examining relationships and thinking patterns: The empirical observations were corroborated with the interviews with the informants, which were then compared with their party's standpoint and practices on indigenous issues. Thinking patterns were noted for their frequency and similarity with their respective political party's stances on the issue.

3. Theorising: Local explanations were taken beyond the specific case and linked to a broader theories to explore possible reasons for the occurrence. The patterns and political-non-political behaviour of the participants were analysed using the theoretical frame explained in the introduction section and related to the broader indigenous movement which is presented in the descriptive form in the second part of the article.

The data and analysis were audited with the help of two experts in ethnography and presented to a committee of five members (a theorist, and four social science experts including the same two experts).

The case study is based on the Tamang community of the 'Great Gorge' municipality of Bagmati province. Tamangs are one of the largest Adivasi Janajati (indigenous groups), comprising 5.6% of the total population (CBS, 2011), and are very politically active. They belong to the Tibeto-Burman clan believed to have migrated from the central Asian plateaus (Zemach-Bersin, 2005), especially Tibet (Kukuczka, 2011). The community's support for Tibet during the Nepal–Tibet battle of 1855–56 led the Shah regime to segregate them from the mainstream society. For over 200 years, Tamangs were exploited for rent, taxes, and labour and were excluded from opportunities in education, civil service, and military service (Holmberg, 1996; Zemach-Bersin, 2005). This historic marginalisation has continued as reflected in the lower living standards of Tamang compared to other groups. This has prompted many episodes of Tamang resistance throughout the history, most noticeably in the recent years. Similarly, the Great Gorge municipality is an ideal selection for a microcosmic view of the identity movement in Nepal. Although most of its inhabitants are Tamang, there is a significant population of Bahun-Chettri, Newar, and Dalits. Majority of Tamangs in the municipality acknowledges the continued privileges accorded to the 'upper caste' Bahun-Chettri and the overall treatment of Tamangs as inferior. Nonetheless, there is neither a uniform view about the Bahun-Chettri nor significant hostility towards them. Furthermore, the rural municipality has witnessed many democratic struggles, most notably the 1990s uprising, Maoist rebellion, and recent ethnic movement, and boasts partisans from all three major political parties. At the time of my field

research, CPN-UML and the Maoists had already united at the national level, but supporters continued to identify themselves as either CPN-UML or Maoist. The nascency of the unification, the incompleteness of the merger, and the rising tension between the leaders of the newly formed Nepal Communist Party (NCP) might have fuelled The members to be reluctant to be identified as a member. Hence, I have separated CPN-UML partisans from Maoist partisans. Additionally, I use the term partisans loosely, to imply active members, vocal supporters, and anyone who voted for the party in the previous election.

The study is case-specific and not comparative, which limits its generalisability. However, I have simultaneously related the case to the broader national context to alleviate this limitation. The names of the participants and the municipality have been changed to ensure anonymity. The paper is divided into four parts, followed by a conclusion: The first part discusses the political parties' interrelatedness with the partisans; the second part discusses partisanship as social identity; the third part discusses the how partisanship drives not only political but also non-political behaviour of the people, and the fourth part explains how the partisan identity might have deterred the indigenous identity movement.

CASE STUDY

Political parties, partisans, and their intricate co-dependence

Throughout Nepal's modern history, there have been three major political parties: the democratic socialist NC, centrist but 'moderately left' CPN-UML, and far-left Maoist. These parties have rich histories, ideologies, and practices that can be understood as an institutional culture (Snellinger, 2010). NC is the oldest party, having been formed in 1940 to overthrow the Rana regime, and led the democratic uprisings of 1950, 1990, and 2006 (Shah, 2019). NC is a mass-based, liberal-democratic organisation (Gupta, 1994), and the public recognises that democracy and individual freedom are the foundation of the party's position (Snellinger, 2010). Due to lack of direction and strategy, NC is considered more flexible than others, lacking in discipline and rules, and largely ad hoc in its operation. As the oldest party, it has a vast and diverse support base, including the regional elite groups who joined and supported the party to retain their local influence (Thapaliya, 2019). The Maoist party formed in the 1990s is ideologically farthest from NC. The party's promise of an egalitarian society and a people's rule as its guiding principles came at a crucial point when the democratic exercise had begun to attract increasing criticism for rampant

corruption and favouritism that continued to benefit only a small section of the society (Shneiderman, 2009). Thus, the Maoist ideology was especially appealing to the downtrodden and rural masses, who remained on the sidelines despite political reforms (Sales, 2003). The party was initially organised as a militia or underground guerrilla group, but it relaxed its strict communist stance after joining mainstream politics. CPN-UML sits in the ideological middle ground between the Maoists and NC. They describe themselves as centrist but moderately leftist, as they are a communist organisation that has engaged in multi-party democratic politics since 1990s. As the second oldest party, CPN-UML was the primary opposition to NC throughout the 1991–2005 democratic period (Shneiderman, 2009), growing in popularity since 2000 as a spill-over effect of the increasing criticisms of NC. In sharp contrast to NC, the Maoists and CPN-UML organize deliberately and have a strict code of conduct for members and partisans (Snellinger, 2010). The supposed ideologies or institutional culture of the three parties and the associated party culture operate as social guide for partisans to identify themselves and others or create their own group identities (Snellinger, 2010), as the case of the Great Gorge municipality exhibits.

The Great Gorge municipality's early engagement with politics has created a prominent NC and CPN-UML support base, although the Maoists also have notable representation. Based on past electoral wins, NC has the strongest representation in the municipality, which elders claim has a long history as the party itself. Elders credit NC members during the Panchayat era for raising awareness against the tyrannical absolute monarchy and introducing the idea of democracy. Although many remained elusive about their support for the then-banned party, support increased as the democratic struggle began to pay off nationally. This support was further strengthened two decades later when the all-powerful leaders of NC visited the municipality to fulfil the promise of schools, electricity, and telephone services in the area. For many *Kangressi* (NC partisans) including 5 key informants, this incident, in addition to the NC's 'glorious' history, liberal ideology, and commitment to democracy, is the basis for their continued support for the party despite its many setbacks, even during the terrifying era of Maoist rebellion.

During the Panchayat era, the communist ideologies of CPN-UML became appealing, especially to many poor and disfranchised inhabitants attracted to its idea of an egalitarian society devoid of class and caste differentiation, which increased its support base in the municipality. The rise of CPN-UML can to some extent also be attributed to the personal differences that began

to surface among NC supporters. In the 1980s, as the municipality became increasingly involved in the pro-democratic struggle, many political events were significant in raising the political consciousness of its inhabitants. Among such events, the Piskar Massacre, which occurred only a few miles away from the municipality, was particularly significant. In January 1984, on *Maghe Sankranti* a major festival for many communities including the Tamangs – Piskar held its annual Jatra (public festival). Some CPN-UML activists used the occasion to protest the oppressive state. Although the protest started peacefully and there was a minimal provocation, police officers executed a pre-planned attack on the activists and other participants, killing two people and injuring and imprisoning many more. For some informants, this incident became pivotal for their support of CPN-UML and the communist ideology. Decades later, support for the communist ideology also formed the basis for many municipal residents to support the Maoists. The failure of democracy to meet the expectations of the poor and the inability of CPN-UML to hold the communist ideology and practices intact inclined many disenchanted communist followers towards the Maoists, which was also the case for at least 3 key informants. During its active rebellion, the Maoists indoctrinated, politicised, and recruited inhabitants of the municipality by force or consent, thereby increasing the number of its partisans in the municipality.

Apart from ideological inclination, one of the salient features of Nepalese partisanship is political patronage: 'a dialectical interplay of modern democratic concepts and traditional patron-client behaviour of leadership and masses operating within the state and political parties' (Dahal, 2010). In Nepal, against a strong historical backdrop of patriarchy, the caste system, and paternalism, patronage serves as a set of social norms through which people navigate their social lives (Snellinger, 2010). As a mutually beneficial social tie, patronage is a source of valuable economic gains with unemployment and a lack of social welfare remaining a significant problem in the country. Some aspects of political patronage include the giving of government posts, transfers, and promotions to supporters, allocation of development resources (Dahal, 2010; Adhikari, 2013), and even protection in criminal cases. Party patronage often is best expressed through the localised English term 'source force'. In common usage, source force refers to the political network from which one can benefit in economic and social contexts. In return for source force, partisans become a crucial resource in anchoring their party's presence within the political system and in controlling communication flows (Kopecký, 2019). Additionally, as electoral systems have been institutionalised, patronage has been

a key instrument in retaining and expanding electoral reach. All three parties have sustained a reliable base of partisans by relying on the patronage system. The Maoist party has relied on intimidation and extortion, often disguised as 'donations' from businesses and government organisations, to sustain its cadres even after the active rebellion (Adhikari, 2013). As the largest party in the 1990s, NC overwhelmingly favoured its partisans for formal and informal positions. Interestingly, in recent years, CPN-UML has strengthened its support base in all areas much more efficiently than the other parties. After being in government four times in the 1990s, CPN-UML has been part of the government uninterrupted for the last 15 years. As a result, it has expanded its party network throughout many sectors, such as education, bureaucracy, NGOs, private investment, *etc*. (Stabilisation Unit, 2018). Additionally, the normalization of nepotism and favouritism in all sectors of the society suggests that the political parties have become a means of survival for many as a person needs one or the other party to navigate through the challenges of life, as can be illustrated by some examples from the Great Gorge municipality.

In mid-2018, I attended to the funeral of a resident in the municipal Gumba (Buddhist temple). The tiring 7-day affair was attended by hundreds of people paying final tribute to the deceased. At the funeral, two large NC flags stood at the entrance and smaller party flags were placed alongside the Buddhist flags next to the photograph of the late gentleman. Many NC supporters came from the nearby places and from the capital to help with the rituals and honour their late friend. The costly and lengthy procession was largely managed by the municipal party office. On another occasion, as recalled by an elderly Maoist leader, a dispute arose between two young men after a few drinks that led one to being imprisoned for seriously injuring the other. The next day, a group belonging to the Maoist party accompanied the injured to the police station and convinced the police to drop the case. As both individuals supported the Maoists, the party became a mediator in the dispute. According to the inhabitants, incidents such as these are all common, as many affirm that the party has a 'duty' to take care of its supporters. Conversations with a few local leaders revealed that they often find it difficult to uphold these expectations. A CPN-UML member who works at the government Veterinary Office stated that supporters sometimes had unrealistic expectations of the party:

> "It is difficult to make the supporters understand what the party can and cannot do for them. They expect us to provide everything; rice at home to jobs for their children. They assume that the party is their parent who is responsible for everything." (CPN-UML Leader 4)

Party networks remain the most trusted way of acquiring sought-after positions, such as jobs at municipal offices, government schools, or local NGOs, and government contracts for infrastructure and development programmes. Some will occasionally admit that partisanship is an even stronger bond than blood, as the case of a contract government employee illustrates. Grace Tamang is a local resident who had worked in the municipal office for over seven years and was among the very few local women with such experience. However, the new local government refused to renew her contract after the local election of 2017, even though two of the members including the Ward Head, were among her close relatives. According to the municipal office, she is no longer qualified as a local because she was married to someone outside the municipality. However, Grace continued living in the municipality even after her marriage. She claims that the real reason for the non-renewal of her contract was her support for a party that was not well represented in the local government. Nevertheless, she was able to regain her contract using 'source force' from her party's national leader. Similarly, three NGOs operate in the municipality in various fields such as microfinancing, women's and children's health, education, and capacity-building. These NGOs are open or rumoured supporters of CPN-UML, which, according to many residents, has led to programmes being dedicated mostly to communist-supporting clusters. Additionally, some NC members asserted that they were hesitant to ask for services from the NGOs because they knew all too well that they would not be heard. What is interesting in these cases is that unapologetically favouring and supporting a fellow party supporter is considered an acceptable norm.

Partisanship as social identity

A person's ideological, emotional, and instrumental dependence on a group in most cases culminates into a social identity and provides a source of security, well-being, and self-esteem. (Tajfel, 1979). Correspondingly, partisan identity in Nepal can be better understood through the much-discussed Nepalese term '*afno manche*'. *Afno manche*, which literally means 'one's close people', refers not only to close familial ties like family and relatives but also to the social networks one identifies with and relies upon. Dor Bahadur Bista first studied the term and its significance to Nepalese society in his much-celebrated book Fatalism and Development in 1991. He argued that the creation and maintenance of a group of dependable close-knit people (*afno manche*) is an important feature of Nepalese society: 'the distinction between the group "us" and the rest as "them" manifests itself in every walk of social, cultural, political, and economic life. Everything inside the circle of "us" is predictable, and

the rest is external and unpredictable. Therefore, there is a constant need to maintain the boundary' (Bista, 1991: p.97). Within this conception, the political party serves in the present day as a carefully constructed group of *afno manche*, which provides security, identity, and a sense of well-being and self-esteem, and which can be relied upon in good and bad times. Parenthetically, there is a constant need to maintain membership within such groups and to enhance the group identity. In the Great Gorge municipality, political parties have been part of peoples' everyday lives as *afno manche* for decades. As such, '*Kangressi*' (NC supporters), '*Emale*' (CPN-UML supporters) and '*Maobadis*' (Maoist supporters) constitute like-minded people who share some similar or distinctive 'traits' and often rely on their respective groups for emotional and instrumental support.

In the municipality as in many parts of the country, leaders and partisans usually function as a tight-knit social entity with a lack of apparent formality encroaching well into an individual's personal space. Leaders and supporters are typically assigned to fictive kin relations – *dai*, *didi*, *aama*, *buwa* (brother, sister, mother, father) *etc.* – and for many the party does indeed serve as a surrogate family that is obliged to provide emotional and economic support when needed. Four (4) key informants during semi-structured interviews, voluntaries, introduced themselves by stating their name and surname followed by the respective party they supported suggesting an association with their party is integral to their identification. Additionally, 5 of the key informants who were senior members of their respective parties, were considered as '*dai*' (brother) by their respective parties' partisans and were crucial to the decision-making process of these partisans in political and even non-political matters. For instance, these party leaders were often consulted on matters concerning local development activities, disputes, employment and even life events such as accidents, funerals, and marriages. Similar respects were accorded to some of the more senior national leaders of the parties who occasionally visited the municipality. Any noticeable deviations from political cues from these leaders especially in the case of the Maoists and the CPN-UML parties were regarded as serious offences that could land partisans in serious trouble with their party. This is in line with O'Neill *et al.* (2020)'s finding that leaders of political parties are often seen as patrimonial figures who demand almost blind loyalty from their followers. In 2017 during a preliminary visit to the municipality, I met a *Kangressi* supporter who often wore a party's badge with its founder's picture even during non-political events like marriage or community meetings. He said he regularly wore the badge because the leader is like his '*ba*' (father), and he likes honouring

him. This picture of the party as a surrogate family can be linked to the relative stability of partisanship over a sustained period and makes the party integral to many people's lives.

The first exposure of most Nepalese citizens to a party practice occurs at a relatively young age, as an element of family or neighbourhood socialisation or through schools, political events, *etc*. This socialisation introduces individuals to party-specific traits and norms that influence their political and non-political behaviour. As repeated representations, imposed codes of behaviour, or organisational cultures endlessly recreate normative values and identities (Borgenson, 2005: p.71), individuals internalize and express a party identity through normative behaviour or conformity to party-specific practices.

The personal is political: political parties and the political and non-political behaviour of partisan.

People follow their party's lead either because it reflects their views or because they depend on expert cues to engage in politics (Sniderman *et al.*, 1991). In Nepal, such influences of political parties are most prominent during moments of heightened and intensified socio-political activities such as social movements. Social movements with their 'prophetic function' (Snellinger, 2010), serve as opportunities for political parties and their supporters to redefine, elaborate on, and justify their political agendas, ideology, identities, and even ways of life. These have also been deciding factors in political parties' electoral successes and failures. Correspondingly, the identity movement forced the older political parties NC and CPN-UML, which had never presented a comprehensive position on ethnic or identity issues, to enunciate their stand on their fundamental demand for ethnic/identity-based federalism. Despite having acknowledged and pledged redress for many ethnic/identity-related grievances, the two political parties were never in favour of an ethnic/identity-based federalism as it conflicted with their ideologies and the interests of their voter base. NC had long maintained that a strong democracy was the only antidote to caste or class-based inequalities, including ethnic issues. The party put democracy forward as an ever-evolving and accommodating ideology with the potential to resolve all social conflicts. Similarly, CPN-UML, saw themselves as architects of a radical social transformation that required all participants to give up primitive ethnic identities in favour of a modern homogenous national identity as Shneiderman (2009).

The Maoists which have a largely ethnic partisan base, in contrast, encouraged, and supported ethnic/

identity-based federalism. The party viewed distinct ethnic and regional identities because of unequal development between communities, as opposed to the other communist party CPN-UML, which typically saw ethnic or regional identities as a type of backwardness (Stabilisation Unit, 2018). During its 10-year war, the Maoists adopted many tactics to publicize their support for ethnic movements, including instigating the idea of setting up 14 ethnicity-based autonomous states and running a parallel government from 2001 to 2005 following this model in many rural areas (Stabilisation Unit, 2018). In government, the Maoists were the foremost proponents of ethnic/identity-based federalism, encouraging and participating in the nationwide movement. After the debacle of the first CA, the parties strategised to crystallise their stand on the contentious issue. For instance, NC's 2014 manifesto was clear on its stance on 'rights for all' and this continued even after the promulgation of the constitution, as demonstrated in the 2017 manifesto, which stated '*Sabai atne desh, Sabai lai jodne kangress*' (the country has a place for everyone, and congress binds everyone together). Similarly, the 2015 election manifesto of CPN-UML supported special representation for minorities while hinting at the disapproval of ethnicity-based federalism by restating a vision of the pluralist Nepalese state and society.

The three major political parties all relied on their partisans and cadres to sustain their hold on the masses during the identity movement. The Maoist party was able to lure and recruit an aggregation of the ethnic minority by coercion or consent. Maoist partisans became influential in politicising ethnic minority communities, especially in rural areas, and organising protests, strikes, and shutdowns in which the use of violence was not uncommon. It also relied on partisans to extort money to sustain the party and the identity movement. Once it joined mainstream politics, the party strengthened the movement by giving its supporters important positions in government and NGOs. Meanwhile, the other two parties mobilised their partisans to push back against the movement. The pro-ethnic slogans of the Maoists and the ethnic narratives they told were countered by partisans of the older parties in various ways. For instance, when the Youth Communist League (YCL; a Maoist youth body) announced strikes and protests in Kathmandu, Biratnagar, Birgunj, Nepalgunj, Dhangadi, and other cities, partisans of NC and CPN-UML held peace rallies with themes of unity in diversity. In several cases, these resulted in clashes with YCL. The partisans of NC and CPN-UML promoted pro-unity slogans, such as '*himal pahad terai koi chaina parai*' (No matter where one is from- the mountains, hills or plains- we are one) during many pro-unity rallies attended by people of diverse ethnicities and religious backgrounds. These parties also exploited their overwhelming presence in the public and private sectors, including the media, universities, and other intellectual sectors, to counteract pro-ethnic discourses and garner support against the growing identity movement. In rural areas, their partisans became useful tools for resistance against the growing ethnic awareness, especially during the second CA election campaign. The partisans and the public alike began to look at these events and the respective stances of the three political parties on ethnic issues as norms of these parties. Hogg (2001) suggests, if they are to fit in, the group members must adopt attitudes and norms consistent with the group. As such, the partisans of the three political parties internalised and expressed these norms through their political as well as non-political behaviours, as the Great Gorge municipality illustrate.

In the municipality, all the supporters of the NC whom I interviewed fervently opposed the idea of Tamsaling (one of the 14 provinces proposed in the identity movement to prioritise Tamang people) and the ethnic/identity-based federal model. They agreed that the Tamangs needed more opportunities in politico-economic arenas but did not believe that the identity movement in its current form would provide such opportunities. On the contrary, they stated that the last few years had shown that it would only create divisions instead of uniting people. Many CPN-UML voters and partisans including all 7 key informants from the party shared similar views: they denounced the need for identity-based federalism while acknowledging that some positive discrimination was needed for Tamangs. These sentiments were shared by most of the inhabitants, as reflected in the last few local and national elections. In the national election, NC and CPN led the municipality. Likewise, in local elections, the Maoists polled poorly as Tamang and Bahun-Chettri candidates from NC and CPN-UML who were vocal opposers of the movement emerged as clear winners.

The Maoist supporters in the municipality including the 6 key informants, strongly supported the idea of Tamsaling and what it stood for. Even after the promulgation of the constitution, some partisans, especially those associated with ethnic organisations, such as the Nepal Federation of Indigenous Nationalities (NEFIN) (often referred to as a 'sister' organisation of the Maoist party (Pradhan, 2019) and Tamang Ghedung, continued to speak of an autonomous Tamsaling as an essential right of the Tamangs and called for amendments of the current constitution. These organisations hold documentary screenings on Tamang history and occasionally carry out ethnic activism and protests

targeting the local and national governments. Although the documentary screenings are meant for everyone, the attendees are mostly Maoist supporters. When people from other parties join, most of them condemn the contents of the documentaries or are sceptical about the intentions of the meetings. Staunch partisans of the other two parties, especially NC which has a conflictual history with the Maoists, usually avoided these gatherings. During the active rebellion, Maoists targeted mostly NC partisans for extortion, kidnapping, and murder throughout the country. In the municipality, strong NC partisans recall in horror the lives and property lost to the Maoists and for some, like the former village chairman who lost his wife in a Maoist-instigated ambush, the revulsion against all things known as Maoist is quite intense. These aversions manifest passionately during political activities, especially during election periods.

The discussion of party-related topics is not restricted to elections and can be considered a favourite Nepalese pastime, often accompanying morning or afternoon tea. The municipality's Bazar has many tea shops, most of which have a client base belonging to a particular party. During heightened political tensions, people stick to their tea shops. Supporters of all three parties share a mutual suspicion, and at least 11 informants stated that they mostly preferred to work and interact with their fellow party members to avoid unnecessary conflicts and suspicions. Some also stated that the supporters of each party have specific ways of working and thinking, which causes confusion and conflicts with the approaches of the members of other parties. These demarcations along party lines are drawn rather clearly and exhibited quite openly. Party flags, party-specific calendars, posters, and party symbols drawn on the walls can be found in many houses as proud declarations of support. The borders are quite rigid, and many do not like overstepping them even in very personal matters like family and marriage. Most members of an immediate and extended family support the same party, with only a few exceptions. Similarly, many people feel that intermarriages between members of one party and those of another party are unpreferable. Spousal, parent-child, and sibling relationships that cross party lines can become tense, especially during elections. One member of such a mixed household admitted that he rarely goes home during elections to avoid arguments with his father.

Partisanship also affects other very personal domains of a person's life, including religion and culture. Cultural performances and religious rituals have long been understood in rural Nepal as primary areas for political expression (Shneiderman, 2009). The most common cultural protest in recent times is boycotting Dashain (often considered to be the national festival with Hindu roots) and rediscovering community-specific festivals (Hangen, 2013). In the Great Gorge municipality, Dashain remains the most celebrated festival, although a few Maoist families have discontinued or subdued their Dashain celebrations for consistency with their ethnic activism. Accordingly, at least two of the families that I interviewed choose to consume beef, which is considered a sin by most Hindu and Buddhist communities but is historically associated with Tamang culture. A similar trend has also been reported in the case of Teej, which is a woman-centred festival widely associated with the Bahun-Chettri culture. Previously, Teej was widely celebrated by women from many ethnic backgrounds, but this decreased in the aftermath of the identity movement. In the municipality, I learnt that the festival was boycotted by many women, and not just staunch Maoist supporters. Some said they shunned it because it was a festival for Bahun women that conflicted with Tamang culture and religion. A deeper study, however, revealed a different and more interesting reason. It so happened that NC supporters organised the Teej celebration on the community ground that year, with the initial participation of most villagers, including men. When the performances began, however, arguments arose between the organisers and CPN-UML supporters regarding performers and finances. As the conflict began to escalate, the CPN-UML leaders asked their supporters to boycott the event. Thus, the boycott had more to do with loyalty to their political party than issues of ethnicity.

Partisan identity versus ethnic identity and the implications for the identity movement

The implication of party loyalty for the progress of the identity movement is better understood by exploring various aspects of partisan identity. As discussed above, parties act as agents for like-minded citizens (Iyengar & Westwood, 2015). As such, *Kangressi* or *Emale*, one can argue, clusters/categories that comprise people, who do not have a strong faith in the ideology of ethnicity/identity-based federalism or who do not choose to be associated with it. Correspondingly, the members of these groups are people whose life experiences and choices are not necessarily represented by the radical movement. As members of their respective parties, they conform to their party-specific norms, and this conformity is not merely surface-level behavioural compliance but rather a deeper process of internalising and enacting the group's prototypical norms (Huddy *et al.*, 2018). Within this understanding, the opposition to ethnicity/identity-based federalism by these two partisan groups suggests the internalisation and expression of their respective party's norms.

Partisanship as a social identity also leads to the categorisation of people into in-groups and out-groups, causing favouritism and discrimination and often leading in-group members to denounce or disregard the norms of other groups to boost their group's esteem (Tajfel & Turner, 1986; Greene, 1999, 2004). There have been many spontaneous and organised actors in the history of the identity movement in Nepal, but it is the Maoists that have actively driven the movement in recent times. The strong and almost synonymous association of the Maoist party with the identity movement, I argue, has affected the progress of the movement in the municipality and the country at large. In the Great Gorge municipality, like elsewhere, parties elicit hostility between partisans and their opponents (Iyengar & Westwood, 2015; Westwood *et al.*, 2018). The three parties' ideological foundations, especially those of the NC and Maoists, are starkly different, resulting in many disagreements between them. During the Maoist rebellion, although other parties also suffered atrocities, NC was the main target of Maoist violence in the country. The history of conflict between the Maoists and the other two parties, especially NC, might have also contributed to a rejection of the Maoist agenda, including ethnic/identity-based federalism. The animosity across party lines implies a reduced willingness among NC and CPN-UML supporters to treat Maoist actions, even those that may resonate with their own lives, as legitimate.

Furthermore, partisan identities have considerable stability and diminish the political influence of the short-term events on party loyalties (Green *et al.*, 2002). In the case of the Great Gorge municipality, as in the country at large, issues of identity or ethnicity are not a new idea, but their politicisation is nonetheless understood as a short-term event (Regmi 2003; Upadhyay 2013). Municipal CPN-UML leader and former development worker prophetically stated:

> "I do not deny the existence of caste-based discriminations but the way [the ethnic activists and Maoist leaders] have gone about is very superficial. Additionally, the caste system is losing its rigidity which will eventually make things like ethnic movement obsolete." (CPN-UML Leader 1)

Such scepticism over whether the movement represents or benefits the lives of the members of ethnic minorities and over the durability of the movement has weakened support for the identity movement. Scepticism toward ethnic movements also supports the idea that partisanship may exert a stronger psychological bond than affiliation with racial, religious, linguistic, or ethnic groups (Iyengar

& Westwood, 2015). A study by Westwood *et al*. (2018) stated stronger identification with a party than ethnic identity can be attributed to the fact that parties are generally reflections of a person's deliberate choices and decisions. In contrast, ethnicity has been handed to him at birth, which eliminates personal freedom (Matinovich, 2017).

Furthermore, the identity movement in Nepal has been publicly driven by a handful of experts and activists who have, in most cases, openly supported the Maoist party. An intense dislike for this party may be a reason for the cynicism many people hold about the movement. For instance, 5 NC respondents, 4 CPN-UML respondents, and one former Maoist supporter exclaimed that the so-called experts and activists of the movement are nothing but puppets of their 'international masters', who only care about their benefit and know little about the reality on the ground. Similarly, the local chapter of NEFIN does not enjoy as much support in the focal municipality as in other parts of the country which might be attributed to the organisation's association with the Maoist party. Another Tamang-based organisation, Tamang Ghedung, has met a similar fate. NC once led Tamang Ghedung but, since the 2000s, most members of the organisation have been from the Maoist party. Many residents in the municipality including the 13 key respondents attested that their association or disassociation with an ethnic organisation is determined by the party which leads it at the given time.

The support of partisans for their own party's norms, ideology, and directives, does not mean that ethnic members of the parties do not acknowledge the discrimination and marginalisation of their community. All Tamangs interviewed from NC and CPN-UML accepted that their community was marginalised and some even expressed sympathy for the identity movement. However, they were strongly against the idea of ethnicity/identity-based federalism as it symbolised the most prominent feature distinguishing their party from the Maoists. The first CA not only posed a threat to their party's power but to its group members' collective social standing, in which issues of ethnicity/identity-based federalism remained the most prominent and contentious factor threatening the future of the parties. Additionally, as political parties are integral to people's lives, a party's successes and failures become personal (Huddy *et al*., 2018) and its members are motivated to protect and advance its status and electoral dominance to maintain its positive distinctiveness (Huddy, 2001). Under such pressure, partisans aggressively mobilised themselves according to the party norms and directives for the second CA elections, leading to the dissolution of ethnic/

identity-based federalism. Furthermore, the discourse of identity or ethnicity in Nepal is controversial and often argued not to be representative of the heterogenous Nepalese society in which 'everyone is indigenous, and everyone is an immigrant'. The identity movements may also have been negatively affected by the major political parties, including the Maoists, having all been led by Bahun-Chettri men throughout their history.

CONCLUSION

The discourse on the identity movement in Nepal has overlooked the complex relationship between the movement, political parties, and partisanship. Studies show a long-standing interrelationship between the political parties and social movements with overlapping, mutually dependent actors, including partisans. Partisans and political parties are known to be mutually dependent. All individuals are associated with a political party because of their ideological predispositions or instrumental reasons or, in most cases, the overlap of the two. Similarly, political parties depend on partisans for their very existence, as partisans are indispensable to maintaining and expanding their voter base and achieving electoral successes. Once established, partisanship is a powerful, stable identification that affects the partisans' political and non-political behaviours in correspondence to party norms or traits. Partisans will in some contexts exhibit their party's 'stereotypical' ideological beliefs even when they run counter to their own (Snellinger, 2010). This understanding of partisanship provides valuable insight into the Nepalese identity movement, especially to explain why the movement could not garner much support for ethnicity/identity-based federalism during the constitution promulgation period.

Parties are deeply intertwined into people's everyday lives in Nepal, often providing emotional and instrumental security and a source of self-esteem as a group of *afno manche*. Nationally, and in the focal municipality, parties, especially NC and CPN-UML, have impacted the better part of the inhabitants' lives and provided them with a sense of emotional and instrumental security. Most people, therefore, strongly identify one party or another. As such, the relative lifespan of partisanship over assumed short-term events like the identity movement might have compromised support for the movement. Furthermore, social identities such as partisanship are known to create in-groups and out-groups and corresponding discrimination, and partisans are likely to proclaim their group membership most vehemently in times when the group's identity is threatened, which was the case during the recent indigenous identity movement. There were clear stakes

for the parties during the first and second CA- the Maoist party's very existence depended on the movement, and the future of NC and CPN-UML would also be set by how they responded to it. Acknowledging their diversity of voter bases and established ideologies, the two parties took a stand against ethnic/identity-based federalism in sharp contrast to the Maoists. This stand became a norm of both parties, which their partisans enacted by denouncing many aspects of the identity movement, including ethnic/ identity-based federalism. Likewise, the two older parties have strong roots in the focal municipality, which also has a history of serious confrontations between the NC and the Maoists. Apart from the destruction of infrastructure, some members of the NC party lost their families and friends to the insurgency. The level of animosity across party lines created during the Maoist rebellion might have contributed to a reduced willingness to treat the activities of the Maoists and affiliated ethnic organisations such as the NEFIN and Tamang Ghedung, as legitimate, even if many non-Maoists could relate to the ethnic issues to varying degrees. This had clear implications for the identity movement and the rejection of its most prominent demand for an ethnic/identity-based federalism, implying that partisanship in some contexts has stronger bonds than ethnicity, i.e., partisanship can be thicker than blood.

This article presents a thumbnail of a wide-ranging and complex phenomenon in which multiple identities collide with each other in numerous ever-changing social and political contexts. As the study only provides a case-specific understanding, comparative studies on a bigger scale are needed to give broader insights into the phenomenon. Future studies may also explore the nexus between the political parties and the government and non-government organs, such as the bureaucracy, bilateral donors, NGOs and academic institutes. Research along these lines might provide a better understanding of the heterogeneous and diverse Nepalese society that never ceases to amaze.

END NOTES

1. I use the terms 'ethnic' and 'indigenous' interchangeably because the terms are (mis)understood as synonymous in the Nepalese political context.

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RESEARCH ARTICLE

A cross-cultural approach to issues of male dominance and domestic violence

T. Gunawardena[1], P. De Zoysa[2*], K. Jinadasa[1], K. Thurairajah[1] and N. Cruez[1]

[1]Shanti Maargam, Sri Lanka.

[2] Department of Psychiatry, Faculty of Medicine, University of Colombo, Sri Lanka.

Abstract: Harmful masculine norms, attitudes, and behaviours are considered the cause of most cases of gender-based violence against women and girls in most parts of the world. This premise applies to the patriarchal society of Sri Lanka as well. Regarding various policy-level efforts made to reduce the frequency of gender-based violence in Sri Lanka, this paper explores the efficacy of adapting a cross-cultural evidence-based approach to gender relations tried under the Parivartan programme in India in an effort to improve masculinity-based gender norms in Sri Lanka. The programme's content and consensual validities are assessed by using the Delbecq technique which involves experts from a variety of relevant fields. At the onset of the programme, each expert independently rates the relevant concepts and teaching techniques that are generally used by cricket coaches on male cricketers of 12-14 years. Towards the end, after a group discussion by experts, a second rating is made of the same concepts and teaching techniques. The two ratings are compared, and the programme is revised to suit Sri Lankan society. The Sri Lankan experience of the cross-cultural evidence-based approach to gender relations inspired by the Parivartan programme in India shows satisfactory content and consensual validities. Therefore, this paper argues that the Delbecq technique is a useful tool to devise in improving masculinity-based gender norms in the society of Sri Lanka.

Keywords: Cross-cultural adaptation, gender-based violence, masculinity, parivartan, violence against women and girls.

INTRODUCTION

Research on gender-based violence in Sri Lanka reports that there is a prevalence rate of 18% to 72% across different geographical areas on the island (World Health Organization, 2018) and that survivors of sexual violence are often stigmatised (CARE International Sri Lanka, 2013). Ironically, a higher percentage of females (75%) display gender inequitable attitudes (CARE International Sri Lanka, 2013) and even certain professionals maintain tolerant attitudes toward violence against women and girls (Haj-Yahia & De Zoysa, 2008). In this context, evidence-based community interventions aimed at preventing gender-based violence are treated as a necessity in Sri Lanka (Jayatilleke *et al.* 2010)

While cross-cultural research indicates that societies with more stringent ideologies of male dominance have more intimate partner violence (IPV) (Levinson, 1989, as cited in Jewkes, 2002), it is observed that masculine ideologies are closely linked with attitudes and behaviours which can lead to the perpetuation of IPV. It is revealed in a study carried out in Sri Lanka that 40.6% of men reported that women should tolerate violence against them and that 57% agreed that to be a man they need to be tough (CARE International Sri Lanka, 2013).

For a considerably long time, models aimed at attitudinal and behavioural change in adolescents (Tuttle, Cambell-Heider & David, 2006; Shek & Sun, 2013) developed in one culture are subsequently adapted in other cultures too. In such cross-cultural adaptations, accounting for unique cultural nuances of the new culture is essential (Colby *et al.* 2013) such as the qualities of the programme facilitators and characteristics of the population on which it is implemented (Ringwalt *et al.* 2004). Such a thorough cross-cultural adaptation lends to a sense of ownership from the community stakeholders,

impacting the programme's long-term sustainability (Botvin, 2004; Johnson *et al.* 2004).

Suggesting reforms in gender norms and attitudes of men and boys with a focus on the negative developments concerned with masculinity, especially IPV, has become prominent in research interventions throughout the world (Flood, 2011; Ricardo, Eads & Barker, 2012; Sweetman, 2013; Taylor & Barker, 2013). The programmes concerned with gender issues are mainly conducted with sports teams, schools, clubs, workplaces, and other institutions which have higher participation of men and boys (Jewkes *et al.* 2015). According to statistics, there are only a few such programmes in Sri Lanka (World Vision & Promundo, 2013; CARE International Sri Lanka, 2013; Men Engage Alliance Sri Lanka, n.d.) and none of them involves sports as a medium of intervention. Hence, it is useful to implement many more programmes that utilise sports as a medium, such as Parivartan, particularly via cricket, which is considered the island nation's most popular sport. Further, these programmes should particularly target the youth population of 15-16 years, because, in Sri Lanka, the youths are reported to be most susceptible to harbour harmful gender norms (World Health Organization, 2018). Moreover, these programmes should facilitate self-reflection on the powers and privileges accorded to males. The harmful attitudes and behaviours of men and boys often negatively impact women and girls. Therefore, such programmes are considered effective in deconstructing harmful masculine norms and supporting males to change their negative attitudes and behaviours towards females (Lundgren & Amin, 2015).

In adapting cross-cultural programmes on gender issues, consensus methods (De Zoysa, Rajapakse & Newcombe, 2007; Epstein, Santo, & Guillemin, 2015) are used, especially in the medical and nursing disciplines (Sitlington & Coetzer, 2015). They aim to achieve an agreement on a particular set of concepts by bringing together several expert opinions (Minas & Jorm, 2010). The key strengths of the consensus methods are concerned with the opportunity they allow the relevant experts to make a balanced participation and to diminish the pressure to conform to the traditional types of group discussions (Harvey & Holmes, 2012). The two main consensus methods are the Delphi technique (Linstone & Turoff, 1975) and the nominal group technique.

In the Delphi technique, experts are polled individually and anonymously, usually with a self-administered instrument, to provide opinions/ratings, in two or more consecutive rounds. At the second round (and subsequent, if any), a rating by other experts is shown and allowed to change their original opinions/ratings, if required, by considering the others' opinions. But the experts never meet.

The nominal group technique is done in two ways: the Delbecq technique where the experts, having decided their individual opinions/ratings, discuss their differences in a structured face-to-face meeting, at a setting facilitated by another expert; and the Glaser technique where a structured meeting takes place between the experts who have formed opinions/ratings about the concepts under study, facilitated by a non-expert who has credibility with the relevant experts.

This paper reports the use of the Delbecq nominal group technique (Delbecq, Van de Ven & Gustafson, 1986) in the cross-cultural adaptation of a masculine gender norm-based transformative programme, Parivartan, in Sri Lanka (International Centre for Research on Women, 2009). The Delbeq technique is chosen over the other consensus methods because it allows the experts to meet (unlike the Delphi technique) and work collectively on the concepts that require agreement. Hence, issues that may need clarification could be discussed in a forum. The facilitation of this process by an expert (unlike in the Glaser technique) is considered as giving guidance to the entire process.

The Parivartan programme

Parivartan means 'transformation' in Hindi. The name for this programme has been coined so because of its objective of transforming the participants into culturally mature individuals. It has a masculinity-based norm transformation curriculum like the American programme 'Coaching Boys into Men' developed by the 'Family Violence Prevention Fund' in 2005 (Tolman & Edelson, 2008). Parivartan was developed based on the lessons learnt during the implementation of 'Coaching Boys into Men', a programme developed to reduce violence against women and girls, and to prevent gender inequity issues among school athletes in the USA (International Centre for Research on Women, 2009). It is based on the notion that sports coaches play a vital role in fostering healthy gender roles. Making use of role models, the programme employs coaches to disseminate positive ideas about masculinity and respect toward women. The original Parivartan programme was implemented by training 26 school-cricket-coaches and 10 community-mentors in schools and community settings in a large Indian city, respectively (International Centre for Research on Women, 2009). Evaluation of this programme has shown a clear change in gender-based attitudes and behaviours of the male athletes, except in their attitudes towards

women working outside their home environment. Moreover, as reported by female relatives, there is also a transformation in the perspectives and practices of the coaches and mentors themselves (Das *et al.* 2015). A subsequent study on adolescents who have participated in the Parivartan programme or have completed it shows that while attempting to transform their attitudes towards gendered behaviour, they are opposed by parents who are strict on the traditional notions of gender roles. These athletes, though sometimes ascribing to the traditionally dominant male role also voice gender inequity and lobby for the empowerment of girls (Huynh *et al.* 2020). Due to these initial outputs of Parivartan, it has now been expanded to girls for raising their self-esteem and educational aspirations too (Bankar, 2019). Parivartan, hence aims to decrease gender-based violence against girls and women by changing gender norms relating to masculinity. The long-term aim of the programme is to reduce discrimination against females and to promote gender equality. It is a three-year programme implemented with community cricket clubs and schools. The Parivartan curriculum is disseminated via cricket coaches as well as community youth mentors.

The two main resource items in the Parivartan programme are the Coaches' Handbook and the Training Cards (International Centre for Research on Women, 2009). The Coaches' Handbook focuses on the following aspects: the definition of gender, the need to respect known individuals as well as the unknown, the different types of societal violence, how being a male gives a sense of power to be used for the betterment of others, the qualities of positive masculinities(i.e.,) positively expressing masculinity through care, love and respect), and how to develop good facilitation skills. After following this programme, they are deemed to be suitable facilitators for the cricketing students on whom they use the Training Cards. The Training Cards encompass concepts that are discussed with cricketing students and include discussions about: respect, ethics, fair play and sportsmanship, personal responsibility, toxic masculinities, the impact that eve-teasing has on females, managing aggression, and ways to develop respectful relationships with girls. For each thirty-minute Parivartan session conducted by the coaches, one training card is used as a discussion point.

METHODOLOGY

Participants

The process of adaptation mainly consists of five consecutive stages: Stage 1; Contextualisation of the manual through a desk review, Stage 2 translation of the original Parivartan manual, Stage 3-evaluating the content and consensual validity of the programme by utilizing the Delbecq method, Stage 4-key consultation with the original author, and Stage 5-consultation with selective stakeholders within the educational sector in the three respective locations in Sri Lanka.

The contextualisation stage comprises three participants: the primary consultant of the project, an author of the original Parivartan manual, and a Sri Lankan gender specialist. The translation stage includes two translators who translate the English version of the manual into Sinhala and Tamil and two back translators who translated the Sinhala and Tamil versions back into English, respectively. The stage where the Delbecq method is used was implemented in a group consensus method with 18 experts: one school cricket coach, one national cricket coach, one national male cricketer, one national female cricketer, three teachers who teach 12-14-year-olds, four gender-consultants, one social-worker, two youth-service-officers, and one youth representative at the community level. These individuals were chosen for their expertise in cricket, gender, youth education, adolescent psychology, and community work with the youth. Stage 4 consists of two participants, where the primary consultant and an original author discusses findings following the Delbecq session with the experts. In stage 5 of the process, three stakeholder groups are contacted within the educational divisions in Colombo (5 participants), Galle (5 participants), and Nuwara Eliya (10 participants) to discuss the feasibility of implementing the adapted Parivartan programme among Sri Lankan school-going male adolescents. These key stakeholders consist of child rights protection officers, youth service officials, zonal education department personnel, and directors of education. Any educational personnel working under the purview of the Ministry of Education and who are also willing to take part in the stakeholder discussion are included in the sample for the stakeholder discussions.

MATERIALS

The Parivartan manual

The Parivartan manual consists of the Coaches' Handbook and the Training Cards. The Coaches' Handbook begins with an inspirational message by a leading international cricketer about the importance of gender equity, violence prevention, and respecting women and girls. Subsequently, the following aspects are included: the influential power of sports and coaches; a summary of each topic on the main concepts of the

programme (such as gender, respect, masculinity, violence and relationships); and five 'teachable moments' to show how the Parivartan message can be taught using different scenarios that might occur in the field (e.g. one teachable moment is titled 'No Ball' - where, during a cricket match there is an incident of emotional and verbal intimidation and a fight occurs between the home team wicket-keeper and the opposing team batsman. The match comes to a standstill. The 'teachable moment' includes watching these behaviours carefully, where first the coach considers how his players react to the situation; secondly, calling the players to him and discussing what happened and impressing on them that violence is not condoned; and thirdly, discussing the incident further once the game is ended).

The Training Cards encompass concepts that are to be discussed with cricketing students and include discussions of respect, ethics, fair play and sportsmanship, personal responsibility, masculinity, insulting language towards females, controlling aggression, and ways to develop respectful relationships with girls. For each thirty-minute Parivartan session conducted by the coaches with the cricketing students, one Training Card is used as a discussion point. The coaches are expected to adopt a facilitator role, rather than a teaching mode, during the Parivartan sessions.

Stage 1: Contextualisation of the manual

Permission was obtained from the original author by the non-government organisation Shanthi Maargam, to contextualise and adapt to Sri Lanka the Parivartan manual (i.e., the Coaches' Handbook and the Training Cards) which focuses on reducing violence against women and girls. Contextualisation of the manual was conducted by the primary consultant considering the relevant research relating to the gender norms, other gender norm transformation programmes, and particular needs of the Sri Lankan culture. At a discussion held with the original author from the International Centre for Research on Women (ICRW), the contextualised material was reviewed by a Sri Lankan gender specialist to retain the concepts that are suitable for the Sri Lankan culture.

Stage 2: Translation of the contextualised manual

After finalising the contextualised version, it was word-to-word translated into Sinhala and Tamil, the two local languages in Sri Lanka. The Sinhala and Tamil translations of the manual were then reviewed by two Sinhala-speaking and Tamil-speaking gender specialists to simplify the comprehensibility issues.

Stage 3: Delbecq method-based content and consensual validation of the translations

In this exercise, the Delbecq nominal group technique was conducted with 18 experts contacted via email based on their interest and availability to take part in the Delbecq. They were invited to a workshop on the practices of Parivartan and the objectives of the Delbeq. The experts were equally divided into six panels, each of which was composed of a gender expert, a cricketing expert, a teacher, or a youth services officer, to review the different sections of the Parivartan Coaches' Handbook or the Training Cards. This distribution of experts among panels and the allocation of different sections to them were determined by the time available and the length of the text to be reviewed. They were then asked to rate the components allocated to them, on a Likert scale, by considering the appropriateness of each concept/section of the Sri Lankan culture and the target group of players and coaches. They were also asked to make suggestions on how to make the manual more appropriate to the local culture. A rating from 1-9 was given to each section of the manual where in an ascending order one indicates strong disagreement and nine indicates strong agreement. To avoid bias, in the first round, the experts were requested not to discuss their ratings with others. Subsequently, the experts were asked to discuss the section allocated to them with other experts on their panel. The discussion focused on the appropriateness of the concepts to the Sri Lankan culture, their applicability to the target group of athletes and coaches, and suggestions on how to make the curriculum better suited to Sri Lanka. A scribe was assigned to each panel to record the discussion outputs.

In the next step, each panel presented a brief outline of the respective section to a wider group of experts (i.e. to those who had not reviewed the section under discussion), along with suggestions on how to make the language more comprehensible and concepts more familiar. The wider group of experts were invited to provide additional suggestions on the sections being presented to them by other groups. After all the sections were presented, the experts were requested to re-rate their allocated sections using the Likert scale. They had shown their initial rating before the re-rating. Thereby, a pre-and a post-rating were obtained from each expert. As some experts were unable to participate in person, they were requested to answer via email. The inputs received online were considered secondary data.

Stage 4: Key consultations with the original author

After completing the Delbecq process, a discussion on the experts' ratings was held. Suggestions were obtained

from the author of the original Parivartan programme. Based on this discussion, some changes suggested by the experts were incorporated whilst other changes that looked contradictory to the original aims of the Parivartan programme were discarded.

Stage 5: Key consultations with the selected stakeholders from the education sector

At the final step in gathering expert opinion from stakeholders in the education sector where the adapted version of Parivartan would be ultimately implemented, child protection officers, youth service officials, zonal education department personnel, and Directors of education in the Colombo, Galle and Nuwara Eliya districts were invited to separate open-group discussions within their educational zones, with the primary consultant and the project team. The main purpose of these open forums was to outline what the Parivartan programme entailed and to get the expert opinions on any possible revisions and suggestions concerned with the feasibility of its implementation.

RESULTS

Stage 1 and 2: Contextualisation and translation of the Parivartan manual

Following the desk review of the available literature on gender norm transformation programmes and a review of the English version of the Parivartan manual, the primary consultant deemed the manual appropriate at its face value for the Sri Lankan context. The discussion with the original author was used to clarify the meanings and their historical representation of certain concepts presented in the manual.

The initial translations made by the independent translators who were not experts in the field, based themselves on the literal meanings of words in the original Parivartan programme manual. Some of these translations did not accurately depict the intended conceptual meaning of words such as 'aggression' and 'violence'. Hence, an appropriate modification was made to these wordings during the translation stage based on the feedback received from the gender experts.

Stage 3: Delbecq method-based content and consensual validation

The content and consensual validity of the Parivartan programme were assessed by the Delbeq nominal group technique. The expert ratings were analysed using Scott and Blacks' (1991) three-point categories of 1-3, 4-6, and 7-9. The decision of what to retain and what to

discard in the Sri Lankan version was made based on the following criteria: at least 70% of the expert ratings are at or above 4. In content validation, all sections in the Coaches' Handbook and the Training Cards received a rating of 4-6 or 7-9. Accordingly, the only section which received a 1-3 rating was the one on "how respect can be shown to family and friends, and women and girls?". However, one expert rated all these between 1-3 while the other four rated them as 4-6 or 7-9, and hence that section was retained (Scott & Black, 1991). In the consensual validation, all ratings were found either in the 4-6 or in the 7-9 categories. Hence, the Sinhala and Tamil validated versions of the Parivartan programmes were considered favourable.

Based on the Delbecq process, the Sri Lankan version of the Parivartan was developed with its unique features. For instance, the original version of Parivartan indicated gender as male and female, but in the Sri Lankan adaptation, transgender was also included as a classification of gender in keeping with the changes in time (Parivartan was first introduced in 2009 and the adaptation to the Sri Lankan context took place in 2020-2021). In the masculinities section in the Coaches' Handbook (ICRW, 2009), experts suggested emphasising that masculine qualities are not only displayed by males but also by females or transgender individuals - an aspect not pronounced in the original Parivartan.

The idea of respect focused in the original Parivatan programme centred on showing respect towards women and girls. However, the Delbecq experts opined that rather than focusing on respect towards females, in particular, the youth should be taught the importance of respecting everyone. However, when discussing with the original author, it was decided to retain the original focus on respecting women and girls (only), as the intention of the programme was to establish respect towards women and girls, thereby facilitating the reduction of violence against them. Furthermore, more examples than those in the original version were provided for harmful masculine behaviours - such as the expectation of males to be unemotional (e.g., boys not being allowed to show fear when they see a snake). The 'Power and Privilege' aspect, which was placed in the masculinities section of the original version, was taken as a separate section in the Sri Lankan version where different types of power one experiences in life were explained as: power-over, power-with and power-at. Power-over was defined as controlling the actions or choices of another person or group of people, limiting their freedom and opportunity; power-with was explained as working in equal partnership with others and supporting those in need; power-at was described as recognising one's power

and ability to affect change. How these varieties of power relations would work in the context of an adolescents' life were also given in the translations. The decision to separate this concept of power from the category of masculinity was taken due to the need to emphasise how power operates at different levels in society. Further, Gaining Consent was also added as an additional section in the Coaches' Handbook. As suggested by the experts, two more sections were added to the Training Cards: being an ally for those who do not have power or are underprivileged, and how to face any societal opposition when the gender transformation process takes place in the athletes after being part of the Parivartan curriculum. In the eighth Training Card, methods that coaches can use to train athletes on managing aggression were also included, as this was considered an important aspect not covered in the original programme. Among the methods that can be used to further extend the message of the Parivartan programme beyond the cricketers, social media campaigns were also added whereby the athletes can make webcasts and post videos on how they respect females.

A general opinion expressed by all the Delbeq experts was the importance of the coaches having an attitudinal shift before conducting the programme on the athletes. Hence, a manual for the coaches was also developed. It was also emphasised that the training given to coaches should not stop after the initial training of the content in the Coaches' Handbook. There should be a mentoring programme through which coaches are provided further guidance in their own gender-based norm transformation process.

Stages 4 and 5: Key consultations

The key consultations with the stakeholders were conducted in several locations in the country, on the cross-culturally adapted Parivartan manual, which helped to identify the implementation issues of Parivartan in Sri Lanka. As an example, in the Nuwara Eliya district, in the Central Province of Sri Lanka, the key stakeholders were doubtful about using cricket as the sport selected for the pilot study, since volleyball is more popular in the region. Therefore, it was decided to implement it via whichever the established sport in the selected area rather than limiting it only to cricket.

It was noted in the key consultations that most of the stakeholders normalised both physical and verbal sexual harassment between the adolescent girls and boys. They opined that it is the expected behaviour with the development of secondary sexual characteristics. Furthermore, a majority was also of the opinion that certain types of behaviour (especially those considered

verbal harassment) are expected behaviour from males. Therefore, these stakeholders opined that someone not behaving in this so-called 'normal' way might feel unnatural/awkward and might even get bullied by his peers for being so. This highlights the importance of changing biased attitudes amongst the stakeholders who will be implementing this programme if it is to be successful.

DISCUSSION

The objective of this paper is to describe the cross-cultural adaptation process of the Indian masculinity-based gender transformation programme, Parivartan, in the Sri Lankan context, among Sinhala and Tamil-speaking coaches and athletes in the country.

A review of the cross-cultural adaptation of psychometric instruments and programmes indicates the importance of ensuring that the concepts in the original psychometric instrument/programme bear conceptual equivalency to the population it is being adapted to (Antunes et al. 2012). In the adaptation of psychometric instruments, this is ensured through a literature review of the concepts assessed and their applicability to the target culture. This procedure was also used in the cross-cultural adaptation of the Parivartan programme though such a literature review is not deemed essential for the adaptation of programmes, unlike in the psychometric instruments. However, by doing so, it is captured the needs of the local culture as well as identified possible elements in the local culture that should be considered during the cross-cultural adaptation process. After this contextualisation, Parivartan was cross-culturally adapted through a Delbecq, which is a useful consensus method for the cross-cultural adaptation of programmes (Harvey & Holmes, 2012).

The results of the Delbecq technique recommend the use of seven experts (McMillan et al. 2014). However, this paper highlights that bigger groups can be more effective and could generate more useful data. The 18 experts in this study were allocated to panels of five members each. The panels consisted of either Sinhala or Tamil-speaking experts. Such an allocation of experts to the panels enabled easy facilitation as well as an improvement of their focus on their entrusted tasks. A feature of the Delbecq technique is the need for experts to meet in one place (Potter, Gordon & Hammer, 2004), which enhances the facilities for the discussion of programme concepts. However, this limits the accessibility of experts at the grass-root level who cannot travel and whose input would be valuable for an adaptation process. The present research endeavoured to overcome this limitation by asking such grass-root level experts to respond by e-mail and considering their data as secondary evidence.

The original Parivartan programme was developed in India in 2009, a decade before its adaptation to Sri Lanka. To enhance the effectiveness of a programme it is necessary not only to consider the differences in cultures but also the differences in the time periods. As time changes, it is necessary to identify the needs and demands of the culture that the programme hopes to serve (Johnston *et al*, 2009, as cited by Colby et al. 2013). This was reflected in the many conceptual as well as training-based incorporations suggested by the Delbecq experts. For instance, social media campaigns were the main way experts recommended for carrying the message of Parivartan, beyond the athletes, to other young people in schools or the wider community. Moreover, print media-based awareness programmes, including slogans and awareness messages during events such as 'big matches' (i.e., inter-school cricket matches), and messages on tickets for such events were also suggested.

After the Delbeq, consultation with stakeholders in different locations of the country has had to decipher the implementation issues, if any, of the Parivartan. It was clear at these consultations that the transmission of the Parivartan message via cricket might not be the best option as other sports are more popular in certain areas of the country. This highlighted the importance of cross-cultural adaptations that consider specific sub-geographical locations and the characteristics of a given sub-population (Ringwalt et al. 2004). Another important aspect that was noted during the stakeholder consultations was the need to change the gender-based attitudes of the stakeholders themselves. Many stakeholders considered violence against women and girls as something that is expected from men and boys. Therefore, a great consideration is to be made when choosing facilitators who are to deliver gender-based norm transformation programmes such as Parivartan, to young people.

CONCLUSIONS

This paper aims to present the cross-cultural adaptation process of an Indian curriculum on a masculinity-based gender norm transformation programme for 12-14-year-old Sri Lankan cricketing students. Several steps were involved in the cross-cultural adaptation process starting with 1) the initial discussion with the original author, 2) the contextualisation of programme documents, 3) the translation of the original programme manual into the local languages, 4) the application of the Delbecq procedure, 5) the discussion of the suggested changes at the Delbecq with the original author, 6) the consultations with the stakeholders in key regions in the country, and 7) the pilot testing of the programme in Sri Lanka. The Parivartan's Sinhala and Tamil adaptation was deemed

to have good content and consensual validity. Based on the suggestions of the Delbecq experts, changes unique to the Sri Lankan culture and the current time period were incorporated into Parivartans' Sri Lankan version. Hence, the Sinhala and Tamil versions of Parivartan could be effectively used in Sri Lanka for transforming masculinity-based gender- norms.

This study is not without limitations. The translation of the Coaches' Handbook and the Training Cards was conducted as a forward translation only. There was no backward translation (Neuman, 1997), due to time constraints. If the backward translation process was utilized, the conceptual equivalence of the programme contents could have been enhanced. However, before the Delbecq process, the translations were reviewed by the two gender experts, ensuring the conceptual equivalence between the original and the adapted. Even though the typical forward and backward translations were not employed, the use of the gender experts ensured that the Sinhala and Tamil versions were conceptually equivalent to the original version. However, there were instances when perfect conceptual and literal equivalence could not be achieved. Some terms such as gender-based violence became complex when translated into Sinhala and Tamil and hence, it was 'heavy' for the lay population to identify. Therefore, such terms were made less pronounced after the translation process was streamlined to reduce the initial discriminatory tone. These difficulties have been found to occur commonly when translating cross-culturally (World Health Organization, 1997). Another limitation of the study is that this programme was adapted for 12-14-year-old Sinhala and Tamil-speaking youths who are frequently schooling. Therefore, it might not be appropriate for intellectually challenged children or children with learning difficulties. Therefore, further research will be needed to explore the possibility of expanding the use of this programme to such groups of children, and indeed to implement and assess the effectiveness of the cross-culturally adapted Parivartan in Sri Lanka.

Lessons learnt

The lessons learnt could be broadly categorised into two sections: those relating directly to the methodology employed during the cross-cultural adaptation, and those that generally apply to programme adaptations.

The Delbecq consensus method was found to be effective when conducting the cross-cultural adaptation of the Indian masculine gender-based norms transformation programme, Parivartan, to the Sri Lankan culture. It provided the opportunity to gain local (i.e. Sri Lankan)

experts' opinions on the concepts and techniques included in the Indian original programme and to gain a more holistic idea about the workability of such a programme in the local culture. Time efficiency was the main benefit of using this method in comparison with the Delphi technique, which entails a longer waiting period to receive a response from the experts who contacted it. One main methodological limitation was apparent during the Delbecq technique; though the Delbecq technique requires experts to have individually reviewed the sections assigned to them before attending the Delbecq workshop, many experts due to their busy schedules had not followed these instructions. Therefore, whether a thorough understanding of the programme concepts was gained is debatable.

The importance of maintaining the authenticity of the original programme in introducing it to the local culture was highlighted, where certain suggestions made by the experts to make the breadth of the target concepts more general were not retained (e.g., one such suggestion was to include all humans in the concept of respect, rather than only women and girls, as in the original version). Because, by doing so, the original intention of the programme, which is to develop respect towards women and girls would be lost. It was understood that during a cross-cultural adaptation process, it is important to retain and give due credit to the core intention of the programme.

The intention of adapting a programme developed in another culture is to ensure that the programme can be effectively applied to most of the regions in the local culture. Hence, several consultations were conducted with the various stakeholder groups around the country during the cross-cultural adaptation process. However, during the stakeholder meetings held in the Central region of the country, it was seen that the gender norms - though expected to be like the other parts of the country - were widely different. Therefore, the importance of taking into consideration the possible sub-community differences were highlighted. Moreover, it was also noted that discussing with stakeholders about programme implementation of a 'sensitive programme' such as gender-based norm transformation was a challenge. Most of the stakeholders whose support would be needed for the ultimate implementation of the programme also shared hegemonic notions of masculinity and therefore, displayed resistance to the implementation of such programmes which contradicted their notions of masculinity. Therefore, the need to address the attitudes held by individuals who might not be the direct audience of the programme was also learnt during the consultation sessions.

The need to take into consideration the time lapse between the design of the original programme and that of its current adaptation was also emphasised during the implementation process. This was mainly to do with the communication medium, through which the programme concepts are transmitted to the target audience. In an attempt to address the changes in communication trends over the years, the technique of social media was incorporated as a possible medium of communication within the programme.

Declarations of interest: None

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RESEARCH ARTICLE

Awareness and preventive practices related to COVID-19 pandemic among the Indian public

Jashandeep Singh[1*] and Shelly Singhal[1]

Chitkara Business School, Chitkara University, Punjab, India.

Abstract: This paper assesses the level of awareness the general public of India maintains about the COVID-19 pandemic which is likely to vary on the basis of their heterogeneous demographic characteristics and examines the efficacy of the preventive practices being followed by them. In this survey-based cross-sectional study, with the help of a self-administered questionnaire circulated through various social media platforms for almost two weeks, data were collected online from 2168 literate adult citizens of India. The participants were selected through a convenience sampling technique, and the results indicate a significant difference between the demographic profile of a respondent and his/her knowledge about various aspects of the COVID-19 pandemic. It was found that nearly 90% of the respondents were aware of the evolution, the symptoms, and the transmission of the COVID-19 pandemic and almost all of them were following the state-recommended preventive practices. Thus, the overall result of the study reveals that the majority of the Indian population is aware of the pandemic and is being followed.

Keywords: COVID-19, coronavirus, pandemic, awareness; prevention, India.

INTRODUCTION

As reported by European Centre for Disease Prevention and Control, ECDPC, (2020) and Zhang *et al*., (2020), a new member of the coronavirus family named Novel Coronavirus or 2019-nCov was discovered in Wuhan city of China, on 31st December 2019. The patients who contracted the disease displayed pneumonia type symptoms and in three days, 44 patients with similar symptoms were reported in China (WHO - World Health Organization, 2020a). Clinical research on 2019-nCov revealed that the common symptoms developed by the patients are related to viral pneumonia, i.e., cold, dry cough, fever, sore throat, and fatigue (Verity *et al*., 2020), with the exception that some patients may also show signs of runny nose, aches and pains, nasal congestion, or diarrhoea (NHMI - National Health Mission India, 2020).

In mid-January 2020, a few cases were also reported in other countries like Thailand, Japan, and the Republic of Korea. All those patients were found to have travelled from China (Agence France-Presse and Reuters, 2020) to the respective countries. The first Novel Coronavirus positive case found in India was a female student, who returned to Kerala state on January 30th, 2020 (Chander, 2020). The WHO named the novel Coronavirus or 2019-nCov officially as COVID-19 in February 2020. By 15th February 2020, the virus had been reported to have reached 26 countries across the globe with 51,857 cases and 1669 deaths, with most of them in China (Zhong *et al*., 2020). On 11th March 2020, COVID-19 was declared a pandemic by the WHO, and its Secretary General asked the governments of the nation states worldwide to take urgent and aggressive action to stop its spreading.As reported by BBC(2020) that time some other countries such as Italy and Iran had also been severely hit by COVID-19, and a nationwide lockdown had been imposed in Italy.

As per the WHO Situation Report (2020), the total number of COVID-19 positive cases in the entire South

*Corresponding author (jashan.kheiva@gmail.com https://orcid.org/0000-0003-0377-811X)

East Asia were 14161, and that of COVID-19 deaths were 617. In India, 33 states and union territories were reported to have 28,125 confirmed cases in total, with 6573 cases who had been recovered and 887 who had deceased as at April 26, 2020. The total number of cases tested up to April 26, 2020, was 37,613 (COVID19India, 2020). As per the ET Online, (2020); FP Staff, 2020, the Union Cabinet Secretary urged the states and union territories to invoke provisions of Section 2 of the Epidemic Diseases Act, 1897 and the Prime Minister urged all citizens to observe *Janata Curfew* (public curfew) on March 22, 2020. Two days later, when the number of confirmed cases in the nation tallied at a figure of around 500, a nationwide total lockdown was initially announced for a period of 21 days; from March 25 to April 14, 2020 (Gettleman and Schultz, 2020), As reported by Press Trust of India, PTI (2020) the lockdown further extended by the prime Minister of India for another 19 days.

According to WTO (2020b), the COVID-19 pandemic primarily spread through direct contact with the droplets spawned by coughing or sneezing of an infected person; according to Zhai *et al.*, (2020) and as reported by the National Health Mission India, NHMI (2020), it may also spread by touching these droplets on any surface and subsequent contact with then touching eyes, nose, or mouth; and according to the ECDPC (2020), it usually takes 2-14 days for the infection to develop and symptoms to appear. As per WHO (2020c), it was recommended to maintain at least a one-meter distance from the infected person and practice hand hygiene. As per NHMI(2020) and WHO (2020d),, it was the COVID-19 virus doesn't spread through the air, and by covering one's face while coughing and sneezing and by washing or sanitising one's hands frequently, when exposed to any person infected or surface, may reduce the risk of getting infected (Cochrane Special Collections, 2020; Davis and Stoppler, 2020). As per the Indian Council of Medical Research (ICMR) reports, social distancing, quarantine, and isolation can be very helpful in reducing the spread of the disease by 62% (Singh, 2020; Thacker, 2020; Ali *et al.*, 2020). and therefore a complete lockdown was implemented in India. After the lockdown, the Government of India along with the state governments and union territory administrations held awareness programmes on the prevention of the COVID-19 pandemic.

With the experience of previous epidemics such as the Ebola virus, MERS-CoV, and SARS-CoV, it was realised that the awareness of the pathological nature of the disease and the clinical preventive measures against the virus is indispensable in combating the COVID-19 epidemic.

Since the risk of infection was very high, public awareness was highly important for preventive measures against the virus and the WHO, ICMR ,The Indian Council of Medical Research(ICMR), European Centre for Disease Prevention and Control (ECDPC), and other organisations have initiated many awareness programmes. Hence, it is essential to examine the level of awareness of COVID-19 among the Indian public, and the extent of following the prescribed prevention practices, so that, the policies are prepared accordingly, to curb the pandemic.

Therefore, the objective of the current study is to assess the awareness level of the general public in India maintained about the COVID-19 pandemic and the differences that prevailed among them as per their demographic characteristics. Further, we intend to explore the prevention practices followed by the general public in India against the COVID-19 pandemic and their association with the relevant awareness parameters and the present demography.

CONCEPTUAL AND THEORETICAL PERSPECTIVE

Health Belief Model

The Health Belief Model (HBM) is one of the oldest theories to explain and predict health-related behaviours. The HBM was developed by social psychologists at the U.S Public Health Service in the 1950s. The HBM endeavours to envisage health-related behaviours on the basis of various belief patterns. An individual's motivation to accept a preventive health behaviour can be influenced by three factors:

1. *Individual perceptions*: factors that impact the perception of a disease and its severity, individual concerns about his/her health, and susceptibility to the disease.

2. *Modifying factors:* demographic variables, perceived threats, and cues to action.

3. *Likelihood of action*: benefits of adopting a health behaviour perceived after assessing the barriers against the suggested health action.

The combination of these factors exhibits the possibility of a new health behaviour.

Social cognitive theory

Social Cognitive Theory (SCT) developed by Albert Bandura in the 1960s highlights the psychosocial determinants which influence the health behaviour of various individuals and also suggest techniques to promote sustained behavioural changes. The determinants of health behaviour are based on the reciprocal determination, observational learning, outcome expectations, and self-efficacy. Reciprocal determination symbolises the interaction between the behaviour and the environment and its impact upon each other while observational learning signifies the capacity of an individual to learn by observing others' behaviour. Outcome expectations are centred upon a behaviour adopted with a focus on some desired development while self-efficacy is the degree of assertion in an individual's own capability to maintain the desired behaviour. Thus SCT considers one's prior behaviour, intellect, social and physical environment, while envisaging one's future behaviour.

METHODS

Participants

The cross-sectional survey in connection with the present study was conducted through a self-administered questionnaire among a group of 2168 participants using the convenience sampling technique. Due to the lockdown across the country, drawing a random sample, or conducting a series of direct personal interviews was not feasible. Therefore, the data was collected online over two weeks, March 29 - April 11, 2020, by sharing a Google forms link among the respondents contacted through various social media platforms. Literate adult Indian citizens with exposure to English with an acceptable demographic profile, were allowed to participate in the study.

Survey questionnaire

The survey questionnaire formulated with inspiration from the *WHO* Advice for Public (WHO, 2020), Zhong *et al*. (2020), and Ali *et. al*. (2018), included 51 items to elicit answers valued on a three-point scale, where '1' was for completely aware, '2' for somewhat aware, and '3' was for completely unaware. It comprised three sections: i) to collect information about demographic profiles including age, gender, residential area category, educational qualifications, and occupation of the respondents; ii) to elicit awareness about 42 aspects of the COVID-19 pandemic; and iii) to investigate whether they follow COVID-19 preventive practices identified in

terms of nine health habits. The variables in the study were selected from the scientific literature issued from time to time by the government and the WHO time to time. The relevant Google forms online questionnaire link was created with the above features and released to the general public through various social media channels. As a result, a total of 2168 responses were collected in two weeks time. Thereafter an exploratory factor analysis using principal component analysis followed by varimax rotation was applied in analysing the data whose eigenvalue was set at 1, and loadings below 0.4 were suppressed. The results converged thus in 3 rotations, which were merged, while retaining 21 items, to form three factors of awareness about the COVID-19 pandemic, named as 'COVID-19 evolution awareness' (5 items; alpha = 0.83), 'COVID-19 symptoms awareness (9 items; alpha = 0.79), and 'COVID-19 transmission awareness' (7 items, alpha = 0.81).

Statistical analysis

For the analysis of the data, SPSS 25.0 was used while a descriptive analysis was done to check the frequency and percentage of the distribution of answers across various categories for each section of the questionnaire. The awareness scores of the respondents for various parameters were compared with the various demographic characteristics using Kruskal Wallis and chi-square tests (as the data was measured on an ordinal scale). Several studies (Wallace, 2002; Khosravizadeh *et al*. (2021)) used HBM to recognise the respondents' perception of the susceptibility and seriousness of the disease which is used to explain the need to adopt some particular preventive behaviours. Similarly, SCT has also been used by some researchers for understanding physical activity health behaviours. It was thus postulated that health behaviours are the manifestation of the interactions between an individual's personal factors, the environmental factors, and the resulting behaviour from both (Bandura 2001). In this paper a binary logistic regression analysis (similar to Zhong *et al*., 2020; Shi *et al*.,2020; Cao *et al*., 2020) was performed to examine possible associations between the preventive practices followed by the respondents and the independent variables including various awareness scores - (evolution, symptom, transmission) and demographic variables like age, education qualification, gender, region, *etc*. Logistic regression is used because in our study the dependent variable is "whether preventive practices are followed by the respondents or not" which is binary in nature (either yes or no).

Since logistic regression calculates the probability of success over the probability of failure, the results of the analysis are in the form of an odds ratio. Mathematically,

odds are defined as the ratio of the probability of the occurrence of an event divided by the probability that the event will not occur. In logistic regression, a logistic transformation of the odds (referred to as logit) serves as the dependent variable:

$$Log\,(odds) = logit\,(P) = ln\{P/(1-P)\} \qquad (1)$$

Here P= Probability of preventive practices followed by respondents

Taking the above transformation as the dependent variable and adding independent variables in the regression equation, our logistic regression model is represented as follows:

Logit(P) = a+ b1* COVID-19 evolution awareness score+b2 *Covid -19 transmission awareness score+ b3 *covid 19 symptoms awareness score+ b4* gender + b5* age + b6*educational qualification + b7*occupation + b8*area (2)

The independent variables are demographic variables and various awareness scores. The observations are independent from each other, and no multicollinearity issues were found in the independent variables.

RESULTS AND DISCUSSION

Characteristics of participants

Of the 2168 participants in the study, gender-wise, 56% were male and 44% were female, age-wise; 73% belonged to the 26-35 year age group, 21% to 18-25 year age group, and 6% to 36 years and above age group. As per educational background, 38% of the population were graduates, 35% were postgraduates, 19% were higher secondary passed, 6% were matriculation passed, and 2% were doctorates. Location wise, 63% of the respondents were from urban areas, 20% were from rural areas, and 17% were from semi-urban areas. Their occupational engagements reveal that 61% of respondents had private businesses, 28% were government employees and 4% were private employees in different sectors, 4% were students, and 3% were involved in some other professions. A detailed profile of the respondents is presented in Table 1.

COVID-19 awareness among the Indian public

For each set of awareness items, three different scores were calculated: namely COVID-19 symptoms awareness score, COVID-19 transmission awareness score, and COVID-19 evolution awareness score. For each statement, the value "1" is assigned to the response "completely aware"; value "2" to "somewhat aware"; and value "3" to "completely unaware". The scores were thus calculated as the cumulative sum of the responses for each category of questions. For all the demographic variables, the mean score for COVID-19 symptoms awareness is high (9-10) whereas awareness mean score for evaluation awareness is 5-7. This indicates that in general, participants are less aware of the COVID-19 evolution compared to his/her awareness of the COVID-19 symptoms. The values of these scores were compared with the demographic characteristics of the participants using the Kruskal Walis test (Table 2).

For the COVID-19 evolution awareness score, the value of the p-statistic indicates significant differences in the awareness level between male and female participants. In a similar study on MARS-CoV disease, Asaad *et al*. (2019) also identified gender differences, with the fact that women were found to be more aware of MERS-CoV. The awareness levels stipulated for all three scores were found to be statistically different across the age groups indicating that the awareness of the respondents is related to their age. When the educational qualification is taken as a demographic variable, the COVID-19 symptoms awareness score and the COVID-19 evolution awareness score are significantly different from each other; 5% and 10% respectively, signifying that the level of education influences the awareness of the participants. The COVID-19 evolution awareness score is also statistically different as 10% of the respondents are in various occupations. Regarding the COVID-19 transmission awareness score, except for the age group, no other demographic variable is found to be significant. The respondents are significantly aware of the COVID-19 transmission irrespective of their gender, educational qualifications, area type, and occupation. Lee *et al*. (2021) demonstrate that the respondents in South Korea has shown satisfactory awareness of COVID-19, including the transmission of the virus through respiratory droplets of the infected people and clinical symptoms of the disease. In contrast to it, in a study related to HIV, only 11% of the selected population was not aware of HIV/AIDS transmission in the Union Territory of Delhi, India (Mehra *et al*., 2014).

COVID-19 awareness and demographics of the Indian public

To study the bivariate association between the demographic variables and various awareness scores (COVID-19 symptoms awareness, COVID-19

Table 1: Demographic profile of the respondents

Variable	Type	N	Percentage
Gender	Female	952	43.91
	Male	1212	55.90
	18-25	452	20.85
	26-35	1588	73.25
Age Group	36-45	88	4.06
	46-55	24	1.11
	56 & Above	16	0.74
	Doctorate	44	2.03
	Postgraduate	748	34.50
Education Qualification	Graduate	832	38.38
	Higher secondary	416	19.19
	Matriculation	128	5.90
	Rural	428	19.74
Area	Semi-Urban	360	16.61
	Urban	1380	63.65
	Business Person	1320	60.89
	Govt. Employee	588	27.12
Occupation	Private Employee	88	4.06
	Student	96	4.43
	Other	76	3.51

transmission awareness, and COVID-19 evolution awareness), a cross-tabulation and chi-square analysis were conducted, and the results are presented in Table 3.

Awareness and gender

The COVID-19 symptoms awareness score indicates that, although 57% of the total number of the participants were male and 43% were female, statistically, there is no significant gender-wise difference between their awareness levels. The COVID-19 transmission awareness score shows that, relatively fewer participants were aware of it and the chi-square test results indicate that there is no difference in the awareness level of males versus that of females. The COVID-19 evolution awareness score suggests that, although the total number of well-informed participants are the low the chi-square results show that there is a significant gender-based difference in the awareness levels the participants maintained.

Awareness and age group

The COVID-19 symptoms awareness score suggests, that, of the total number of well-informed participants, about 90% represent all age groups, and there is no significant age-wise difference in their awareness level. Similarly, the COVID-19 transmission awareness score suggests that few participants (38%) were aware of COVID-19 and there is no significant difference in the awareness level of participants. But on the contrary, when it comes to COVID-19 evolution awareness score, of the 62% well-informed participants, the majority belonged to the age category of 18-25 years.

Awareness and educational qualification

From the total numbers the knowledgeable participants in the COVID-19 symptoms awareness score and the COVID-19 evolution awareness score (90%

Table 2: Kruskal-Walis analysis of awareness scores

Variable		COVID-19 symptom awareness	p	COVID-19 transmission awareness	p	COVID 19 evolution awareness	p
Gender	Female	9.99±2.1	0.495	9.77±2.5	0.208	7.47±2.0	0.080**
	Male	10.21± 2.5		9.86±2.6		7.13±2.0	
Age Group	18-25	10.25±2.5	0.026*	9.75±2.6	0.032*	7.38±2.0	0.068**
	26-35	9.59± 1.3		9.96±2.3		7.15±1.7	
	36-45	10.18±1.5		10.82±2.9		7.82±2.3	
	46-55	9.00±.0		8.17±1.3		5.50±.83	
	56& Above	9.00±.0		7.50±0.0		6.25±.95	
Education Qualification	Doctorate	9.84±2.6	0.049*	9.84±2.6	0.316	6.66±1.5	0.083**
	Postgraduate	8.91±2.3		8.91±2.3		7.18±1.0	
	Graduate	9.59±2.6		9.59±2.6		7.25±1.9	
	Higher secondary	9.74±2.6		9.74±2.6		7.23±2.1	
	Matriculation	10.04±2.5		10.04±2.5		7.59±1.9	
Area	Rural	10.41± 3.0	0.945	9.69± 2.8	0.323	.68±.46	0.475
	Semi-Urban	10.13 ±2.5		9.54± 2.6		.58±.49	
	Urban	9.97+1.9		9.90± 2.8		.62±.48	
Occupation	Business Person	9.50±1.0	0.128	9.55±2.1	0.502	7.95±2.2	0.075**
	Govt. Employee	10.00±2.2		10.84±3.0		7.26±2.0	
	Other	9.50±1.1		9.37± 1.6		6.71±1.7	
	Private Employee	9.88±2.2		9.95± 2.6		7.60±2.0	
	Student	10.26±2.4		9.72± 2.6		7.20±1.9	

*p<.05 **p<.10

and 38%, respectively), a 10% level significant difference is also found among the various categories of educational qualifications of the respondents, whereas, there is no significant difference among the categories for the COVID-19 transmission awareness scores. Nooh *et al*. (2020) also found that educational qualification significantly contributes to establishing individual awareness about MERS-CoV.

Awareness and area type

The majority of the knowledgeable participants in all COVID-19 symptoms awareness scores, COVID-19 transmission awareness score, and COVID-19 evolution awareness score were found to be living in urban areas. However, none of them were found to have a significant difference among all the defined categories of the area type at a 5% significance level. This implies that COVID-19 awareness level of the participant has no association with the type of geographical area they belong to. This is in line with the study of Nooh *et al*. (2020). They also found that there is no significant difference in the amount of knowledge about MERS-Cov and the kind of area the respondents belong to.

Table 3: Association of demographic variables with awareness factor scores

Demographic variable		Awareness factor scores					
		COVID-19 symptoms		COVID-19 transmission		COVID-19 evolution	
		Aware	Unaware	Aware	Unaware	Aware	Unaware
Gender	Female	43.40%	50.00%	43.70%	44.40%	49.00%*	40.90%*
	Male	56.60%	50.00%	56.30%	55.60%	51.00%*	59.10%*
Age Group (in years)	18-25	22.00%	9.60%	19.70%*	22.70%*	21.10%	20.70%
	26-35	71.80%	86.50%	74.60%*	71.00%*	72.50%	73.70%
	36-45	4.10%	3.80%	2.70%*	6.30%*	2.90%	4.70%
	46-55	1.20%	0.00%	1.80%*	0.00%*	2.50%	0.30%
	56 & Above	0.80%	0.00%	1.20%*	0.00%*	1.00%	0.60%
Education Qualification	Doctorate	2.20%**	0.00%**	2.10%	1.90%	1.00%**	2.70%**
	Post graduate	34.90%**	30.80%**	32.80%	37.20%	28.40%**	38.20%**
	Graduate	36.90%**	51.90%**	39.10%	37.20%	43.10%**	35.50%**
	Higher secondary	20.20%**	9.60%**	20.30%	17.40%	20.60%**	18.30%**
	Matriculation	5.70%**	7.70%**	5.70%**	6.30%	6.90%**	5.30%**
Area	Rural	18.80%	28.80%	20.60%	18.40%	16.70%	21.60%
	Semi-Urban	16.90%	13.50%	18.20%	14.00%	18.60%	15.40%
	Urban	64.30%	57.70%	61.20%	67.60%	64.70%	63.00%
Occupation	Business Person	59.80%	71.20%	62.10%	58.90%	62.10%*	58.90%*
	Govt. Employee	27.80%	21.20%	26.30%	28.50%	26.30%*	28.50%*
	Private Employee	4.30%	1.90%	3.90%	4.30%	3.90%*	4.30%*
	Student	4.70%	1.90%	5.10%	3.40%	5.10%*	3.40%*
	Other	3.50%	3.80%	2.70%	4.80%	2.70%*	4.80%*

*$p < .05$ **$p < .10$

Awareness and occupation

Ostensibly, a large number of business-oriented respondents took the maximum share in the knowledgeable population, but that made no significant difference in the scores of the COVID-19 symptoms awareness and COVID-19 transmission awareness. At the same time, 62% of the knowledgeable participants were also found aware of the COVID-19 evolution and there was a significant difference among various occupational categories for COVID-19 evolution awareness at a significance level of 5%.

Associations among COVID-19 preventive practices, demographics, and awareness

A chi-square test was applied to assess the relationship between the demographic variables and different preventive practices followed by the respondents. Table 4 presents the values of the results:

The chi-square test which depicts that there are significant differences between the prevention practices followed by the participants based on gender, age group, and education level (p=0.001). The practices followed

Table 4 : Association of preventive practices with demographic variables

Demographic Variables		Following n	%	Not Following N	%	χ^2(p)
Gender	Female	888	42.8	60	65.2	51.487 (0.000)*
	Male	1188	57.2	24	34.8	
Age Group	18-25	428	20.6	24	26.1	
	26-35	1528	73.6	60	65.2	
	36-45	88	4.2	0	0	22.378 (0.000) *
	46-55	24	1.2	0	0	
	56& Above	8	0.4	8	8.7	
Education Qualification	Doctorate	40	1.9	4	4.3	
	Postgraduate	732	35.3	16	17.4	
	Higher secondary	400	19.3	16	17.4	19.368 (0.001) *
	Graduate	800	38.5	32	34.8	
	Matriculation	104	5	24	26.1	
Area	Rural	404	19.5	24	26.1	
	Semi-Urban	324	15.6	36	39.1	10.974 (.004) *
	Urban	1348	64.9	32	34.8	
Occupation	Business Person	1268	61.1	52	56.5	
	Govt. Employee	560	27	28	30.4	
	Private Employee	88	4.2	0	0	8.444 (.077) **
	Student	96	4.6	0	0	
	Other	64	3.1	12	13	

*p<.01, **p<.05, ***p<.10

are also significantly different based on the type of area they live in (p=0.05), and their occupational level is also making a difference significant (p=0.1). It indicates that the gender of respondents, their age, and educational qualifications play an indispensable role in taking preventive measures against the COVID-19 pandemic controlas it is significant at 1% level. At the same time, the type of area and the occupation have also play an important role in the adoption of a particular preventive practice.

For further confirmation of the results, a binary logistic regression was run to examine the possible associations between the preventive practices followed and other independent variables (Table 5). The awareness scores of all the parameters namely the COVID-19

Table 5; Results of binary logistic regression for preventive practices

Variable		Preventive practices score		
		OR	CI	p
COVID-19 evolution awareness		14.557	(6.305-33.613)	0.00*
COVID-19 transmission awareness		4.259	(2.929-6.192)	0.00*
COVID-19 symptoms awareness		4.865	(3.377-7.008)	0.00*
Gender	Female (ref)			
	Male	.333	(0.120-0.923)	0.035**
Age Group	18-25 (ref)			
	26-35	1.09	(0.82-1.87)	0.04**
	36-45	1.56	(0.83 – 2.65)	0.191
	46-55	1.86	(1.09 – 3.53)	0.023**
	56 & Above	1.44	(0.75 – 2.48)	0.275
Education Qualification	Doctorate (ref)			
	Postgraduate	2.62	(1.32 – 6.42)	0.010*
	Graduate	2.43	(1.08 – 5.48)	0.025**
	Higher secondary	3.26	(1.96– 6.23)	0.007**
	Matriculation	2.44	(1.57 – 5.19)	0.004**
Area	Rural (ref)			
	Semi Urban	.627	(0.166-2.374)	.492
	Urban	2.210	(0.073-3.608)	.004**
Occupation	Business Person (ref)			
	Govt. Employee	.146	(0.023-0.929)	.162
	Private Employee	.879	(0.155-4.979)	.884
	Student	10.139	(1.443-32.260)	.870
	Other	.092	(0.007-1.259)	.174

*p<.01, **p<.05, ***p<.10

symptoms awareness, the COVID-19 transmission awareness, and the COVID-19 evolution awareness are found to be significant ($p<0.05$), which indicates a suitable model fit for all three variables. The results of the study specify that there is a significant difference in the preventive practices followed by the respondents based on gender. The odds of the preventive practices being followed are more for females as compared to males. Similarly, participants in the age groups of 26-35 years and 46-55 years respectively with an odds score of 1.09 and 1.86, respectively are more likely to follow the preventive practices as compared to those in other age groups. All categories of educational qualification are significant in determining the preventive practice score. However, the odds of the preventive practices being followed are higher for higher secondary qualifications. In our Preventive practices of the respondents residing in the urban areas are significant at $p<0.05$. With an odds ratio of 2.210, the urban participants are more likely to follow preventive practices as compared to their rural counterparts. The occupation of the participants is not significant in determining the preventive practices followed by ($p>0.05$). The study is also in line with, Jiang *et al*., (2016), that also concluded education and mobilisation were found to be related to the prevention practices followed against infectious diseases. Similarly, Asaad *et al*., (2019) confirmed that education about disease prevention propagated among people reduces their chance of getting infected. Several studies (Wallace, 2002; Rosenstock *et al*., 1988; Anuar *et al*. 2020; Khosravizadeh *et al*. 2021) thus used HBM to recognise perceptions of susceptibility, benefits, and seriousness, which are used to explain the need to adopt particular preventive behaviours regarding the disease and provide cues to actions related to their health behaviours.

CONCLUSION

The present study highlights the awareness level the Indian public maintained about the COVID-19 pandemic, in terms of the three parameters - COVID-19 symptoms awareness, COVID-19 transmission awareness, and COVID-19 evolution awareness, with a variation pattern determined by the demographical characteristics of the survey participants. The results indicate that, more than women, men were aware about the evolution of the pandemic and that, among the respondents, there were cases not completely aware of the basics of the COVID-19 pandemic, despite being administrative staff members of various hospitals in metropolitan cities such as Mumbai (Modi *et al*., 2020). On contrary, a similar study conducted with Saudi Arabian participants in Saudi Arabia, claims that around 98% of the respondents were aware of the COVID-19 clinical symptoms and that 96%

had known the fact that there is no clinically approved treatment (Al-Hanawi *et al*., 2020).

The majority of the population in the age group 18-35 yrs were aware of how the pandemic spread was spreeding, it was found that age mattered only concerning COVID-19 transmission awareness. As reported in Mygov.in (2020) and Press Trust of India (2020), India's developing status with a huge population might be a potential reason for the setbacks experienced in the efforts to control the spread of the pandemic. However, respondents for COVID-19 symptoms awareness and COVID-19 evolution awareness were different educational qualifications.

The study further reveals that the demographic variables of the participants had a huge impact on the preventive measures they followed. Furthermore, it was discerned that the awareness levels determined under various parameters, concerning the symptoms, the transmission, and the evolution of the COVID-19 pandemic also make a significant difference in taking preventive measures for COVID-19. In this regard, it is worthwhile to look at the premise developed by Yang *et al*. (2021) that SCT in relation to health literacy reflects the individuals' comfort and skill to access, seek, interpret, and use health information. Therefore, it is emphasised that, for effective prevention and control measures, individuals need to have knowledge about infectious diseases (Kim, 2015). In our study, it was discovered that most of the participants were following preventive practices, and it may be one reason for the slow spread of the virus in India, as compared to other countries.

Limitations and future research

The generalisation of the findings from a cross-sectional study is always difficult. Moreover, this study was carried out through a quick online survey using a convenience sampling technique during the COVID-19 pandemic lockdown. Although, we tried to have respondents from every corner of the country, many states could not be covered. The study was also limited to the English-literate population having access to the internet. Further research may be done by taking a larger sample including the illiterate public, to validate the generalised results with stronger data.

Science communication strategies used by the government

Science communication strategies have emerged as an influential instrument for managing public health in India. In such a pandemic situation, clear communication

can stimulate public responses, lessen anxiety, and improve the living conditions of the people. The government was able to maintain calm among the public amidst the overflow of information on television, the internet, and social media. Many posters mentioning Dos and Donts regarding COVID-19 were published. Radio and television advertisements were also broadcasted in the public interest. A nationwide caller tune was applied in the regional languages on the mobile phones of all the carriers for reminding people to take precautions. A mobile application named *Arogya Setu* was also launched and was made mandatory for people who were travelling or going out so that they could come to know if any person with COVID-19 symptoms is within the range of a few kilometres. The app was also meant to assist in self-assessment of COVID-19 symptoms and send an alert if someone tested positive around you.

Author statements

Ethical approval

Only voluntary participation of the respondents was recognised, and their anonymity has been maintained throughout the process.

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Competing interests

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RESEARCH ARTICLE

Assessing visitor preferences and willingness to pay for Marine National Park Hikkaduwa: application of choice experiment method

Chamathi Jayaratne [1*]**, UADP Gunawardena**[1]**, J. C. Edirisinghe**[2] **and Sahan Dissanayake**[3]

[1]*Resource Economics Unit, Department of Forestry and Environmental Science, University of Sri Jayewardenepura.*
[2] *Faculty of Plantation Management, Wayamba university of Sri Lanka.*
[3] *Faculty of Economics , Portland State University, USA.*

Abstract: Eco-tourism all over the world is threatened by the fact that the coral reefs and associated ecosystems are in a process of disappearing at an accelerated rate due to several natural and anthropogenic causes. In this context, the Marine National Park Hikkaduwa (MNPH), one of the four marine national parks in Sri Lanka, that features a fringing coral reef with a high degree of biodiversity, reports a decreasing trend in visitation mainly due to a condition of coral bleaching caused by an El Nino effect. Unfortunately, the regeneration of the corals is found to be slowed by continuous anthropogenic activities. Against this background, the research focuses on investigating how visitor behaviour changes with the degraded situation and what avenues are available to attract more visitors to ensure benefit flows. In this concern, visitor preferences regarding the quality of the habitats and other facilities and their significance were analysed under a conditional logistic regression model. Further, a choice experiment was carried out with a randomly selected group of 200 visitors to diagnose their response to the present condition of the coral reef, the beach, and the facilities provided. Under a conditional logistic model, it was discovered that the condition of the coral reef is an important attribute that answers the question of why visitors are not willing to pay if the corals are bleached and broken. It was also discovered that the visitors are willing to pay LKR 322.52 if they are provided with new boats and new safety jackets. The results indicate that benefit flows could be enhanced with the restoration of coral ecosystems and the improvement of the physical infrastructure. Overall, the research attempts to establish that the standard maintenance of the coral reef along with high-quality visitor welfare facilities to match visitor preferences will positively impact all types of payment compliance issues with regard to the visitors.

Keywords: Coral reef, choice experiment, willingness to pay.

INTRODUCTION

It is observed that coral ecosystems in the world deteriorate due to natural causes and anthropogenic activities (Hynes *et al*., 2018) such as water warming, pollution, ocean acidification, overfishing, and physical destruction to the corals, and coral bleaching occurs due to stress caused by light, temperature, and nutrients. The flow of ecosystem service benefits (Barbier, 2012) of corals, especially in relation to eco-tourism, is currently suboptimal due to their degradation, and the value depreciation it causes (Arin & Kramer, 2002; Gaylard *et al*., 2020). It is observed that climate change also tends to accelerate their degradation process (Carlson & McCormic, 2015). Some believe that managerial improvements are crucial to ensure the restoration and enhancement of economic and other benefits of the coral reefs. An environmental valuation of the degraded coral ecosystems (Laurans *et al*., 2013; Parsons & Thur 2008; Cesar & Beukering 2004; Ahmed *et al*., 2007) is meant to provide a useful source of information in this concern.

Sri Lanka is no exception in relation to the marine resource degradation experienced by other countries around the world. Although the island nation is endowed with a rich form of marine biodiversity especially coral diversity, many areas are under severe pressure due to the combined impact of human overexploitation, coral habitat destruction, pollution, and general neglect (Rajasooriya 2005). The importance of marine biodiversity needs to be understood in terms of its economic contribution
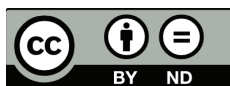
to the local tourist industry, the third largest foreign revenue source to the economy, plays an important role in Sri Lanka's foreign earnings, (Sri Lanka Tourism Development Authority 2019), with the record of its annual growth being approximately 22% for the past four years (Sri Lanka Tourism Development Authority, 2019).

In this context, the Marine National Park of Hikkaduwa, which contains a fringing coral reef of high degree of biodiversity, attracts prominence in the context of eco-tourism. The area was declared as a wildlife sanctuary in May 1979 and then upgraded to a nature reserve in August 1988. Further, it was established as a national park in 2002 with an extension of the land area (Department of Wildlife Conservation - DWLC, Personnel Communication). Since then, it has been contributing to the national income through the revenue earned from the entrance fee and boat service, being the main tourist destination in the southern coast of Sri Lanka. Considering the threat of deterioration, the marine park is faced with, the paper presents its research issue, conceptual framework, and literature review, focusing mainly on the environmental valuation of degraded marine ecosystems, and subsequent sections covering the methodology, the results achieved, and a discussion leading to the conclusions drawn.

The research problem and the objective

The Marine National Park Hikkaduwa (MNPH) is reported to be showing a declining trend of visitation (DWLC, 2019) mainly due to the issue of coral bleaching that was noticed for the first time in 1998 as a result of the El Nino effect (Rajasooriya 2005). Since then the regeneration process of corals has been very slow due to continuous anthropogenic activities in the MNPH surroundings (Rajasooriya 2005). The Department of Wild Life Conservation (DWLC) has taken certain steps to rehabilitate the degraded corals by replanting them. The next issue in the venue that discourages visitation is that the infrastructure facilities for visitor use are at a minimum level although the Hikkaduwa Urban Council has provided a washroom complex. Although the management of visitor-generated wastes are currently being handled by the DWLC and the Urban Council, there are shortages of labour and other resources affecting the cleanliness of the beach. The boat services are being operated by the private sector but their safety conditions are monitored by the DWLC. How the visitors perceive the site quality in the presence of the degraded situation of the corals is yet an un-researched area in Sri Lanka. In addition, visitor preferences for site facilities also form an unexplored research area. It is also worthwhile to investigate avenues available to attract more visitors in

managing a degraded tourist attraction to ensure a boost in the ecosystem service flows.

Conceptual framework

As the Marine National Park Hikkaduwa holds the value of a non-market good or environmental service, the research was conducted as a choice experiment (CE) based on the random utility model (RUM)/utility maximization model (Lancaster, 1966) originally developed by McFadden and others (McFadden,1974) to analyse behavioural choices among mutually exclusive alternatives (Haab and Mc Connell 2002). As the RUM is an attractive modelling strategy since it can model the choice of one out of many recreational sites, it is adopted in this research mainly because it can deal with choices that individuals could make. Although different kinds of sampling schemes are possible such as exogenous sampling (random or stratified sampling) and choice-based sampling, as this research concentrates on a recreational analysis, a common choice-based sample is taken for the purpose of on-site sampling.

After the problem was identified, the survey design was made in three steps. First, information about the present situation was obtained and the target population was identified, and then choice cards were established. One of the attributes was defined as price or cost with an intention to obtain data on the visitor's willingness to pay (WTP). Then a marginal utility estimate model was used to estimate the WTP of the respondents for any changes in the given attributes. Once the attributes and their levels were decided, several scenarios were constructed, including the attributes with their respective levels in the changing values, enabling the participants to select alternatives out of the presented options.

LITERATURE REVIEW

Coral ecosystems are subjected to extensive valuation studies globally from the ecosystem service perspective and most of them are reported from the United States, Southeast Asia Caribbean and a few from the South Pacific region (Laurans *et al*., 2013; Pascal *et al*., 2016; Elliff and Kikuchi, 2017). In this context, benefits obtained from flood protection in a global context are studied by Beck *et al*., (2018), Beck *et al*., (2016) and Storlazzi *et al*., (2017), and the recreational value of coral reefs are studied by Brander *et al*. (2007) by using a meta-analysis. Further, Seenprachawong (2016) assesses the economic value of the coral reefs in Thailand while Spalding *et al*., (2017) estimate the global value of coral reef tourism, and Robles-Zavala and Reynoso (2018) estimate the recreation benefits in Mexico. Holstein

et al., (2019) assess ecosystem services provided by Mesophotic coral ecosystems, Putri, *et al.,* (2020) assess coral reef health in the nature recreation park based in Indonesia. Yeo (2004) estimates the recreational value of coral reefs in a Marine Park in Malaysia and Oleson *et al.,* (2020) develop an ecological economic model of coral reef recreation based on Hawaii.

The economic values of the degraded coral habitats focus on degradation resulting from local as well as global threats. Lane *et al.,* (2013) estimate coral mortality and bleaching for three major US locations and calculate the economic values of changing coral cover, using a benefit transfer approach. Their results suggest that a reduced global emissions scenario would provide a substantial benefit to shallow water coral reefs by delaying or avoiding potential future bleaching. Similarly, Persons & Thur (2008) value the changes in the quality of coral reef ecosystems in the Bonaire National Marine Park in the Netherlands. They assume a hypothetical degraded situation and calculate per-person welfare loss per annum. Further, Van Beukering *et al.,* (2010) calculate the total economic value (TEV) of Bermuda's coral reefs while Carr and Mendelsohn (2003) and Van Riper *et al* (2016) recommend the need for conservation policies for Great Barrier Reef based on its value (consumer surplus) to protect it from global warming, mining, overfishing and water pollution.

Based on the results of valuation studies, different authors recommend different policy tools for reversing coral degradation. For example, Seenprachawong (2003) assesses the coral reefs at Phi Phi islands in Thailand and mentions how the current threats due to rising maritime traffic, improper fishing methods, and unsustainable tourism activities could be minimised and how its value could be enhanced. Based on an estimated consumer surplus, the study recommends doubling the entrance fee and charge an additional fee for those who wish to see corals. Further, Ahmed *et al.* (2007) calculate the recreation and conservation benefits of the coral reefs in the Philippines, in order to prevent threats to the corals from the current utilisation patterns and introduce a consumer surplus value. The study highlights the role of advocacy, education, and awareness campaigns that may increase the visitor's willingness to pay (WTP) for the management of coral reefs. Notably, Rani *et al.,* (2020) assess Saint Martin's coral island in Bangladesh, whose coral reef had been deteriorated due to fishing, anchoring boats, and discharging wastes by tourists, and indicate the net present value of the benefits from all the available resources focused on a 25-year time frame. The study proposes that the government should produce a new management plan for sustainable

utilisation of the valuable resources concerned. Eventually, Chen *et al.,* (2015) evaluate the economic damage caused by climate change and increased carbon dioxide concentrations on the global coral reefs. They have estimated the resultant loss in terms of economic value based on a meta-analysis of the recreational and commercial value of the reef cover.

It is reported that El Nino, which occurred in 1998, led coral mass bleaching and a loss of tourism income for many Asian countries. In this regard, Cesar (2000) points out that it caused a 30-50% of coral mortality in the Philippines and the potential loss for their national economy over the period 2000-2025 was estimated as US$ 1.5 million. Accordingly, losses in tourism and welfare revenues in Sri Lanka due to the coral bleaching were estimated at by 2000 - 2025 is US$ 2.2 million (Westmacott *et al.,* 2000).

Regarding coral reef deterioration, Wilson *et al.* (2010) claim that climate change-associated impacts contribute to coral cover declines and lead to the elimination of many coral fish species which are an important source of protein-rich food for coastline inhabitants. The lost producer surplus from commercial fishing precipitated by coral bleaching of the Great Barrier Reef is calculated as US$ 0.4 billion ((Oxford Economics, 2009). Further, Westmacott *et al.* (2000) estimate that the financial damage due to coral bleaching which took place over a 20-year period until 1997 was over US$ 8 billion; that due to coastal erosion was US$ 2.2 billion; that due to tourism loss was US$ 3.3 billion; and that due to fishery loss was US$1.4 billion.

The previous studies adopt a range of valuation methods in valuing coral degradation. In this concern, Ngazy *et al.* (2004) estimate the demand for recreational scuba diving in Zanzibar using the contingent valuation method (CVM), in order to identify the impact of coral bleaching on tourism. Further, Carr and Mendelsohn (2003) use the travel cost method (TCM) to estimate the annual recreational benefits of the Great Barrier Reef, which is meant to prevent, the adverse impacts of global warming, mining, overfishing, and water pollution. Subsequently, Ahmed *et al* (2007) use TCM and CVM to estimate recreational and conservation benefits of the coral reefs in the Lingayen Gulf, Bolinao. It is mentioned that the corals are at a threat due to overfishing as well as illegal fishing methods such as blast and cyanide fishing. Further, Christie *et al.* (2015) use CE to value the benefits derived from two coral ecosystems in the Caribbean which degraded due to agriculture run-off, sewage, overfishing and bad

fishing practices and they mention that an economic valuation of marine ecosystem service will be used to plan marine conservation policies that maximise the welfare benefit. Wattage *et al*. (2011) use CE method to conserve deep sea corals in the Irish waters which are faced with a threat due to the expansion of the Irish deep-water fishery that uses trawls fitted with vigorous rock-hopping gear under a risky technique very destructive to coral habitats. Similarly, Parsons and Thur (2008) also report on conducting a choice experiment study to value a coral reef ecosystem for scuba divers in the Caribbean.

Regarding Sri Lanka's coral reefs, the ecosystem services at the Kalpitiya bar reef is valued as LKR 53 million per year (Senarathne *et al*., 2015); that of the Pigeon Island National Park, as LKR 60 million per year (Jayaratne *et al.*, 2016); that of Hikkaduwa National Park, is LKR 6135.48 million (Rathnadeera, 2002); and the estimated recreational value of the Hikkaduwa National Park is calculated at the rate of LKR 1300 per local visitor (Jayasekara *et al.* , 2019).

The above review provides evidence of valuation attempts on coral degradation and the associated economic losses in several countries. Similarly, Hikkaduwa which used to be a biodiversity-rich destination about three decades ago, now experiences reducing numbers of visitors over the years due to coral bleaching (Department of Wildlife Conservation, Personnel Communication). There has been some effort to replant corals in the HMMP and improve the site quality. Yet, in the several valuation studies on the coral habitats carried out in Sri Lanka, a research gap appears in the potential enhancement of the values of the degraded sites when they are redesigned by rehabilitating the degraded areas and improving other aspects of the recreational experience. The site quality, especially the quality of the corals and the quality of the recreational

infrastructure, are important parameters in determining visitor preferences.

METHODOLOGY

Research design

The research considers that the first step in conducting a CE is to identify different attributes, along with their status and trends. In order to establish those important attributes, focus group discussions (FGDs) and key informant interviews (KIIs) were conducted in the study area. Initially, a pilot test was held to conceive a general idea about setting questions. The list of the selected attributes and the associated levels are presented in Table 1.

Regarding the monetary attribute, a monthly payment in Sri Lankan Rupees was finally selected among other possibilities such as willingness-to-accept payment, or willingness to spend time. This kept the exercise simple and generic. The attributes and their levels were determined after conducting the focus group discussions (FGDs) with the stakeholders and the key informant interviews (KIIs).

In order to create various choice scenarios to be used in the discrete choice experiment (DCE), first a statistical design was developed to generate random alternatives and they were organized in several choice tasks, amongst which the respondents were enabled to choose their most preferred alternative. The statistical design for the CE was generated using the SPSS 21 software. The number of random alternatives in each choice task was set to two, with a third fixed alternative corresponding to the status quo. An orthogonal main effect design was used and blocked into nine different versions (blocks) of

Table 1 : Attributes and their levels

Attribute	Level
Quality of coral reef	Healthy; 50% bleached; completely bleached and broken
Quality of the beach	Clean; clean except for some polythene thrown here and there; not clean
Replanting	Corals are replanted, a plan to replant underway; no plans to replant
Boat quality	New boats less than 1 year old; Boats between 1 to 5 years old; boats more than 5 years old,
Availability of facilities	Many facilities (visitor center, changing rooms, toilets) available; Only basic facilities (such as toilets) available; Facilities not available
Payment (LKR)	1000, 500, 100, 50

three choice tasks. Orthogonality was assumed, with a design that ensured that the individual estimates of the respective attributes and levels were independent of each other. Each block (with 3 choice cards) was shown to 20 respondents, and they had to pick one card out of four choice cards. In the cards, the condition of the coral reef, the level of pollution, the plans to replant, the condition of the boats, the availability of facilities, and the monitory contribution was presented.

Several field tests and reviews were conducted in order to make sure that the questions were clear and understandable. The survey included several sections

to select 200 respondents which represent 1.7% of the annual visitor arrival, and they were interviewed using a standard questionnaire.

Calculating marginal payment compliance or willingness to pay

When at least one attribute is measured in financial terms, the MWTP can be traced as the ratio of two parameters, holding others constantly, provided that both attributes are statistically significant. The MWTP is the ratio of the coefficient of the attributes of interest and that of the price coefficient (Can & Alp, 2012).

Table 2 : An example of a choice card used in the visitor survey

Attribute	Option A	Option B	Option C
Quality of reef	Healthy	Bleached and Broken	50% bleached
Level of pollution	Clean except for some polythene here and there	Clean	No proper garbage management system
Level of coral restoration	No replanting	Plan to replant	Corals are being replanted
Quality of the boats	Boats older than 5 years(old)	boats in between 1 to 5 years old	New boats less than 1-year-old
Availability of facilities	Only toilets	No facilities	Visitor Information Centre and changing rooms and toilets available
Expected payment	LKR 1000	LKR 100	LKR 500

aimed at collecting extensive information on the socio-economic background of the respondent and their household, their use of marine ecosystems (and those by their households), their perception of the preservation issues and the choices made during the discrete choice experiment (DCE) section. An example of a choice set is depicted in Table 2.

Data collection

The data collection was done from June to August 2019, covering the target population of the survey, that was the visitors to the Hikkaduwa Marine National Park in 2019 whose total number was recorded as 12,321 (DWLC). There a random sampling method was used

Let the initial state of the utility be V0, the new state be V1, and the coefficient of the cost attribute be βc. Then, the MWTP is derived from an equation as follows:

$$MWTP = \beta_c^{-1} ln \frac{\{\sum_i \exp{(|vi^1\}}}{\{\sum_i \exp{(vi^0\}}}$$

By letting βk represent the coefficient of any attribute, the above equation of WTP can be stated as follows:

$$MWTP = -\frac{\beta_K}{\beta_c}$$

RESULTS

This section of the paper presents the results of data analysis.

Visitor's perceptions of disturbances to the ecosystem

According to Figure 1, 71% of visitors considered that the existing number of boats is not too many, and 22%, that it is too many and a disturbance to nature. Seventy-one percent (71%) believed that trampling of corals does not prevail while 22%, that it does. Among the respondents, 75% complained that dropping boat anchors on the corals is not a problem, and 17% did not. Fifty-three (53%) percent reported that non-biodegradable garbage was not seen on the beach and 40% social that it was on the beach. Sixty-nine percent (69%) of the visitors revealed that they did not see fishing nets on the reefs, and 24%, revealed that they did. Regarding beach pollution, 42% of the visitors claimed that they did not notice any beach pollution while majority 52% claimed that they did. This reflects the level of degradation that has happened and the need for a robust conservation strategy.

Visitor perception of the environment

Several questions were asked from the visitors, to figure out their perceptions of the environment. The information elicited thereby appears as follows. 1). When asked whether they had been aware of the place
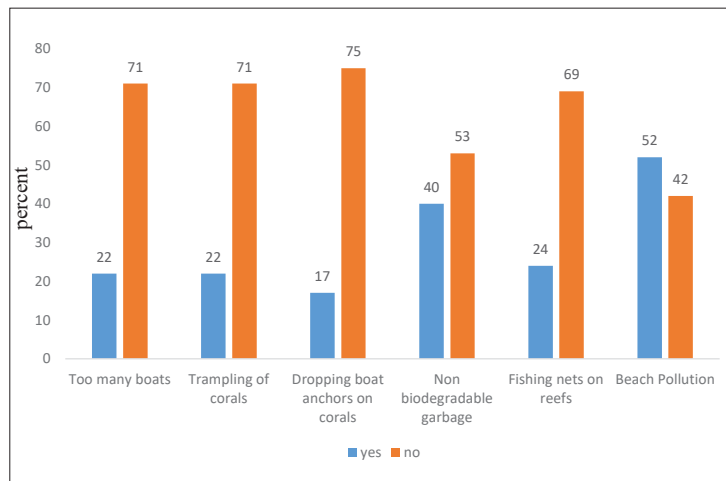

Figure 1: Visitor perception of the disturbances to the ecosystem
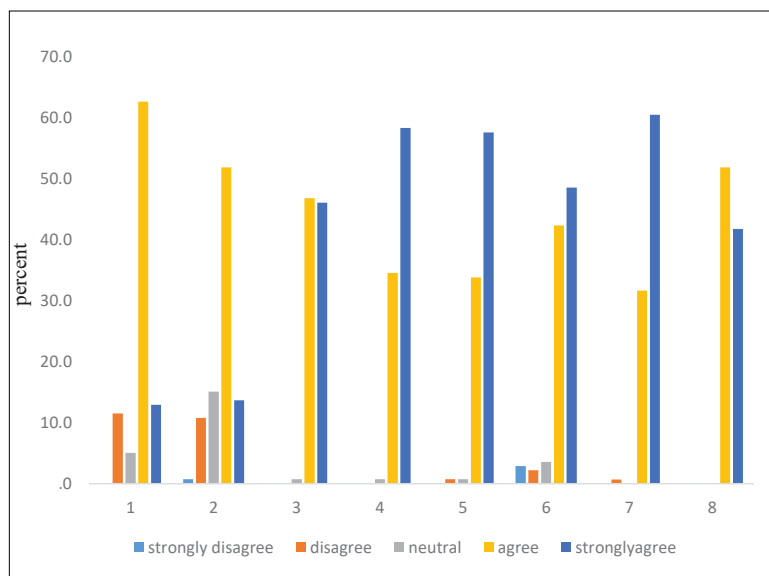
Figure 2: Visitor's perception of the environment

before participating in this survey, approximately 76% answered, "yes". 2) When asked whether they had known about rare fish species, 51.8% answered "yes", and 13.7% "yes, very much". This implies that this is a common destination for watching rare fish species. 3) When asked whether the visitors admire the beauty of the nature, 93% respondents introduced themselves as nature lovers and only 0.7% remained neutral. 4) When asked whether Sri Lankans have a responsibility for the protection of the marine environment in the protected area and its surroundings, 93% admitted it. 5) When asked whether the Sri Lankan government must do more to preserve the marine environment, 91.4% answered "yes". 7) When asked whether fishing should be banned in the surrounding area, 90.8% of the respondents agreed, and 5.1% disagreed, and, asked whether the venue should be protected for their children and for the future generation, 92% agreed and 8% strongly agreed. 8) Finally, when asked whether the park should be protected because it represents a unique and fragile ecosystem which has a right to exist, 52% of the respondents agreed and 42% strongly agreed. The perception questions and the results are given in Figure 2.

Analysis of choice experiment results

A conditional logistic regression was done in obtaining the choice (represented by the cards that were selected by the respective participants) as the dependent variable and in obtaining the response to other variables (represented by the quality standards of the environmental and the facilities available) healthy coral reef, bleached and broken coral reef, clean beach, no proper management of beach, corals being replanted, no replanting of corals, new boats with safe jackets, old boats and no safe jackets, facilities available, facilities not available and contribution, in Table 3 as independent variables. The model is statistically significant with a 95% probability level (P<0.05). Further, a pseudo R2 value of 45.56% is received, indicating that 45% of the variation in the dependent variable (choice) can be explained by the independent variables.

According to Table 3, regression equation for the respondents can be presented as,

choice = -0.0021413 - 15.22608 bleached and broken corals - 14.66015, clean beach -1.421534, no proper management of beach + Replanting of corals 15.78736 + 16.41247, no replanting of corals + 0.6906052 new boats and safe jackets available.

According to Table 3, the availability of healthy coral reef variable is not significant at the 95% confidence

level. However, bleached and broken corals reef variable is significant. The value of the coefficient is negative, which implies that when the corals are bleached and broken visitors value becomes less important compared to the 50% indicator on the bleached and broken corals. The signal given by the negative coefficient is that people have considered a 50% indicator of the bleached and broken corals and broken corals is more important compared to the other two options.

As explained in section 3.3, marginal payment compliance or marginal willingness to pay is the negative of the proportion of between the coefficient of the attribute and the coefficient of the contribution.

MWTP for bleached and
broken corals $\quad\quad\quad = -(-15.22608/-0.0021413)$
$\quad\quad\quad\quad\quad\quad\quad = \text{LKR-7111}$

The marginal willingness to accept (MWTA) value for bleached and broken corals is LKR 7111 and it implies that the visitors are not willing to pay to visit the national park if the corals are bleached and broken. This ultimately implies that the condition of the coral reef is considered an important aspect according to the visitor's perception. Further, the decreasing number of annual visitors also provides a signal that the deterioration of coral quality over time has reduced the number of visitors.

The variables of clean beach and no proper management of beach are both significant at a 95% confidence level and have negative coefficients. This implies that these two options are less important compared to the clean beach except for some polythene strewn here and there, which is the most preferred option. The marginal willingness to pay for the clean beach is calculated as follows;

MWTP for clean beach $\quad = -(-14.66015/-0.0021413)$
$\quad\quad\quad\quad\quad\quad\quad = \text{LKR -6846}$

Therefore, MWTA for the clean beach is LKR 6846 and MWTP for no proper management of beach is calculated as follows;

MWTP for no proper
management of beach $\quad = -(-1.421534/-0.0021413)$
$\quad\quad\quad\quad\quad\quad\quad = \text{LKR -664}$

Therefore, the MWTA remains, if the beach is not properly managed, as LKR 664. It reveals that the visitors prefer a moderately clean beach to a perfectly

clean or not properly managed beach. This states that the visitors are more concerned about the quality of corals compared to the other facilities available in the national park.

The visitors prefer new boats with safe jackets compared to old boats less than 5 years with safe jackets because new boats with safe jackets have a positive coefficient with a p value less than 0.05 (significant at a 95% probability level). MWTP for new boats with safety jackets is LKR 322.52 and it is calculated as follows;

MWTP for new boats
with safe jackets   = -(0.6906052/-0.0021413)
                            = LKR 322.52

The result implies that visitors are willing to pay this amount for new boats with safety jackets and that they are satisfied with better-quality boats. The worst option is the old boats with no jackets which are not significant. This also implies that the visitors are concerned about having a better recreational experience with safety. Therefore, in order to attract more visitors better quality

Table 3 : Results of the Conditional logit Regression

Attributes and Interactions	Conditional logit model coefficient	P value
Healthy coral reef	0.2227638 (0.5313)	0.675
Bleached and broken coral reef	-15.22608* (1.1710)	0.000
Clean beach	-14.66015* (1.1075)	0.000
No proper management of beach	-1.421534* (0.4730)	0.003
Corals being replanted	15.78736* (1.2681)	0.000
No replanting of corals	16.41247* (1.2681)	0.000
New boats with safe jackets	0.690605* (0.26885)	0.010
Old boats and no safe jackets	-.2974127 (0.6587)	0.652
Facilities available	-.3670738 (0.5613)	0.513
Facilities not available	-.1643107 (0.2930)	0.575
Contribution	-.0021413* (0.00005)	0.000
Log likelihood	-111.17446	
Pseudo R2	0.4556	
Sample size	200	

Note * P value <0.05, ( ) standard error

boats with safe jackets should be provided. This also provides important implications for park management.

The results also reveal that visitors do not consider the availability of facilities as an important aspect since both attributes (facilities available and facilities not available) are not significant.

DISCUSSION AND POLICY IMPLICATIONS

There are similar studies carried out in the international arena, Wattage *et al.* (2011) show the use of a multinomial logit model to test banned trawling is a feasible option. Accordingly, three variable parameters, area, activity, and cost were tested. The cost attribute was found insignificant (i.e., the management and monitoring cost for calculating payment compliance or the willingness to pay (WTP) value that had been designed as a payment of an additional yearly tax contribution per person towards the maintenance of the protected marine area in the U.K). Further, Glen *et al.*, (2010) mention that the attribute of additional annual tax contribution was not a significant determinant of preference in his study. However, in this study, the contribution is considered significant (p value 0.0000) as it ultimately depicts that more people in developing countries are willing to pay for the preservation of natural resources than those in developed countries.

Glenn *et al.* (2010) use a conditional logit model to analyse the Irish public support for the designation of protected marine areas to protect the Lophelia reefs. In this study, it is significant that the protection of all areas where corals are supposed to exist is preferred over the status quo of protecting all currently identified coral reefs with a positive coefficient (+1.16258) and that bleached and broken coral reefs has a negative coefficient (-15.22608). This highlights the importance of protecting coral reefs globally.

Both Wattage *et al.* (2011) and Glenn et al. (2010) reject trawling as a fishing method that should be banned to protect corals with significant positive coefficients. In the focus group discussions, it was mentioned that dynamiting is similarly a destructive fishing method that is being practiced despite prohibition by law (Fisheries and Aquatic Resources Amendment Act No. 4 of 2004 of Sri Lanka).

Can and Alp (2012) derive a pseudo R2 value of 0.087 while, according to Hensher *et al.,* (2005), pseudo R2 values between 0.2 and 0.4 are considered a decent fit. Louviere *et al.* (2000) consider this range as an extremely good fit, evaluating a pseudo, R2 value of 0.4556 as a valid model.

Ahmed *et al.,* (2007), have mentioned that willingness to pay (WTP) values (in absolute terms and as a percentage of income) for the conservation of coral reefs at Bolinao was very low among domestic tourists. This reveals that the preservation of natural resources and the environment may not be an immediate priority among the local travellers among the socio-economic considerations in developing countries such as the Philippines.

Rani *et al*., (2020), based on a study carried out on St. Martin's Island, Bangladesh state that tropical coral reefs provide a large number of ecosystem services to the local economy in various ways. However, without any sustainable use practices and proper conservation methods over the last couple of decades, many tropical coral reef ecosystems have been damaged due to the overuse of the resources. This situation applies to Hikkaduwa coral reef as well. Therefore, the main policy recommendation made in this paper is that the government should produce a conservation and management plan for the restoration of the degraded coral ecosystem. Further, it has been proved from this study that visitors are more concerned about the health of the coral reef so that policymakers should concentrate on strategies that are capable of preserving corals.

The ratio between the total number of visitors and the income from the Marine National Park Hikkaduwa has been showing a declining trend over the past years. It can be highlighted in this research that the needs of the visitors are the condition of the boats and the quality of the coral reef rather than the cleanliness of the beach. These are good signals for the policymakers and this place can be developed further to attract more visitors focusing increased revenue generation.

Following Can and Alp (2012), a multinomial logit model was used to analyse the choice experiment data and the results show that the local residents and the foreign tourists are willing to pay 18 US$/month and 16.6 US$/tour, for the improvement of the water quality. In the Sri Lankan context, so far, research has not been carried out, on water quality aspects. Therefore, research projects with similar objectives would be much appreciated in the Sri Lankan context as well.

Further, it was disclosed in the FGDs that the solid waste that gets accumulated in the national park is mainly from the visitors and is jointly disposed of by

the Department of Wildlife Conservation (DWLC) and the Urban Councils (UC). The explanation given by the UC on this reveals that there are not enough staff to engage in garbage disposal activities. Therefore, it is mandatory to equip respective institutions with the necessary resources to ensure the sustenance of a better-managed national park.

Moreover, the main state stakeholders associated with the Marine National Park Hikkaduwa are the DWLC, Coastal Conservation Department, Road Development Authority, Irrigation Department, UC. In addition, there are private parties who operate boats. There should be proper awareness and delegation of authority among these stakeholders in order to manage the park in a visitor-friendly way.

A breakwater has been built by the Harbour Corporation a few miles away from the National Park, and it has resulted in the accumulation of a large heap of sand in the coral reefs. It is reported that many valuable corals are being extinct after the construction (FGD). Therefore, it is necessary to have made a proper environmental impact assessment policy to be followed before making any changes to the natural environment.

In addition, wastewater canals are being diverted to the sea in the Hikkaduwa area, resulting in sea pollution. There should be a proper screening method for the wastewater being discharged into these canals, in order to protect the corals in the sea.

The policymakers can use these results to guide the management of the park in a more sustainable way and to increase the revenue earned by the national park.

CONCLUSIONS

This research attempts to investigate changes in visitor behaviour with regard to the degraded situation of the coral reef precipitated by natural and anthropogenic reasons. The condition of the coral reef is considered an important aspect of life by visitors. It was evident that the visitors prefer the quality of the corals compared to other facilities available in the park. Further, the visitors are moderately concerned about the cleanliness of the beach and they are more concerned about the condition of the boats to have a better recreational experience. This indicates the importance of building infrastructure facilities in order to compensate for the lost natural capital.

The present study adopted a choice experiment to value the environmental amenities of a marine park which is under continuous pressure from natural and manmade degradation such as climate change, marine pollution, and species loss. That is why it is argued that it is mandatory to bring strict, yet applicable environmental policies focused on the conservation of the park. It is expected that research findings of the present study will assist decision-makers in developing management strategies to overcome the current environmental problems of the national park.

Acknowledgments

END NOTES

1. Total economic value is aggregation of the use and non use values provided by a given ecosystem.

2. Consumer surplus is the excess of social valuation of product over the price actually paid.

3. Willingness To Pay is maximum price customer is willing to pay for a product or service.

4. Sustainable utilization is using resources without compromising the needs of the future generations.

5. Meta-analysis is examination of data from a number of independent studies of the same subject, in order to determine overall trends (Perman *et al* 2003).

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RESEARCH ARTICLE

Mobile phone-enabled internet services and the technology readiness of the users

A. M. A. S. M. Bandara[1*] and L. N. A. C. Jayawardena[2]

[1]*Department of Operations Management, Faculty of Management, University of Peradeniya, Sri Lanka.*
[2] *Department of Agricultural Extension, Faculty of Agriculture, University of Peradeniya, Sri Lanka.*

Abstract: At a time the ecosystem of mobile phones continues to evolve, this study investigates the impact of the users' technology readiness (TR) and perceived value (PV) of mobile phone-enabled internet usage (MPEIU). The primary aim of this study is to examine the potential roles of TR and the dimensions of PV as antecedents of mobile data usage and to contribute to the debate on the determinants of technology acceptance and usage by individuals. The perceived value of mobile phone-enabled internet is conceptualised under five dimensions, viz: (1) utilitarian value, (2) hedonic value, (3) uniqueness value, (4) epistemic value, and (5) economic value, in a survey conducted by using a validated questionnaire, with a sample of 550 adult mobile phone users in the Central Province of Sri Lanka. The data analysis employs covariance-based structural equation modelling (CB-SEM) analytical process and the findings reveal that their adoption intention (AI) has a direct positive influence on the MPEIU. It is discovered that the utilitarian, epistemic, and hedonic value dimensions of MPEIU indicate a direct influence on their AI while TR indicates an indirect influence on it. The findings imply that the generic strategic approaches (i.e., cost and differentiation) to mobile internet services may be an ineffective solution and suggest that the focus should shift towards improving the utilitarian, epistemic, and hedonic components of mobile internet services. Accordingly, the users with a higher level of TR indicated an affinity to have a higher AI and higher usage. Therefore, the user's TR is recommended here as the basis for market segmentation.

Keywords: Mobile internet, technology use, perceived value, technology readiness.

INTRODUCTION

The entire spectrum of the mobile phone ecosystem has been changed due to the inclusion of data transmission facilities to cellular phones (Vriendt, *et al*., 2002). In addition, internet access has brought an unlimited potential to the services offered through a mobile phone. For example, in 2003, Blackberry, a leading mobile phone manufacturer, managed to capture the executive market by introducing a phone with access to email services.

Enhancing data transmission capabilities targeting a better service in terms of internet access has become a primary focus of the development agenda of the mobile industry (Lee, 2014). As a result, mobile service providers have diversified their service mix by blending innovative new types of services with the traditional ones. These value-added services have become a significant source of income (Kuo & Yen, 2009) for mobile service providers and created a platform for gaining a competitive advantage through service differentiation (Cricelli, Grimaldi, & Ghiron, 2011).

Mobile phones have become a ubiquitous device used by the majority of people. However, during the early stages of the mobile industry, the facilities were only available in the highly urbanised regions of the developed

*Corresponding author (amilab@mgt.pdn.ac.lk (iD) https://orcid.org/0000-0002-4028-5341)
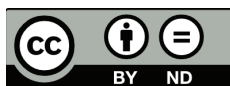
countries. Mobile technologies become ubiquitous due to technological inventions, which enable the transmission of large volumes of mobile data to long distances. On top of these, the reduction of mobile devices and data transmissions costs has enabled a significant portion of the population to use mobile phones.

The overwhelming popularity of the mobile technologies has made the mobile service providers (MSPs) focus on selling new connections to the potential customers as a premier growth strategy. However, due to the intense competition and diminishing number of the potential customers within the market, none of the MSPs could maintain the growth levels they aimed at. Therefore, increasing the earnings from the existing connections emerged as an alternative growth strategy (Genakos & Valletti, 2012). The mobile data stand the most essential component in the mobile service mix and that can significantly impact the earnings from the connection. Therefore, theorising the antecedents of the mobile data usage would be critical in explaining why or why not an individual uses the service. Such studies would generate valuable knowledge for MSPs regarding the increase of their earnings by persuading their existing customer base to consume more services (Xu, Peak, & Prybutok, 2015).

The rest of the paper continues as: the literature review, the research hypotheses, the conceptual framework followed in the research design, findings together with the conclusions & implications, and future research directions.

LITERATURE REVIEW

Investigating the determinants of technology acceptance by individuals is regarded as a popular research area with an extensive literature base. However, the existing literature indicates many under-investigated areas. Therefore, this section reviews the existing literature and the research gaps addressed in this paper. After that, the research hypotheses are presented together with the theoretical underpinnings. Finally, the conceptual framework that has been derived through synthesising all the research hypotheses is presented at the end of the section.

Depending on the target users, the technologies are broadly categorised into two: (1) organisational context and (2) consumer context (Venkatesh, Thong, & Xu, 2012). The existing literature base is skewed towards organisational technologies since most researchers have investigated the acceptance of such technologies. Consequently, many researchers on the use of technologies in the consumer context have utilized the theories developed for the organisational context. However, considering the apparent differences between the two contexts, it would be equally important to study and understand the user acceptance process of the technologies within the consumer contexts (Venkatesh *et al*., 2012; Wang & Lin, 2012; Woodruff, 1997; Xu *et al*., 2015).

It is also evident from the literature that having developed technologies and made them available for potential users may not necessarily assure the use of such technologies (Y. S. Wang & Lin, 2006; Xu *et al*., 2015). Usage rates lower than the forecasted are a common claim related to pay-per-use technologies such as mobile internet. This study has attempted to explore the determinants of MPEIU so that the generated knowledge could be used in formulating strategies to improve the usage rates.

Moreover, Parasuraman (2000) states that a potential reason for having lower technology usage rates despite the ubiquitous availability of the required infrastructure and other facilities, could be the lack of consumer (user) readiness. Only a few researchers have attempted to investigate this relationship, especially in mobile technologies. The association between TR and PV has also not been sufficiently studied in the existing literature, leaving a considerable knowledge gap (Yieh, Chen, & Wei, 2012).

Therefore, the paper attempts to address the existing knowledge gaps by investigating the impact of the users' TR on the MPEIU and the dimensions of PV. The paper also examines that the impacts of PV and TR on technology usage may vary with cultural and demographic factors. Therefore, a study of this nature from a less researched cultural background like Sri Lanka would complement the existing knowledge base.

Users' perceived value

Kim & Han (2009) indicates the consumer's perceived value as one of the most significant determinants of his or her adoption intention. PV is generally defined as a trade-off between total benefits and total sacrifices, where these sacrifices could be either monetary or non-monetary, or both (Kim, Choi, & Han, 2009; Kim & Han, 2009). However, most of the research in the existing literature has conceptualised PV as a single dimension despite its multidimensional nature (Al-Debei & Al-Lozi, 2014; Berraies, *et al*, 2017; Y. Wang, *et al*, 2019). Therefore, the existing knowledge base shows an inadequacy in explaining the influence of the dimensions of perceived value on the use of technologies in the consumer context.

In contrast to most studies (Xu *et al*., 2015), this research divides PV into five constructs, and the impact of each construct on each individual type of impact on each technology usage has been studied.

Al-Debei & Al-Lozi (2014) conceptualise five dimensions of PV, namely: (1) utilitarian value, (2) hedonic value, (3) economic value, (4) uniqueness value, and (5) epistemic value. The utilitarian value is defined as "the extent of effectiveness and efficiency perceived by consumers when using information systems" (Kim *et al*., 2009). Utilitarian value considers objective factors such as the functionality and economy of a technology (Ozkara, Ozmen, & Kim, 2017; Shi *et al*. 2017). The existing literature provides evidence of this factor as a significant determinant of adoption intention and use (Kim & Han, 2009; Shi *et al*., 2017).

The hedonic value is defined as the level of pleasure and joy users experience when using a certain technology (Al-Debei & Al-Lozi, 2014). It is argued that the perception of hedonic value depends on the successful delivery of fun and enjoyment (Rintamäki, *et al.*, 2006) receives from the services such as mobile internet. The users of the technologies are expected to have pleasurable sensations through their sensory channels (Igbaria, Iivari, & Maragahh, 1995). On the other hand, the uniqueness value refers to the sense of differentiation or distinctiveness from others (Tian & McKenzie, 2001). Al-Debei & Al-Lozi (2014) points out that owning or using a unique product or service may generate a perception of dominance and leadership in the social structure. Individuals also use mobile devices to indicate a distinctive social image (López-Nicolás, Molina-Castillo, & Bouwman, 2008). However, it is also noted that when a product or service gets popular, the uniqueness attached to it tends to diminish (Al-Debei & Al-Lozi, 2014).

The epistemic value is defined as the knowledge gained upon trying new things (Pihlström & Brush, 2008). It is widely believed that when a service becomes more innovative, the consumers may adopt it more, indicating a positive impact on the usage intention (Al-Debei & Al-Lozi, 2014). The economic value is defined as the gap between the value perceived from using the mobile internet and monetary sacrifices (Heinonen & Andersson, 2003). Many researchers identify the economic value as a significant determinant of a technology used, especially while adopting technologies in the consumer contexts (Raman & Don, 2013; Venkatesh *et al*., 2012).

Users' Technology Readiness

Parasuraman (2000) defines the TR as people's propensity to embrace and use new technologies for accomplishing goals in home life and at work. Although TR is regarded as a determinant of a "person's predisposition to use new technologies" (Parasuraman, 2000), TR neither represents a measurement of technical competence nor knowledge of technologies. To measure the users' TR, Parasuraman (2000) develops a measurement instrument called the technology readiness index (TRI), and this study adopts have the updated version of the measurement instrument (TRI 2.0) in Parasuraman & Colby (2014).

Since its inception, TR has been used as a construct in various types of research. For example, Borrero, *et al*., (2014) study the role of TR as a moderating variable in the expressive participation in the internet social movements. Sunny, Patrick, & Rob (2018) look at the impact of cultural values on technology acceptance. Ismail *et al*., (2013) investigate the pedagogical use of mobile phones and their impact on TR. However, only a few studies investigate the possible effect of TR on PV. Yieh, Chen, & Wei (2012) are among those few that confirm the existence of such an effect. This research investigates the available knowledge gap by conceptualising the possible effects of TR on the dimensions of PV.

RESEARCH HYPOTHESES

Based on the literature review, six hypotheses resembling the intervariable associations were formulated. The evidence suggests that certain demographic factors may strongly influence certain particular individuals' TR (Rojas-Méndez, Parasuraman, & Papadopoulos, 2015, 2017). Therefore, considering the possible impacts of their demographic characteristics on the relevant users' TR, the following broad hypotheses are formulated:

Null hypothesis 1: H1: The users' technology readiness is equal across all the groups under each demographic factor.

In line with the previous studies (Erdoğmuş & Esen, 2011; Parasuraman & Colby, 2014), this study proposes null hypothesis 2 and null hypothesis 3 considering the potential effects of TR on the intention of mobile phone enabled internet services and mobile phone enabled internet usage.

Null hypothesis 2: H2: There is no direct effect from the users' TR on the adoption intention of mobile phone enabled internet services.

Null hypothesis 3: H3: There is no direct effect from the users' TR on mobile phone enabled internet usage.

The literature further reveals that most studies on technology acceptance recommend the use of adoption intention (AI) instead of actual usage (behaviour).

They believed in the notion of having a strong positive relationship between AI and actual usage (Hsu & Lin, 2015; Wang & Lin, 2006). In the existing literature, empirical evidence to prove this notion is rare. Therefore, this study measures both AI and actual usage. Further, it empirically tests the association between adoption intention and technology usage:

> Null hypothesis 4: H4: There is no direct effect from the adoption intention of mobile phone enabled internet services on mobile phone enabled internet usage.

The existing literature conceptualises PV as a determinant of technology usage (Lin, Wang, & Huang, 2020). In addition, PV is found to indicate the characteristics of a mediating factor for some determinants of both AI and technology usage (Wang, Teo, & Liu, 2020). However, it is yet to understand the individual roles of the dimensions of perceived value within the technology adoption process. Further, a potential association between the users' TR and PV has been predicted in the existing literature (Yieh *et al.*, 2012). However, empirical evidence of such an association is rare in the existing literature (Bandara & Jayawardena,

2019; Yieh *et al.*, 2012). Therefore, null hypotheses 5 and 6 are formulated to identify the mediation effects of the users' TR on their adoption intention of mobile phone enabled internet services and mobile phone enabled internet usage. These two hypotheses would capture all the notions mentioned above.

> Null hypothesis 5: H5: The effect of the users' TR on the adoption intention of mobile phone enabled internet services is not mediated by the dimensions of perceived value.

> Null hypothesis 6: H6: The effect of the users' TR on mobile phone enabled internet usage is not mediated by the dimensions of perceived value.

Conceptual Framework

Figure 1 illustrates the conceptual framework of the study, along with the research hypotheses discussed in section 2.3. The respective code number of each hypothesis is presented next to each arrow. The dotted lines and the arrows represent the mediating effects of the dimensions of the perceived value of the association between TR, AI, and MPEIU.
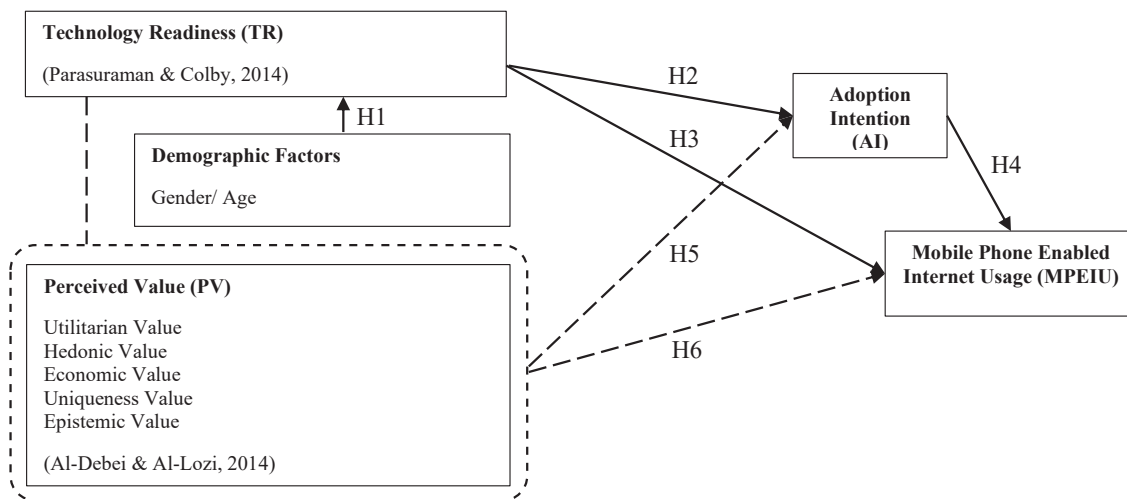
Figure 1: Conceptual framework

METHODOLOGY

In line with the suggestions of Neuman (2014), the sampling strategy, data collection techniques, measurement of the variables, and statistical techniques deployed in the study are presented in this section.

Study population

The study involved a group of adult (above 18 years) mobile phone users in Sri Lanka. However, the focus was narrowed down to the Central Province of Sri Lanka due to the following reasons: (1) The mobile phone penetration rate of the Central Province is reported to be the closest value to that of the country, and it is also reported to be the median value among the other provinces. (2) The residents' profile of the province is represented by all the major groups of the country's population (Central Bank of Sri Lanka, 2018).

Sampling Strategy

In conducting the research, a multistage cluster sampling technique was applied based on the administrative structure of the Central Province of Sri Lanka which is divided into the three districts: Kandy, Matale, and Nuwara Eliya. The districts are further divided into several Divisional Secretariat Divisions (DSD), each of which constitutes several Grama Niladhari Divisions (GND). Thus, on the whole, the province is divided into 2224 Grama Niladhari Divisions (GND). The three stages of the cluster sampling strategy and their justifications are as follows.

During Stage 1 of the sampling process, the DSDs of which the populations are not representative of all the sectors (i.e., urban, rural, and estate) were not considered for the data collection process. Thus, six DSDs from the Kandy district and two each from the Mathale and Nuwara Eliya districts were chosen under stage 1 of the sampling process. During the stage 2, each district was allocated with a quota of GNDs proportionate to the adult population. After carefully considering the time and cost constraints, 10 GNDs were assigned to the Matale district as a base value since it had the lowest

adult population and, thus, the lowest quota among the three districts. Consequently, a total of 55 GNDs were selected (Table 1) by proportionating the lowest quota to other districts.

In stage 3 of the sampling, ten respondents from each selected GND were identified using the purposive sampling technique. The selected sample of 550 mobile phone users were in line with the guidelines given by Krejcie & Morgan (1970) which indicate that for a sample populations size above 1,000,000, the sample should consist of at least 384 units at a confidence level of 95% with an error margin of 5%. Moreover, this satisfies the requirements of the covariance-based structural equation modelling (Hair *et al.*, 2011).

Research Instrument

The Users' TR was measured after obtaining a written permission, using "The Technology Readiness Index 2.0 (TRI 2.0)", authored by Parasuraman & Colby (2014). The scale developed by Al-Debei & Al-Lozi (2014) was adopted to operationalise the five dimensions of PV. In addition, the scale developed by Davis (1989) was employed to measure the adoption intention. All these measurement scales used a 5-point Likert scale.

As per the directions of Davis (1989), time spent on technology usage was used as an indicator of the technology usage. In addition, a filter question was used to distinguish the responses of the mobile internet users from those of the non-users. Finally, inclusive of all these scales, a questionnaire was developed.

Translation of the questionnaire

The questionnaire was translated into the native languages of Sri Lanka (Sinhala and Tamil). The translation process followed the traditional forward and backward approach (Degroot, Dannenburg, & Vanhell, 1994) to ensure the same meaning in all three languages. Then it was tested for the reliability of the items. The results indicated that Cronbach's Alpha values for all the latent variables are higher than 0.7, indicating a reliable survey instrument.

Table.1: GND Quota per district

District	Number of GNDs
Kandy	30
Matale	10
Nuwara Eliya	15
Total	55

Analysis techniques

This study investigates the causal relationship between a set of variables, employing covariance-based structural equation modelling (CB-SEM) as the primary data analysis technique, under which the CB-SEM analysis was carried out, using AMOS version 23.

RESULTS

Sample demographics

From the selected sample of 550 adult mobile phone users, 522 responses were retained for the analysis after removing the incomplete responses. There were 258 responses from the males and 264 responses from the females. The education profile of the respondents reveals that 371 respondents have at least passed the GCE Advanced Level examination, while 22 have educational qualifications below GCE Ordinary Level. The employment profile of the sample reveals that 109 of the respondents are unemployed, 34, self-employed, and the rest employed only during the time of the data collection.

Effect of gender on users' TR

The results of the independent sample t-test reveals that there is no significant gender-based difference between the users' TR scores (t= 1.411, p=0.159). Thus, it concludes that gender does not have a significant effect on the users' TR level.

Effect of age on users' TR

Between the different age groups, the highest TR score of 3.1 is reported against the age group 18 – 25 years, while the lowest value of 2.8, by the age group 56 – 65 years. The results of the ANOVA to test the TR mean differences between the age groups reveal that the TR scores are significantly different among the age groups (F=8.323, p≤0.001). Thus, it is evident that the TR level of the respondents significantly varies in accordance with their age.

Results of confirmatory factor analysis

Prior to testing the inter-relationships among the variables, the uni-dimensionality, validity, and reliability for each latent variable is confirmed using a confirmatory factor analysis (CFA). The factor loadings of the items of each latent variable and correlations between each pair of latent variables are illustrated in Figure 2. All the standardised factor loadings are significant and higher than 0.5. Therefore, it is concluded that the uni-dimensionality of the measurement model is within the accepted level (Kose & Demirtasli, 2012). Moreover, the AVEs for all the latent variables indicate values higher than 0.5, confirming an adequate level of convergent validity. It is also evident that each latent variable's Cronbach's Alpha value is higher than 0.7, and the CR value of each dimension is higher than 0.7. Thus, the measurement model indicates an adequate level of internal consistency reliability (Hair & Sarstedt, 2012, 2013; Nunnally &
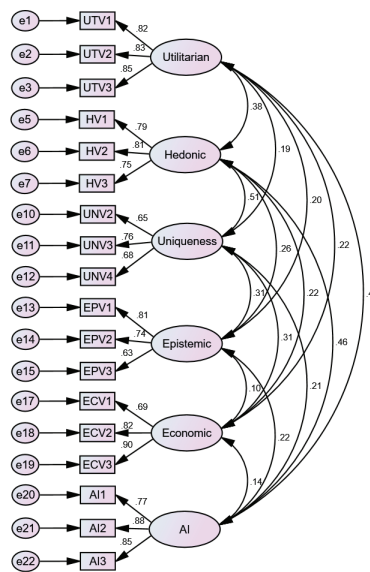
Figure 2: CFA Model – with all latent variables and retained items from CFA

Bernstein, 1994; Sarstedt *et al.*, (2004). The square root of the AVEs is larger than the squared correlations between the constructs indicating an adequate level of discriminant validity for the constructs used in the model.

The model fit criteria, as per the guidelines of Hu & Bentler (1999) are presented in Error! Not a valid bookmark self-reference. All the fit Table 2 indicators of the CFA model are within the acceptable range. Therefore, the model indicates an adequate level of model fit under all categories.

Results of structural equation modelling

The CFA phase of the analysis confirms the uni-dimensionality, validity, and reliability of the measurement model, and the SEM phase of the analysis. First, an SEM model is formulated with all the paths between TR, dimensions of PV, adoption intention (AI), and mobile phone enabled internet usage (MPEIU) (Figure 3). Then, both TR and MPEIU are included in the model as observed variables, and dimensions of PV and AI are indicated as latent variables with factors identified under CFA.

Table 2: Model fit criteria for the CFA model

Model Fit Category	Index	Level of Acceptance	Value for the CFA Model
Absolute fit	Root mean square of error approximation (RMSEA)	RMSEA < 0.08 (Browne & Cudeck, 1992)	0.073
	Goodness of fit index (GFI)	GFI > 0.90 (Joreskog & Sorbom, 1986)	0.908
Incremental fit	Comparative fit index (CFI)	CFI > 0.90 (Bentler, 1980)	0.922
	Tucker-Lewis index (TLI)	TLI > 0.90 (Bentler & Bonett, 1980)	0.900
Parsimonious fit	Chi-square/degrees of freedom (Chisq/df)	Chisq/df < 5.0 (Marsh & Hocevar, 1985)	3.163
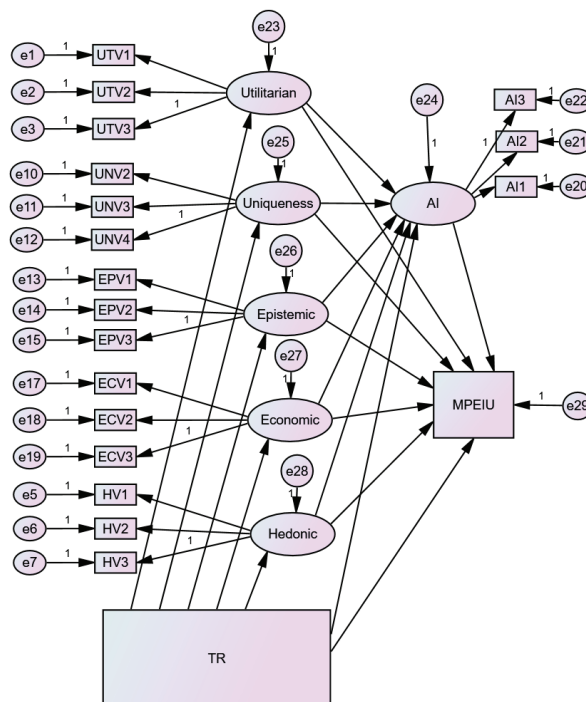
Figure 3: SEM model 1

Standardised regression weights and their significance indicate that none of the variables has any significant associations with MPEIU. Only TR, hedonic value, and utilitarian value indicated a significant positive association with AI. In addition, only the utilitarian, uniqueness, and epistemic values have significant positive associations with TR.

The model-fit criteria for the SEM model 1 indicates that the model does not have an adequate model fit since all the criteria except parsimonious fit indicate values outside the acceptable range. Therefore, in line with the previous literature, the non-significant paths are eliminated one at a time, from the model, and the significant paths and model fit indices for each model are investigated. The process continues until a structural model with an adequate model fit and all significant path coefficients is identified. The final structural model obtained after this process is presented in Figure 4 below.

The results of the CB-SEM on the new model indicate that both the RMSEA (0.069) and GFI (0.931) values are within the level of acceptance, indicating an adequate

level of absolute fit. Further, the model indicates an adequate level of incremental fit since both the CFI (0.939) and TLI (0.922) values are within the acceptable range. Furthermore, the Chisq/df value (2.956) is within the acceptable range, indicating an adequate level of parsimonious fit. Thus, it is evident that the model fulfils all the model fit categories and fits for further analyses.

Standardised regression weights and their significance for each path in the SEM Model 2 are presented in Table 2. All the paths identified in the model indicate significant positive associations by having p values less than 0.05. The effects from each variable are further analysed to identify the total effects, direct effects, and indirect effects and their significance.

The significance of the direct and indirect effects is evaluated, using Bootstrapping procedures. An effect is considered insignificant if a zero value falls in between the upper boundary and lower boundary. It is evident that the users' TR has standardised direct effects of 0.319 on epistemic value, of 0.111 on hedonic value, and of 0.217 on utilitarian value. On the other hand, these three
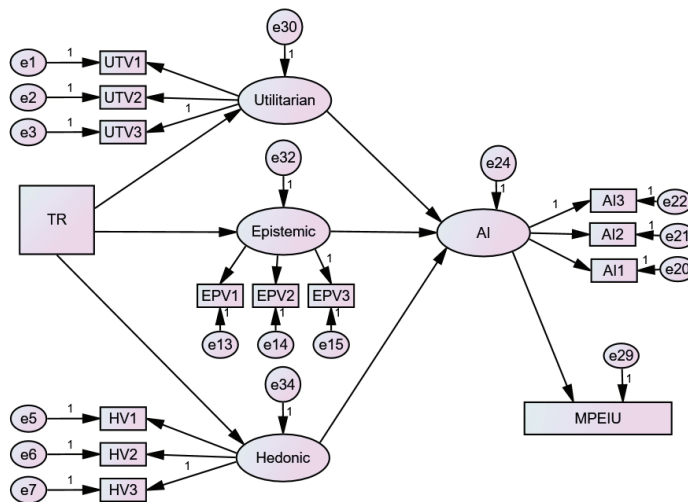
Figure 4: SEM Model 2 – after eliminating all the non-significant paths

Table 3: SEM Model 2 - Standardized regression weights

	Path		Estimate	Standard Error	Critical Ratio	P
Epistemic	<---	TR	.319	.111	5.552*	
Utilitarian	<---	TR	.217	.116	4.152*	
Hedonic	<---	TR	.111	.107	2.047	.041
AI	<---	Utilitarian	.289	.062	5.410*	
AI	<---	Hedonic	.350	.074	6.142*	
AI	<---	Epistemic	.110	.073	2.003	.045
UTV3	<---	Utilitarian	.843			
UTV2	<---	Utilitarian	.834	.048	18.331*	
UTV1	<---	Utilitarian	.825	.050	18.185*	
HV3	<---	Hedonic	.721			
HV2	<---	Hedonic	.826	.082	13.873*	
HV1	<---	Hedonic	.796	.081	13.772*	
EPV3	<---	Epistemic	.638			
EPV2	<---	Epistemic	.756	.108	10.934*	
EPV1	<---	Epistemic	.790	.118	10.917*	
AI3	<---	AI	.839			
AI2	<---	AI	.866	.049	18.403*	
AI1	<---	AI	.762	.050	16.588*	
MPEIU	<---	AI	.152	1.059	2.888	.004

* p≤0.001

dimensions of PV indicate significant direct effects of 0.11, 0.35, and 0.289, respectively, on AI. AI was the only variable that has indicated the impact of a direct effect of 0.152 on MPEIU.

In addition, the epistemic, hedonic, and utilitarian dimensions of PV have indicated significant indirect effects of 0.017, 0.053, and 0.044, respectively, on MPEIU. Thus, it is evident that the AI mediates the relationships of these dimensions with MPEIU. Moreover, TR had significant indirect effects of 0.137 on AI and of 0.021 on MPEIU through PV's epistemic, hedonic, and utilitarian dimensions. Therefore, it can be concluded that the relationship between TR and AI was mediated by the epistemic, hedonic, and utilitarian dimensions of PV. Thus, in addition to the three dimensions, the relationship between TR and MPEIU is also mediated by AI.

INFERENCES ON RESEARCH HYPOTHESES

H1: Users' technology readiness is equal across all the groups in each demographic factor.

The above hypothesis tests the impact of gender and age of a mobile phone user on users' TR, where the effect on each is tested separately. The statistical evidence

of this hypothesis is presented in sections 4.2 and 4.3, respectively. The findings indicate that the gender of mobile phone users does not have a significant effect on the users' TR level. However, the TR level of the respondents significantly varies with the age groups.

H2: There is no direct effect from the users' TR on the adoption intention of mobile phone enabled internet services.

During the structural model evaluation procedure presented under section 4.5, the path indicating the direct effect of the users' TR on their AI was eliminated from the structural model due to the insignificant value of the path coefficients. This implied that the study data does not support the rejection of H2. Therefore, a direct effect cannot be identified from the users' TR on their adoption intention of mobile phone enabled internet services.

In contrast, the existing literature claims a direct association between the users' TR and their adoption intention (Erdoğmuş & Esen, 2011; Meng *et al.*, 2010; Parasuraman & Colby, 2014). However, this study finds an effect from the users' TR on their AI mediated by some dimensions of perceived value. Therefore, it can be argued that the contradiction may be due to the fact

that none of those studies have considered the mediation effects of other variables on this association.

H3: There is no direct effect from the users' TR on their mobile phone-enabled internet usage.

During the structural model evaluation procedure, the path indicating the direct effect of the users' TR on their MPEIU was eliminated due to the insignificance of the path coefficient. Thus, it is evident that the study data does not support the rejection of H3. Therefore, it can be concluded that a direct effect cannot be identified from the users' TR on mobile phone-enabled internet usage.

This finding also contradicts the existing literature. Although many studies suggest a direct association between the users' TR and their technology usage (Erdoğmuş & Esen, 2011; Meng *et al.*, 2010; Parasuraman & Colby, 2014), only a few studies provide empirical evidence. However, this study find an effect from the users' TR on their MPEIU, which is mediated by some dimensions of their perceived value and adoption intention. It can be argued that the contradiction may be because none of those studies consider the mediation effects of other variables on this association.

H4: There is no direct effect from the adoption intention of mobile phone-enabled internet services on mobile phone-enabled internet usage.

The structural model evaluation procedure provides evidence to support the rejection of H1. This finding is in line with the existing literature, and this study provides empirical evidence for the widely accepted association (Davis, 1989; Tan and Chou, 2008; Venkatesh and Davis, 2000; Venkatesh *et al.*, 2003).

H5: The effect of the users' TR on their adoption intention of mobile phone-enabled internet services is not mediated by the dimensions of perceived value.

During the structural model evaluation procedure, the uniqueness and economic dimensions of the perceived value were excluded from the model due to the insignificance of the path coefficients. On the other hand, the remaining dimensions: utilitarian, epistemic, and hedonic values indicate the impact of the mediation effects on the effect of the users' TR on their adoption intention of mobile phone-enabled internet services.

The existing literature does not provide any evidence to support or contradict the behaviour of this mediating effect. However, Al-Debei and Al-Lozi (2014) conclude that the utilitarian value and the economic value indicate significant effects on the adoption intention of

mobile phone enabled internet services. These findings contradict the findings of this study except that in the case of the utilitarian value. On the other hand, the existing literature predicts a possible effect of users' TR on the dimensions of PV (Parasuraman, 2000; Parasuraman & Colby, 2014), but only a few studies empirically prove the association.

H6: The effect of the users' TR on their mobile phone-enabled internet usage is not mediated by the dimensions of perceived value.

During the structural model evaluation procedure none of the perceived value dimensions indicated any significant effects on mobile phone-enabled internet usage, making it impossible to indicate mediations. Therefore, it can be concluded that the study data does not support the rejection of H6. However, the literature does not provide any contradictory or supportive evidence on this.

CONCLUSION AND PRACTICAL IMPLICATIONS

The following conclusions are arrived at, based on the major findings which indicate practical implications related to the mobile phone-enabled internet usage.

Effect of the users' technology readiness on their mobile phone enabled internet usage

The adoption intention of mobile internet services has a direct positive influence on the mobile phone enabled internet usage. The adoption intention of mobile internet services is indirectly influenced by the users' TR. This implies that the users with a higher level of technology readiness are likely to have a higher adoption intention of mobile internet services and may have a higher usage of them.

Moreover, a user's technology readiness level can be used as an indicator of the possible use of mobile internet services. Therefore, mobile service providers can assess the technology readiness of a potential or an existing user in providing customised mobile data packages. For example, packages with larger data components can be offered to users with a higher level of technology readiness than to those with a lower level of technology readiness.

Effect of the dimensions of perceived value on mobile phone enabled internet usage

Although none of the dimensions of perceived value indicate direct effects on mobile phone enabled internet

usage, utilitarian, epistemic, and hedonic values indicate effects on the adoption intention of mobile phone-enabled internet services. These findings imply that the users do not make usage decisions based on the economic or uniqueness value; instead, they make their usage decisions based on the utilitarian, epistemic, and hedonic values of the mobile internet services.

Thus, mobile service providers can shift their strategic focus to mobile phone-enabled internet service offerings. To gain higher usage rates, service providers can focus on (1) increasing the user perceptions of the effectiveness and efficiency (utilitarian component) of the internet services, (2) improving the pleasure and joy experienced by the users (hedonic component), and (3) enhancing the knowledge delivered through internet services (epistemic component). (4) The effects of service differentiation (uniqueness component) or offering services at a lower price (economic component) may not increase the usage of mobile phone-enabled internet services. It was also found that utilitarian, epistemic, and hedonic value dimensions have indicated mediation effects on the effect of the users' TR on the adoption intention of mobile phone-enabled internet services.

Recommendations for future research

Further research has to be conducted to investigate the impact of the users' technology readiness on the dimensions of the perceived value relating to different technologies such as internet banking, email, online video, *etc*. However, it is observed that the studies that explain this impact are rare in the existing literature.

A research study can focus on the differences in user acceptance of different types of internet services, such as social network apps and news apps offered through a mobile phone. A longitudinal study can also be conducted to investigate the possible changes in the users' technology readiness, value perceptions, and technological behaviour over a period of time.

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Early childhood language development: a case study of a Sri Lankan Tamil child's progress in language acquisition

Jeyaseelan Gnanaseelan

Department of English Language Teaching, Faculty of Business Studies, University of Vavuniya, Vavuniya, Sri Lanka.

Abstract: The paper presents a case study of early childhood language development focused on a Tamil child from Sri Lanka. The research study aims to analyse the progress a Tamil child from Sri Lanka achieves in language development at the five levels: phonological, morphological, syntactical, semantic, and pragmatic. The methodology involves a five-fold linguistic analysis of some utterances extracted from a conversation between the researcher and the subject, who is a six-year-old Sri Lankan Tamil child, based on a story presented in the form of a monologue. It reveals that the child had acquired the necessary language skills in Tamil to communicate his thoughts in advance of the conversation. Also, his speech is equal to that of an adult, if not for some interlanguage expressions and discourse markers. The findings reveal that the child has managed to internalise the structure of the Tamil language, which is his mother tongue. The child possesses a considerable fund of 'language universals' that are required in the narration of his story. Although the story is not his own creation but heard from his teachers or parents, the utterances he makes are similar to those used by an adult. Most of the sentences he utters represent a high level of competence. So, this paper identifies the child's language output under Chomsky's mentalist approach to language and transformational generative language acquisition. It is perceived that his innate language faculties help him utter sentences, in addition to his exposure to the use of language by the adults in the environment.

Keywords: Early childhood language development, linguistic levels, Tamil, utterance.

INTRODUCTION

Child Language Acquisition (CLA) represents a crucial development process that a child undergoes in cultivating its ability to communicate his/her thoughts and feelings, across the first eight years of life. Across these years, a child generally cultivates critical and creative thinking, understanding, and enthusiasm for human relationships. There, CLA is considered the most crucial aspect of one's life as it determines the expressive and receptive skills link with oral communication.

In Tamil culture, like in all other cultures, in bringing up children, it is usual to sing and talk with them about all aspects of life. The Tamil language helps generate reflectional and derivative morphological and syntactical expressions with flexibility in achieving choices concerned with variety in communication. Tamil is a language that can be adapted globally to most of the modern-day language requirements, being one of the most ancient classical languages in the world.

In brief, CLA can be studied in stages during the first eight years. The child initiates cooing, laughing, babbling, and playing with sounds, and making physical gestures such as waving. Gradually, when he reaches the 'jargon phase', the child produces some sound signals as he is trying to talk, but this voicing attempt is not linguistically accorded any speech-giving meaning. At the age of one year, the child begins to utter words. In his second year, the first words utter are clear and meaningful. Words like 'amma' (mother) and 'appa' (father) become normal for a child. However, some more words will add to the vocabulary. Notably, a child can

*Corresponding author (jeya86@vau.ac.lk https://orcid.org/0000-0003-1709-7008)

understand more than speaking. Finally, a child start producing two or three-word sentences. At the age of three year, the child finds it possible to produce longer and more complex sentences. At this age, he develops the dual ability of acting and talking simultaneously. More abstract and complex conversations develop in the fourth or fifth year demonstrating diversity in his vocabulary acquisition. The child understands some basic grammar with conjunctions: 'eenanda' (because), 'appidiyenda' (if), 'athala (so) or 'eppa' (when).

The child's early school years begin in five to seven years, and the language development continues faster because of the language learning opportunities with teachers and peers at school. At this stage, the child can tell stories.

The conversational behaviours of normal Tamil-speaking male children in the age range of 3–5 and 7–9 years can be analysed under the following headings: (1) topic initiation, (2) topic maintenance, (3) request for repair, (4) conversation repair, (5) nonverbal behaviour, and (6) topic termination. The results show that the younger children (3–5 years) dyad compared to the older children (7–9 years) dyad indicates a significant difference in orientation under topic initiation, conversation information under topic maintenance, responding to requests under conversation repair, and nonverbal behaviour. On the other hand, discontinuous turns and abrupt topic terminations are present only with the younger group dyad. (Adapted from Harinath & Raghunathan, 2017).

Accordingly, this research involves a child belonging to this age range. In children's stories, words are joined and coined differently, generating different types of sentences. Often, the children come up with ideas and opinions. Thus, the process of child language acquisition or development is almost complete by eight years, and adult-like conversations become a reality with them.

LITERATURE REVIEW

While a child's first language acquisition is natural and spontaneous, human language development culminates in intellectual achievement (Pinker, 1984). The grammar of a language is identifiable by its vocabulary size and composition (Bates *et al*., 1994) and there is no need for direct instruction or intentional conversations (Pye, 1986: pp. 85-100) as cognitive maturity influences early language acquisition changes, especially in the qualitative and quantitative shifts in word learning (Gentner, 1982).

As this paper involves a case study on a Tamil child's language development, it is important to have an idea about the structure of the Tamil language.

"The Tamil language is one of the classical languages in the world. It is ranked 20th in the anthropology list of the most spoken languages worldwide" (Munas & Zunoomy, 2021: pp. 951-955) and "it is a morphologically rich, agglutinating, suffixal, and diglossic language with many regional vernacular variants and a 'high' or codified variety" (Sarma, 2013: p.110).

According to this study, the CLA covers 'the major grammatical categories of Tamil'. Pope (1859) as cited by Rajendran (2015 a) mentions "nouns by four features: class, division, person and case, classes by two, rational and irrational, five divisions; masculine, feminine, rational-plural, irrational-singular, and irrational-plural, numbers by singular and plural number and persons; the first, second, and the third. Cases are seven in number; nominative, accusative, sociative, dative, ablative, instrumental and locative." This study demonstrates some of these aspects.

The acquisition order and competence levels are not the same in all language communities. According to Nirmala & Kalpana (2015), in Tamil, the rules create new words under eight categories: noun to noun, verb to noun, adjective to noun, noun to verb, adjective to verb, verb to verb, noun to adjective, verb to adverb. Word formation techniques represent a pre-processing stage of noun and verb morphological operations in Tamil grammar and linguistics. However, there are standard features and processes applicable to all languages as languages differ in their vocabulary richness and diversity and grammatical flexibility and complexity. A child is supposed to follow unintentionally linguistic rules in phonology, morphology, syntax, and semantics (Sandler & Lillo-Martin, 2006).

Another important area in CLA is the child's capacity to internalise phonological rules and processes. The phonology of Tamil has "retroflex consonants and strict rules for the distribution within words of voiced and unvoiced plosives. It permits few consonant clusters, which can never be word initials. The phonemes include vowels, consonants, and a "secondary character", the *āytam*. The vowels are classified as short (kuṟil) vowels and long (five of each type) vowels and the two diphthongs, /ai/ and /au/, and the three "shortened" (kuṟṟiyal) vowels. The long (neṭil) vowels are about twice the length of the short vowels. The consonants are classified into three categories, with six in each category: *valliṉam*—hard, *melliṉam*—soft or Nasal, and

iṭayiṉam—medium." (Kanapathy, 2015). The current study unveils the child's ability to use consonant clusters.

"The common patterns of grammar in Tamil is particular to the phonological acquisition. Successful acquisition of phonological contrasts presupposes their accurate perception. There is a variation in the *degree* of difficulty. It is doubtful whether it could be easier for a learner if this feature would instead delay or disturb the acquisition. There is a clear asymmetric pattern of acquisition of Tamil phonology by sound compared to the form or structure. The learner can identify the correct form or structure of the two vowels /ai/ and /ao/by sound. Acquiring the non-identical or new vowels is possible through sound by identifying the forms than saying them out. The children acquire the long vowels in the L1" (Adapted from Kanapathy, 2015).

"Sri Lankan Tamil children experience late acquisition of / ʃ /, /h/ and early mastery of /c/, / ɟ /, /r/. They demonstrate Language universal (fronting, stopping) and language-specific (lateralisation, replacing /g/ for /h/ and /k/ for /h/). These processes are evident among Sri Lankan Tamils. There is a statistical significance of age and social dialectal variation on phonological measures" (Saleem, Wahid & Hettiarachchi, 2018).

In exploratory research on isolated cases of early childhood language acquisition processes followed by children growing under the circumstance of inadequate language input (Candland, 1993), it is found that children start oral communication with nouns or subjects and proceed to acquire predicates at a later stage. While acquiring the Tamil language which has 'significantly more inflectional morphology compared to English' (Sandler & LilloMartin, 2006), it is noted that, at this age, the children can reliably produce 50–100 words, with the possibility for picking up close or grammatical words at a later stage (Anderson & Reilly, 2002).

In CLA research on Tamil verbs, it is found that,

"the verb consists of the following things: root, personal terminations, three persons, five divisions, tenses, imperative mood, optative mood, two participles, negative form, and verbal noun. A verbal noun is a noun formed by adding *tal, al* or *kai* to the root of a verb. Adjectives and adverbs in Tamil are syntactically recognised categories. They are not decided by the type of inflexion they receive; rather, they are identified by their function in the sentential construction." Pope (1859) cited by Rajendran (2015 a).

The categorisation of Tamil verbs can be explained in the following terms:

"A verb form gets inflected by suffixes based on person, count, tense and voice. These suffixes are identified by reverse splitting, and the word is tagged as verb. The implementation involves a rule-based suffix stripping method for identifying verbs where suffixes are checked with grammatical rules and tagged as verbs. The proposed implementation uses the traditional way of identifying a word based on Tamil grammar rules, thus avoiding transliteration" (Evangeline & Shyamala 2020).

Based on the CLA models that range between the nativist and empiricist approaches, the present research is conducted. The usage-based "verb island" hypothesis formulated by Tomasello (2000) confirms a gradual syntactic knowledge acquisition beginning with memorised two- or three-word structures. Accordingly, in this research, it is understood that the child in question also communicates in similar sentence structures. However, it is observed that morphological structure development across verbs takes a slow process.

Acquiring time and tense in the Tamil language is another distinct development in CLA.

"As in English, in Tamil also there is a strict one-to-one correspondence between time and tense. Palmer (1984) points out that are only two tenses in English: present and past. Other verbal categories like the perfect and progressive aspects are achieved using the auxiliaries *be* and *have*. English does not have any verbal inflexion for future tense. The forms *shall* and *will* are used for indicating the future time, but they are also used for functions other than future time references, like willingness, probability and general truth. So it is right to say that English has no future tense. In Tamil, there are three marked tenses, the present, the past and the future. There are distinct inflectional verbal forms for the three tenses. For example, Present Tense: Tense Marker: *Kiru/ kira (varukiraan* - He is coming*);* Past Tense: *ith (padithan* - He studied*); itt (kettaan* - He asked*);* Future Tense: *uv (varuvaan* - He will come*) ipp (kuthippan* - He will jump). There is varying sentence equivalence for the two aspects of the English structures in their combination with tense

and voice. While there is Tamil equivalence in the active voice, it is challenging to find similar equivalence in the passive voice. Even in English, the table cannot be complete. In English, modal verbs or modals are available to express various modalities. However, in Tamil, there is no such grammatical category. Anyhow, some morphemes or words do the functions of the modal verbs." (Dinakaran, 2018).

CLA literature reveals that it is natural for children to make language errors and that adults do not show much interest in correcting them intentionally as they do not like corrections. This is evident in McNeill's popular anecdotal account on a child's resistance to error correction where the child complains, 'Nobody don't like me' (McNeill, 1970).

In the Tamil language, inflectional morphology or verbal inflectional morphology is another area of uniqueness. Sarma (2013) says that the verb is the repository of key grammatical functions and is structurally and functionally highly complex and is also the key determinant of argument structure which is particularly interesting in the context of language acquisition.

"Verbal inflectional morphology is critical to furthering our understanding of language acquisition. It has a range of cross-linguistic features that are encoded in inflectional systems and how the components of morphology, syntax, semantics and phonology interface. Studying the acquisition of these features allows linguists and psycholinguists to deduce the mechanisms that drive language learning and to distinguish between universal and language-specific patterns in acquisition" (Sarma, 2013).

It is observed that the highly inflected verbs in Tamil leave the child to acquire the nouns first. However, during language development, the noun-dependence syndrome becomes extinct when the child reaches maturity in using more predicates and grammatical words or morphemes.

"[Tamil is] a morpheme-based language. It has enormous vocabulary growth caused by many different forms derived from one word. The vocabulary size can be reduced by dividing words into stems and endings. The language has ambiguities in the recognised Tamil words" (Saraswathi & Geetha, 2010).

Another area of the Tamil linguistic system is morpho-phonology. Learning and use of these features demonstrate the acquisition.

"Various morpho-phonological studies with methodological approaches, including generative, derivative, lexical phonology and constraint-based studies, have applied data from the spoken and Literary Tamil" (Dass, 2016).

"Tolka:ppiyam, the earliest grammar extent of the Tamil language, explains Tamil morphophonology and its functional roles. It introduced the morphological and phonological mechanisms involved in modifying the interfaces. Further, the manual also offered some notes on the nature of Morpho-syntax behaviour. It describes *punariyal*, (sandhi), *tokaimarapu* (compound word formation), *uyirmayangkiyal* (epenthesis and other matter related to vowels in word formation), *pullimayangkiyal*, (epenthesis and other matter related to vowels in word formation). There are at least three possible ways of classifying the sandhi; case-related classification, Interactive point-based classification and Noun-Verbs based classification" (Dass, 2016).

Another feature noted in Tamil is lexical and syntactic joint development despite the fact that acquisition lacks language modality (Bates et al., 1994). A constituent analysis of Tamil sentences and phrases is meant to reveal these interesting features.

"An adequate linguistic analysis must be not only able to generate all the well-formed sentences we find in a language but also be able to show the relationship between various constituents of sentences. For example, expressions like (10) *avan mahan* 'He (is a) son' and (11) *avan mahan* 'his son' are widespread in many natural languages and the relationship between *avan* and *mahan* in the above two expressions must be clearly indicated by any linguistic analysis. This is being done by labelling various expressions as sentences, noun phrase, verb phrase, etc. *avan mahan* 'he is a son' is a sentence where *avan* and *mahan* are the subject and the predicate respectively. However, in the case of *avan mahan* 'his son' *avan* and *mahan* are in attribute (genitive) - head noun relation, and they form a noun phrase (NP)" Agestilingom (1969).

Munas & Zunoomy (2021, Pp. 951-955), having researched Tamil sentence structure concerning language learning and acquisition, claim that "Tamil has Nominal sentence only. It includes three sentence patterns: simple, compound, and complex." Siromoney (1971: pp. 508-518) describes kernel sentences 1) without an object: a subject (SUB), Verb (VEB) and a time-marker (TIM) and can be written as SUB + TIM + VEB. For example, *mayil* (peacock) *neytru* (yesterday) *addiyatu* (danced). 2) Without object: SUB + VEB + OBJECT + TIM. 3) Other types. Rajendran (2015 b) investigates the Tamil clause components in language acquisition.

> "In Tamil, two clauses are combined in coordination by coordinating elements and in subordination by using nonfinite and infinite verb forms. In Tamil, coordination refers to the conjoining two or more elements of the equal categorical status of the three syntactic levels – word, phrasal, and sentential – to one conjoined structure in which all elements have equal status or rank. Words, phrases, and clauses are coordinated by coordinating morphemes referred to as coordinators, which express the semantic (logical) connections between the elements conjoined. Tamil employs two types of coordinators. In one type of coordination, the clitics -*um* 'and', -*oo* 'or', and –*aa* 'whether; or', occur after each element is conjoined. In other coordination-free forms, such as *allatu* 'or', *illaiyaanaal* 'or' and *aanaal* 'but', coordinating conjunctions occur between the elements conjoined. Tamil has a large system of complex sentence formation involving subordination. Subordination takes place by embedding or adjoining a clause into another sentence. In subordination, the categories which occur as head of a subordinate clause in Tamil are postpositions; verbs and the clause itself. Thus a clause can be embedded into a clause to the left side of a clause by subordination. Tamil does not have a proper subordinator. The postpositions added to the infinitive and nominalised form of verbs act as subordinators. Different types of inflexions on the Verb convert a clause to a subordinate clause," (Rajendran 2015).

In a brief analysis of the form and function of the pronouns in Batticaloa Tamil (BT), a major socio-regional dialects of Tamils in Sri Lanka, Suseendirarajah (1973) treats the forms derived from the demonstrative and the interrogative bases, and the geographical distribution of their linguistic forms and usages, and claims that there are two types of pronouns in BT: 1) which includes the first person, second person, and reflexive pronouns, does not show any gender distinction; and 2) which shows gender distinction except in the case of *aar* (who).

In an investigation into the use of negation by a Turkish-speaking child in the very early stages of language acquisition, the following claim is made and its finding supports the present study.

> "The child not only starts to use most forms of negation as early as age of 1-10 but also does this strategically by performing them for successful communication in a clear developmental sequence such as using various sets, complementing one negative form with the other to emphasise his point and providing reasons and results for his statements. As a result, the child acquires the forms from more independent to the dependent and a sequence from the easy to the linguistically and cognitively more challenging" (İnci Kavak 2019).

The various negations in Tamil suggest that there may be a variety of negative elements in universal grammar that have collapsed into the single English negative *not*; and this may be part of the acquisition problem. The data from Deprez and Pierce (1993) show child utterances with *no* corresponding to negation with *ille* as well as to negation "with the intended meaning of denial or rejection" expressed in Tamil by *veeNDaam* 'don't want'" (Ramadoss & Amritavalli 2007).

All children do not show the same potential in developing functional language skills, and some children need speech therapy or clinical treatment. However, by studying acquisition problems, one can explain the language acquisition process and facilitate expedited language acquisition (Cicchetti & Rogosch, 1996, pp. 597-896). During the first eight years, the children show practical skills at all linguistic levels. In exposure to CLA-rich situations.

The language teachers or parents' complex use of language deprives the language teachers of the opportunity of performing the direct training of language in stages. The nativist or innate school experts state that the connection between the language development and the growth or unfolding of an innate language faculty is similar to that of any physical development (Fodor, 1983).

> "The speaker must know many pragmatic elements to develop the coherency and the ability to react in different situations. Pragmatics studies how context contributes to meaning. It also includes speech acts, conversational utterances and talk in interaction. Pragmatic language refers to social

language skills or social communication. The pragmatic skill also includes using the language at the appropriate time; knowing when to answer a question asked from the learners; being able to participate in a conversation with the other speaker; the awareness to introduce a topic, and makes it sure that the listener understood it; the ability to maintain a particular topic" (Abilasha & Ilankumaran, 2018).

The present research examines the pragmatic aspects of CLA in relation to Tamil children along these lines. Semantics is the meaning and the relationship between the word use and its functions in language.

"The primary meaning is the dictionary meaning of the word and also designative meaning. If a word has only one meaning, it can easily be said that it does not exist in terms of usage (Polysemy, Synonymy, and Homonymy). The pragmatic meaning of the semantic area is particularly connotative; that needs to be explored and explained in the linguistic context. What kind of words, in what sense are they used, who, for what, where are they used" (Ramesh Kumar, 2021).

This article explores and explains the meaning acquisition in Tamil CLA.

"Children's native language and culture influence the discourse production, particularly narratives. There is a clear understanding of their performance during extensive discourse level is still lacking in children with multilingual exposure, the results indicated that the majority of the participants had a clear beginning while using simple and compound narratives, except very few had difficulty in the sequencing of events and resolution of problem with a clear ending. Children 6-8 years old in the urban primary school acquire syntactic and semantic diversity in story retelling and self-narrative tasks. There can be differences between urban and rural society in performance while controlling the children's and parents' socio-economic status" (Ravichandran, Dlvi & Karuppannam, 2020).

The present study explains the bilingual expressions and code-mixing in Tamil CLA. Krishnasamy (2015) investigates the nature of the language behaviour of Tamil-English bilingual children. This study sheds some light on this aspect. Language mixing is an advanced form of bilingual communication (Poplack, 1980).

The significance of the study

The current study explores early first-language acquisition scientifically in line with the existing theories and approaches: their vocabulary size, diversity, composition, sentence types, fluency and accuracy. Therefore, it mainly contributes to social science and theoretical and applied linguistics and the findings enhance communication studies, speech therapy, anthropology, sociology, and psychology as linguistic studies are indispensable to multi-disciplinary and interdisciplinary studies in social sciences.

" The development of microstructure elements of narratives was the topic among the Tamil-speaking children aged between three and six years and eleven months. It then compares their narrative productivity across two elicitation contexts: story retelling (SR) and story generation (SG). Three parameters are the total number of words (TNW), the mean length of utterances (MLU) and the number of utterances. The results reveal an increasing trend in all three microstructure parameters across both contexts and quantitatively high in SR than in SG. Variation in the performance has been explained with behavioural observations from literature, cognitive architecture and a working memory model. The observations can be used to analyse the language deviance and help plan the narrative intervention protocol for language therapy" (Venkatraman & Thiruvalluvan, 2021).

Similar to the above findings by Venkatraman & Thiruvalluvan's (2021), this research explores the child's potential for acquisition, creativity, development, and application of most of the significant linguistic features in the Tamil language. They are voicing, internal and external sandhis, consonant clusters, phonological assimilation, morphological affixation, conjunctions, plural morphemes, elliptical expression and the critical sentence pattern, verb inflexion, semantic generalisation, semantic redundancy, contextual appropriateness and communicative intention, and pragmatic interpretation. Thus, this research contributes significantly to proving that the child has achieved significant management and internalisation of the linguistic systems of his mother tongue.

This paper creates another question in studying linguistic isolation and CLA. It has not been systematically investigated. Nevertheless, it is theoretically relevant to

this paper. Research on that line can clarify the status of CLA deterred by child isolation, abuse, or cognitive immaturity. It can enlighten on the causes of late L1 (first language) acquisition's harmful effects on adult language processing (Mayberry, 2007).

Children are creative in the contexts of linguistic constraints or biases according to the principle of "mutual exclusivity." It states that new ideas need new words (Markman, 1990). The growing familiarity with the language is another conducive factor (Gillette *et al.*, 1999). However, these ideas have not been scientifically verified. The current study investigates one case of a six-year-old child.

METHODOLOGY

Objectives

This paper investigates the CLA of a Sri Lankan Tamil child in acquiring Tamil as his first language. The analysis contributes to the studies in Tamil CLA, development and use and Tamil linguistics in general. This research comes under the purview of social sciences such as linguistics, enhancing the interdisciplinary approaches such as sociolinguistics and psycholinguistics. It aims to identify, analyse and assess the child's language expressions in all five linguistic levels: phonological, morphological, syntactical, semantic and pragmatic

Primary data

The Tamil language utterances have been extracted from a source that begins as a conversation between the analyst and the six-year-old child, ending up in telling a story in the form of a monologue. Seventeen utterances extracted from the narrative have been used as the primary data, the child's complete text telling a story to the researcher in a conversation style. Next, the conversation was recorded, transcribed in Tamil text, and translated into English; the recordings were orthographically and phonetically transcribed in phonetic symbols.

The analyst purposely gives the words found within parentheses to complete the sentence or question so that the sentences may become intelligible and grammatically accurate. They were not uttered in the original conversation or monologue. Only the words given in bold letters have been uttered originally.

Analytical Method

It was a qualitative analysis of a case study conducted in 2018 at an urban school in the Vavuniya District. It involves the non-numerical data of an audio text to understand the basic linguistic concepts, opinions, or experiences during the stages of Tamil CLA in the Sri Lankan context. The child uses a Northern Sri Lankan Tamil dialect. It gathers in-depth insights into the phenomenon of CLA and compares the expressions of the child with the standard or adult language. It resolves the differences and problems in the child language, proves the linguistic and communicative capacity of the child language at all five levels mentioned above, and is equally on par with the adult language in its structures and functions. Thus, it brings new ideas for CLA and development research in Sri Lankan context.

The researcher performed a linguistic analysis following a participatory method approved in the form of a conversation. The researcher began asking some introductory socialising questions. The child answered. Then the researcher asked him to tell the story. Then the child narrated the whole story. The researcher used to stimulate the child's memory and his linguistic, content, and formal schemas (Carrell, 1984) to continue and finish the story. For example, 'ok then' 'what happened next?, he identified and analysed the child's language expressions in all five linguistic levels: phonological, morphological, syntactical, semantic and pragmatic. The researcher confirmed the mentalist and TG Grammar theories of Chomsky. He exemplified many significant expressions under several linguistic features, rules and categories to fulfil the objectives and answer the research questions.

Abbreviations and Codes used in the analysis

The 17 utterances are coded as U1, U2, U3 *etc.*, in the analysis and discussion. The first language is abbreviated as L1, and the second language is L2.

Research questions

Does L1 acquisition by a Tamil child of six years old or first grade demonstrate the necessary knowledge in Tamil to communicate thoughts and messages?

Does the child's performance incorporate all five levels of the Tamil linguistic system?

Does the child's progressive narrative language skill or process meet the communicable standard and intelligibility?

Analysis and findings

The 17 utterances of the child were taken. The original Tamil version is given in Tamil. Next, its phonetic transcription is given in IPA characters. The

direct linear order of the sentence pattern is given as it is found in the Tamil language **in English.** The modified English translation is given. The special symbols used here are/ ʊ /-postalveolar sound, examples / ṇ /, /ḍ/, / ṭ /, / ḷ /; †-central close vowel; ɲ -palatal nasal sound; ̯-dental sound, for example / ṉ/.

The Primary data analysis

1) The Original Tamil Version

01) அப்பா என்ன செய்துகொண்டு இருக்கிறார்?

(B)இஸ்னஸ்

2) Phonetic Transcription

02) Ʌppa: enn∂ seɪðɪkondɨ ɪrɪkɨrar?/

/ bɪsnəs /

3) Linear Order of the Tamil Version

03) . 01) காலம என்ன சாப்பிட்டீங்க?

ரீ குடிச்சன

4) Translation in English

04) **What is** (your) **father doing?**

Business

02. 01) எங்க படிக்கிறீங்க?

கொன்வென்றில

02) / eŋg∂ padɪkɨri:ŋg∂? /

/konventil∂ /

03) **where** (are you) **studying?**

(the) **conventat.**

04) **Where are** (you) **studying?**

At the convent.

03. 01) ΓாΛம என்ன சாப்பிட்டீங்க?

ரீ குடிச்சன்.

02) ka:læm∂ enn∂ sa:pɪṭiŋg∂?/

/ti: kuḍɪʒtʒɔn /

03) (the) **morning in / what** (did you) **eat?**

(I) **Tea drank.**

04) **What did** (you) **have in** (the) **morning?**

(I) **drank tea.**

04. 01) கதேட பேரச் சொல்லுங்க?

அது சிங்கமும் மிருகங்களும்

02) / kaðed∂ pe:r∂Čtʒɔllɨŋg∂ ?/

/ ʌðɨ sɪŋgʌmɨm mɪrɨhaŋgʌḷɨm /

03) (the) **story of** / (the) **name / tell**

That (is) , (a) **lion and** (the) **animals** (and).

04) **Tell** (the) **name of** (the) **story?**

That (is) , (a) **lion and** (the) **animals.**

05. 01) ஒரு நாள் ஒரு நாள் ஒரு சிங்கம் மரத்துக்கு. மரத்துக்குகீழ ஒளிஞ்சிருந்ததாம் கனக்க மிருகங்கள் வந்ததாம்.

02) /ɔruna:ḷ …… ɔruna:ḷ … ɔru sɪŋgʌm marʌθɨkkɨ …. marʌθɨkkɨ kɨ:ḷ∂ ɔḷindʒɨrɪnð∂ða:m. ʌpp∂ kanak∂ mɪrɨhaŋgʌḷ vʌṇð∂ða:m. /

03) **One day.. one day … a lion ..** (a) **tree ..** (a) **tree.. under / was hiding several animals came** (there) (it is said so).

04) **One day.. one day a lion was hiding under** (a) **tree.. tree .. several animals came** (there) (it is said so).

06. 01) அதுகள் ..அதுகள் இந்ததண்ணி குடிக்களண்டு, குடிச்சிட்டுபோகேக்குள்ள சிங்கம் வந்து திண்டிட்டாம்.

02) /ʌðɨhʌḷ …. ʌðɨhʌḷ …. ɨnð∂ ɵṇṇikuḍɪk∂ eṇdɨ, kuḍɪʒtʒɨtɨ, pɔ:he:kuḷḷ∂ sɪŋgʌmvʌṇðɨ ɵɪṇḍɪṭṭaɪm ./

03) **those** (animals) … **Those** (animals) / **this water .. / drink to / having drunk,** [and when they] **were going,** (a) **lion came** (and) **ate** (it is said so).

04) **Those** (animals) … **Those** (animals) (came) **to drink the water, having drunk** (and when) **they were going,** (a) **lion came** (and) **ate** (it is said so).

07. 01) ஒரு நாள் ஒரு காட்டில் இருந்து வசித்து வந்ததாம் முயல்,யானை எல்லாம்.

02) /ɔruna:ḻ … ɔruka:ṭṭɪl∂ ɪɾɪɳðɪ vasiɵɪ vaɳð∂ða:m muyal ja:n∂ ella:m. /

03) **one day ..** / **ajungle in /, from** (a jungle), **was living** (it is said so) (a) **hare** (an) **elephant, all** (of them).

04) **One day … in a jungle, from**(a jungle) **were living** (it is said so) (a) **here** (an) **elephant, all** (of them).

08. 01)அவங்க ஒண்டாசேர்ந்து ராஜாட்ட போவம் எண்டு சிங்க ராஜாவிட்ட போனாங்களாம்.

02) /avʌŋgʌḻ- ɔŋḍa: se:ŋðɪ ra:ja:ṭṭ∂ pɔ:vʌm∂ŋḍɪ sɪŋg∂ raɪja:vɪṭṭ∂ pɔ:na:ŋgʌḻa:m/

03) **they … together … joined ..,** (and said) "(the) **king to /go let us"** (and) (the) **lion king to** (they) **went** (it is said so).

04) **They joined together,** (said) **" let us go to** (the) **king"** (and) **they went** (it is said so) **to** (the) **lion king.**

09. 01) ஆ, சிங்க சிங்கராஜாவே, சிங்கராஜாவே உங்களுக்கு ஒரு மணிக்கு நாங்கள் சாப்பாடு கொண்ணந்து தருவம் எங்களை நீங்கள் மகிழ்வித்தீர்கள்.

02) /a: … sɪŋg∂ ..sɪŋg∂ ra:ja:ve sɪŋg∂ ra:ja:ve uŋgʌḻɪkkɪ ɔru maɳikkɪ na:ŋgʌḻ sa:ppadɪ kɔɳɳʌŋðɪ ɵaruvʌm eŋgʌḻaɪ ni:ŋgʌḻ mahɪḻviɵɵɪ:rhʌḻ ./

03) **"ah lion … lion king! Oh lion king ! / you to / one O'clock …. to, / we food will bring / us you pleased".**

04) **" oh … lion …. lion king! Oh, lion king! We will bring you food at one O'clock** (so by accepting this) **you please us,**

10. 01) அப்ப நாளைக்கு முயல விட்டாங்களாம்.

02) / ʌpp∂ na:ḻaɪkkɪ muyal∂ vɪṭṭa:ŋgʌḻa:m /

03) **so tomorrow… to** / (the) **hare** (they) **let** (to go …. It is said so).

04) **So the following day,** (the animals) **sent the hare** (to the king).

11. 01) முயல் வாறவழியில சரியான கலைப்பாம் அப்போ ஒரு மரத்துக்கு கீழபடுத்திட்டாம்.

02)/ muyal va:ɾ∂ vaḻiil∂ saria:n∂ kalaippa:m ʌppo ɔru marʌɵɵɪkkɪ kɪḻ∂ padɪɵɵɪṭṭa:m /

03) (the) **hare** (the) **coming way… on /** (was) **too tired** (it is said so); **therefore… a tree of under…/ slept ….** (it is said so).

04) **The hare was too tired on** (its) **way: so** (it) **slept under a tree**.

12. 01) பின்னேரம் ஆகினோன திடிரெண்டு எழும்பிச்சாம் எழும்பினோன முழிச்சிப் பாத்து ரைம் பாக்கேக்குள்ள நாலுமணி ஆயிற்றாம்.

02) pɪnne:rama:hinɔ:ŋ∂ ɵɪḍi:teŋḍɪ eḻɪmpɪtʒtʒa:m eḻɪmpinɔ:ŋ∂ …. ∂h … muḻitʒtʒɪppa:ɵɪ … taim∂ pa:kke:kkuḷḷ∂ na:lɪ maɳi a:yitta:m./

03) (the) **evening** (when) **became,** (it) **suddenly awoke… having awakened…., eh… opened** (its) **yes and saw … looking** (the) **time…….. at/** (it was) **4 O'clock** (it is said so).

04) **When the evening came, the hare suddenly awake and looked at the time.** (it was) **4 O'clock.**

13. 01) ஓடியோடிப் போய் கால்ல விழுந்துதாம் சிங்கத்திர கால்ல.

02) /ɐ:dijɔ:dippɔɪj kall∂ viḻɪŋðɪða:m sɪŋgʌɵɵɪɾ∂ kall∂ /.

03) (it) **ran**(and) **ran… having gone ….** (the) **foot… at / fell** (down it is said so), (the) **lions foot … at.**

04) **it ran there and fell down at the feet of the lion.**

14. 01) அப்ப சிங்கம் சொல்லிச்சாம் ஏன் இவ்வளவு லேற் எண்டு.

02) / ʌpp∂ siŋgʌm sɔllitʒtʒa:m e:n ɪvvʌḻavɪ le:eŋḍɪ /

03) **then** (the) **lion told** (it is said so)…. **why** (the hare was) **so late** (that).

04) **Then the lion told that why** (the hare was) **so late.**

15. 01) முயல் சொல்லிச்சாம ஒருசிங்கம் வர்றவழியில, ஒரு சிங்கம் ஒண்டு(ம்) லசிச்சு வந்திருக்கேக்குள்ள அது என்ன நித்திரகொள்ளவிட்டிட்டு அந்த சிங்கம் நித்திரகொண்டோண்ண நான் எழும்பி வந்திற்றன் எண்டு பிறகு அ அ சிங்க சிங்கத்த சிங்கத்திட்ட சொல்லிச்சாம் எங்க என்ன மாதிரி ஒரு ராஜா இல்ல இந்தக் காட்டில.

02) /muyal sɔllitʒtʒa:m … ɔru… sıŋgʌm ..varr∂ valiil∂ ,ɔru sıŋgʌmɔŋdɪ vasıɵɵɪ vaṉðirɪkke:kkuḻḻ∂ ʌðɪ enn∂ niɵɵir∂ koḷḷ∂ viṭɪttɪ … ʌṉð∂ sıŋgʌm niɵɵir∂ koṉdɔ:ṉṉ∂ … na:n eḻɪmpi vaṉðit an … eŋdɪ … pirahɪ …. a.. a. siŋg∂ … sıŋgʌɵ … sıŋgʌɵɵitṭ∂ sɔllitʒtʒa:m

03) (the) **here told** (it is said so)…**a lion …** (the) **coming way .. on / , a lion one…** (when) **was living… , it… me… sleep .. let** (and) **that lion ..having slept.. I got up** (and) **came** (here) **that … then…. eh..eh.. the lio… lion's** (the) **lion to / ..**(the hare) **told** (it is said so)…**Where..me.. like… a king** (was) **not this jungle …. in.**

04) (The) **hare told** (that) **a lion was living on its way. It let me sleep after that the lion had slept. I got up and came … then … eh … eh … the lion told that hare** (that) **there** (was) **not any king other than me in this jungle.**

16. 01) முயல் சொல்லிச்சி இருக்காம் எண்டு என்னைக் கூட்டிக்கொண்டுபோய்க் காட்டெண்டு சிங்கம் சொல்லிச்சாம்.

02) / muyal scllitʒtʒɪ ıyɪkka:meŋdɪ ennaik ku:ṭṭɪkkoṉdɪpɔ:yk ka:ṭṭeṉdɪ sıŋgʌm sɔllitʒtʒa:m./

03) (the) **hare told** (that there) **was** (one it is said so) **"me take** (and) **go** (and) **show"** (the) **lion told** (it is said so).

04) (the) **hare told** (that there) **was one.**(the) **lion said 'take me** (there and) **show me** (that) **lion.'**

17. 01) அப்ப ஒரு கிணத்துக்குள்ள அ கொண்டுபோய் காட்டேக்குள்ள அதிர நிழல் தெரிஞ்சிதாம் அப்ப இதுக்குள்ள சிங்கம் இருக்கண்டு தெரிதெரிஞ்சிட்டாம். அப்ப அந்த சிங்கம் தண்ணிக்குள்ள குதிச்சிட்டாம். கிணத்துக்குள்ள அ கிணத்துக்குள்ள குதிச்சோண்ண அ கிணத்துக்குள்ள குதிச்சோண்ண அ கிணத்துக்குள்ள குதிச்சோண்ண செத்திற்றாம்.

02) /ʌpp∂ ɔru kɪṉaɵɵɪkkuḻḻ∂ … a..kɔṉdɪ pɔ:y kaṭ e:kkuḻḻ∂… ʌðırɛ nɪḻʌl ɵeriɲɪ̵ða:m. ʌpp∂ .. ið̵ɪkkuḻḻ∂ sıŋgʌm ırɪkkeṉdɪ ɵeri … ɵeriɲɪ̵tṭa:m. ʌpp∂ ʌṉð∂ sıŋgʌm ɵaṉṉikkuḻḻ∂ kuɵuitʒtʒɪtṭa:m. kɪṉaɵɵɪkkuḻḻ∂ …. a …. kɪṉaɵɵɪkkuḻḻ∂ kuðitʒtʒɔ:ṉṉ∂. .. a kɪṉaɵɵɪkkuḻḻ∂ kuðitʒtʒɔ:ṉṉ∂ … seɵɵitta:m.

03) **then .. a well … into / eh..** (it) **took**(the lion) (and) **showed** (when) **…, its shadow appeared…** (it is said so) **then … this … into / a lion was** (the lion) **know.. had known. then that lion …** (the) **water … into / … eh.. had jumped.** (it is said so)

eh (the) **well … into / eh** (the) **well into ../.. having jumped once … eh** (the) **well into …/.. having jumped,** (it) **had died.**

04) **Then the hare took the lion** (into the jungle and when it) **showed a well and** (the lion looked into it) **its reflection was seen** (it is said so) **then the lion thought that there was another lion into the water. Therefore it jumped** (into the well it is said so) **and died.**

Analysis at the phonological level

Rajakumari *et a*l. (2018) researched a "number of phonological processes. It was more in bilinguals when compared to monolinguals among the Tamil students. The phonological processes like stopping, deaffrication, alveolarisation, and depalatalisation were exhibited only by bilingual Tamil and English-speaking children and were not found among monolingual Tamil-speaking children. Similarly, the phonological processes like fronting, velar assimilation, prevocalic voicing, medial consonant deletion and weak syllable deletion were seen only in monolingual Tamil speaking children and not in the Tamil and English-speaking bilingual children. In addition, the phonological processes like backing, gliding, affrication, labialisation, cluster reduction, epenthesis, final consonant deletion and initial consonant deletion were common in both." In this research, the child performs naturally in Voicing, /u / →/ɪ/ conversion, internal and external Sandhi, consonant clusters and assimilation.

Voicing is not a distinctive feature

The child answers using an English word in U1. It pronounces the word 'business' as /bisn∂s/. The voiced alveolar fricative /-Z/ is replaced by the voiceless alveolar fricative /-s/. The Tamil language does not have voicing as a phonological feature to distinguish the phonemes. Therefore, both /-Z/ and /-S/ are the same for the child. They are allophonic variations of the Tamil phoneme /-S/.

1.1. /u / →/ɪ/

Throughout most of the utterances, the child uses/-ɪ/ in his speech. However, in standard Tamil, the phoneme /u/ is pronounced but in spoken Tamil, /ɪ/ is used. So, the child also uses the same in U4. /ʌðu/ becomes /ʌðɪ/, /sıŋgʌmųm/ becomes /sıŋgʌmɪm/etc.,

Internal and external sandhi

The child properly handles both internal and external sandhi (U5). /marʌm/+ /-kɨ/ becomes /marʌ + θθɨk + kɨ/ = /marʌ + θθɨk + kɨ/. It is an example of internal sandhi. On the other hand, /ɔḻɪŋðɨ/ + /irɪŋ̱ð∂ðɨ/ + /a:m/ becomes /ɔḻɪndʒɪrɪŋ̱ð∂ða:m/. Here /nð/ becomes /ndʒ/. Simultaneously, the /-I/ of the morpheme /-ɨ / is deleted. Further, the last vowel phoneme /irɪŋ̱ð∂ðɨ/ of the morpheme is also deleted. It is called external sandhi. The adults also do the same. It becomes clear that the child at this age (six and a half years old) has acquired his skill significantly.

An exciting thing has happened in U8. First, the child uses the prepositional phrase /ra:ja: + t̤t̤∂/; later, because of the influence of the standard Tamil, it̃ repeats as /ra:ja: + vɨ + t̤t̤∂/, for, in standard Tamil, it will be as /ra:ja: + vɪdam/. So, the child derives the phoneme /vɨ/ from the standard Tamil and attaches them with the spoken post-positional ending /-t̤t̤∂ /. L1 (first language)

Both the internal and external sandhis fall on the same word in U13: /ɔ:dijɔ:dippɔ:y/, that is, /ɐ:di + ɐdi + pɔ:j/ insertion of the phoneme /j/ and the change of the phoneme /ɐ:/ into /ɔ:/ are the example for internal santhi. The insertion of an additional /-p /is an example of external sandhi.

Consonant clusters

The child has acquired and used the consonantal clusters of the Tamil language in U6 and U8. The words, /eṉḍɨ/ and /se:ṉ̊ðɨ/ are significant. In the first word, both /ṉ/and /ḍ/ are postalveolar consonants. In the second, both /ṉ/ and /ð/ are dental consonants. In Tamil, /ṉḍ/ and /ṉð/ are clusters. In addition to these sounds, the widespread cluster throughout all the utterances of the child is /ŋg/ found in /avʌŋgʌḻ/, /sɪŋg∂/etc.

Assimilation

The plural suffixes /gʌḻ/ and /hʌḻ/ of the words /ni:ŋgʌḻ mahɨḻvɪθθɪ:rhʌḻ/ are significant in U9. Both are allomorphs of the plural morpheme, /-gʌḻ/. Further, in Tamil, as already stated, voicing is not a distinctive feather for contrasting phonemes. The sounds, /g/, /k/ and /h/ are the allophones of the phoneme /k/. Here, in this utterance, /k/ is assimilated to /g/ to cluster with /ŋ/ in the utterance, /ni:ŋgʌḻ/. The phoneme, /k/ is assimilated to /h/ to cluster with /r/ in the utterance, /mahɨḻvɪθθɪ:rhʌḻ/.

The Analysis at the Morphological Level

Affixation

The child, in its answer, uses an English word affixed with a Tamil case suffix /-il∂/ (equal to 'at') in U2. It indicates the child's morphological knowledge of using the suffix /-il∂/ and where to use it.

Morphemes indicating tenses

The child knows the morphological information of the different morphemes indicating the tenses (U3). In between the morphemes /kuṭi-/ (the root) and /-∂n/, the morpheme /-tʒtʒ/ is used to indicate the past tense, and the morpheme /-pp-/ to indicate the future tense, and the morpheme /-kkɨr/ to indicate the present tense. Here, the child correctly uses the morpheme, indicating the past tense.

Overgeneralisation takes place in U9. The story is narrated in the past tense, but there are direct conversations between the lion and the animals or the hare. When a request is made, the animals use the present tense though the conversation was in the past. The animals use the past tense verb in the second person narrative. They use / eŋgnḻaɪ ni:ŋgʌḻ mahɨḻvɪθθɪ:rhʌḻ/ (you pleased us), but the basic form should be /mahɨḻvijɨŋgʌḻ / ("you please us" or "you make us happy"). The child has extended the use of the past tense bound morpheme, /θθɪ:r/, to the present tense use of direct speech. It has replaced the correct bound morpheme of the present tense or imperative / jɨŋ/. The child has over-generalised the use of /θθɪ:r/. Here, the child thinks that although it is a direct request of the present tense, the story happened in the past, so the request is mistakenly changed into a past incident statement.

Morpheme indicating conjunction

The child correctly uses the morpheme indicating the conjunction 'and' in U4. In Tamil, the suffix /-ɨm/ is used in both words to indicate this conjunction, unlike the English use of the word 'and.' It is noticeable in the utterance, /sɪŋgʌmɨm mirɨhaŋgʌḻɨm./

Morpheme indicating word classes

The child repeats the word /marʌθθɨkkɨ/ to verify its morphological use of /- θθɨkkɨ/ in U5. It is similar to the usage of the English prepositions `of' and `to'. The word, /marʌm/ means `tree'. The child tactfully deletes

the noun suffix/-m/ to attach the case suffix /- өөɨkkɨ/ to use another morpheme suffix, /-kɨl∂/ (`under'). In Tamil, to use the morphological suffix /-kɨla/, the noun word should be inflected with the suffix /-kɨ/. The rest of the phonemic cluster in /- өөɨk/ is a morpho-phonological change to join /marʌm/ and /-kɨ/. When the phoneme /m/ is deleted from a noun, naturally, /-өөɨ/ is infixed morpho-phonologically in the Tamil language. It is a generalised rule connecting the morphological suffix /-kɨ/.

The child expresses his skill in using morphemes to change a noun into an adjective (U8) and (U9). It changes the noun, /siŋʌm/ into the adjective, /siŋg∂/ to join with the noun having the dative case at the end in the utterance, /ra:ja: + vɨtt∂/. In this process, the morph, /ʌm/ becomes /-∂-/ The phoneme, /m/ is omitted and /ʌ/becomes /∂/. It is a common feature in Tamil; for example, the noun utterance /marʌm/`tree' becomes the adjectival utterance /mara/ `tree.'

Morphemes indicating plurality

In the noun phrase, /kanak∂ mirɨhaŋgʌl/, the plural suffix, /gʌl/ is correctly attached to the noun/mirɨham/ (animal) to agree with the adjective, /kanak∂/ (Many) in U5. However, at the same time, the child has made an error in forming the plural suffix to the Verb, /vʌn̯ð∂ða:m/. The correct verb should be /vʌn̯ð∂/ +/na/ + /v/ + /a:m/ =/vʌn̯ð∂navaɨm/. So, instead of /na/, the child has given /-ð/, a suffix denoting singularity. The morph, /na/ is the plural morpheme. The morph, /-v-/ is inserted naturally in joining the morphs, / vn̯ð∂na/and /a:m/. The morph, /-a:m/, means `it is said so,' which means, "somebody told this piece of information; now I am repeating what was told me."

The child has made the same mistake in U7. So, it is clear that still, the child has some problems using the correct plural morpheme in the Tamil language verb system.

Another example is the child's inability to use the plural form in U13. The child uses the singular morpheme, /ka:l/ + /l∂/ instead of /ka:l/ + /hʌl/ +/-l∂/. Here, the morpheme /hʌl// is the plural morpheme.

The analysis at the syntactic level

Laxmanen (2000) conducted a "cross-sectional study that investigated the acquisition of relative clauses by 27 Tamil-speaking children, in the age group 2 – 6 and 7-11. A picture-cued production task revealed that children below the age of 5 relativised significantly less often than the older children; they exhibited a strong preference for the tag relative and produced significantly fewer participial relatives than the older children. The findings also indicated that the younger children produced a significantly greater number of pragmatically inappropriate responses than the older children. It is argued that the observed age-related differences in Tamil children's relativisations likely stem from performance factors and that the younger children are probably not inferior to the older children regarding their grammatical and pragmatic competence." This research also exhibits similar characteristics in elliptical expression and the key sentence pattern, reversion of subject-verb order and its disagreement, prepositions in English functionally as inflectional suffixes in Tamil, The positions and functions of suffixes in sentence, and the syntagmatic relationship of the sentence

Elliptical expression and the key sentence pattern

The child uses the technique of an elliptical expression, / na:n/ (I), while it preserves the linear order of the Tamil language sentence, (S) OV (Subject + Object + Verb) in U3.

The child takes some time to utter the appropriate case suffix, /kɨl∂/ (under), to complete the sentence pattern: sentence adverbial + subject + adverb (prepositional phrase) + verb. Therefore, it repeats the word / maeʌө/ өɨkkɨ/. (U5)

The child is mature, considering the subject as an elliptical expression to maintain speed and continuity in the story in U12.

When it repeats the possessive phrase, / kall∂viļɨn̯ðɨða:m, siŋnөөɨr∂ ka:ll∂/ in U13, the child is aware of the elliptical expression of the Verb, / viļɨn̯ðɨða:m/.This fact is observable from his correct repeat use of the suffix attached to the word, /k∂:l/ + / l∂/ = /ka:ll∂/.

Reversion of subject-verb order and its disagreement

The subject-verb order is reversed in U7: adverb (time) + adverb (place) + verb + subject. However, there is a subject-verb disagreement. The subject is plural, but the Verb is singular. The plural verb should be /van̯ðanava:m./

Prepositions in English functionally as Inflectional Suffixes in Tamil

Like Latin, Tamil is also an inflected language. Its nouns usually have the case ending system, which is not found in English. In U11, the subject is merely a noun, but it

should not be according to the standard spoken Tamil. It should be /"muyalıkɨ"/, a noun with the nominal case instead of /muyal/. There is no space in Tamil to divide the suffix from the noun in this type of written form. English Prepositions are Tamil inflectional suffixes. The adverb of place, /va:r∂ valiil∂/ should come at the front position.

The positions and functions of suffixes in sentences

In U11, the sentence pattern as it is found in the expression is subject (noun) + Adv + adjective phrase as complement + Verb (the elliptical expression, /ɪrɪn̪ðaðɨ/ (was). The child has also expressed his knowledge in adequately using the suffix /a:m/in the place where necessary. The standard spoken form would be / va:r∂ valiil∂ muyalıkı sarianı∂ kaılaippa:h∂ ɪrɪn̪ð∂a:m/. However, for stylistic purposes, the child has deleted the verb 'be' so that the suffix /a:m/ is attached to the adjectival complement, / kalaippa:m/. This process has deleted the phonemes /h∂/ and added only /m/ since the word has /a:/ at the end.

The syntagmatic relationship of the sentence

The child shows his attempt at bringing out the direct speech's immediate effect in its indirect speech of his narration in U14. The syntagmatic relationship of the sentence would reveal this fact. In the standard spoken Tamil, the indirect speech will be /ʌpp∂, e:n ɪvvʌlavɨ le: t̪ en̪dɨ/. However, in direct speech, it will occur at the end of the utterance. Therefore, the child has placed the part at the end. Besides, it has placed the word / en̪dɨ / (that) to express an indirect speech. Further, the child performs a code-mixing using the English word *late* /le:t̪/.

The analysis at the semantic level

Verb inflexion featuring the elliptical expression of the subject

In U3, the child's answer, /ti:kuṯit̪ʒt̪ʒ∂n/ has the subject, /na:n/ as an elliptical expression in U3. However, semantically this subject is denoted in the Verb, / kuṯit̪ʒt̪ʒ∂n/. The inflectional suffix, /-∂n/, referring to the first person singular, gives the idea that the child uses the elliptical expression, (I) /na:n/ as the subject.

Subject denoting the elliptical expression of the verb

In U4, it happens the other way round. The child has the verb /irɨkkɨr∂ðɨ/ (is) as the elliptical expression. Here too, semantically, this verb is denoted by using the subject /ʌðɨ/ (that), a demonstrative for non-human singular entities.

Semantic generalisation

The child makes a mistake semantically in using the adverb /na:ḷaıkkɨ/ for /ʌdɨθθana:ḷ/ (the following day) in U10. Though the child is semantically able to differentiate between the single word noun, /na:l/ (day) and the two morphemic noun (noun + suffix), /na:ḷaıkkɨ/ (tomorrow), that is, /na:ḷ/ + /aıkkɨ/. It uses /na:ḷaıkkɨ/ in the past tense. Semantically speaking, the child tries to generalise the concept of `tomorrow' for both present and past tenses. It proves the child's capability for semantic generalisation.

Semantic redundancy

The child shows semantic redundancy in its use of / eḻɨmpinɔ:n̪∂/ (having got up) and /muḻit̪ʒt̪ʒɪppa:θθɨ/ (opened its eyes and look at) in U12. Here, though the words are semantically different at the deep level, it is more approximately less similar at the surface level. However, surprisingly, the child is aware of its deep-level semantic implications. The utterance, /eḻɨmpinɔ:n̪∂/ means to *'awake from sleep and leave the place where one slept.'* The utterance, /muḻit̪ʒt̪ʒɪppa:θθɨ/ means `*to open one's eyes and look at something."* The child has made an error in the sequence of the verb forms.

First, the child uses "got up" and second, uses 'opened eyes and looked at However, the natural order is the reverse. The child has made this sequential error because of the influence of the semantic nature of the consequential words, /taım∂ pa:kke:kkuḷḷ∂/ (looking at the time). The verb participle, /pa:θθɨ/ (looking at) is uttered in anticipation of the Verb, /pa:kke:kuḷḷ∂/ (while looking at) and the object, /taım∂/. Here also, there is an example of 'redundancy within redundancy.' In Tamil, / mvḻit̪ʒt̪ʒɨ + p+ pa:θθɨ/ is regular phrasal usage. So instead of uttering first /muḻit̪ʒt̪ʒ∂ðɨ/ then /eḻɨmpit̪ʒt̪ʒa:m/, the child utters the verbs in the semantically wrong order because of the influence of these words and the phrasal usage.

Synonyms

The child uses the term /ŋɨḻʌl/ (shadow) for /vimpam/ (reflection) in U17. Semantically the child has generalised that the constituents of reflection and that of shadow are the same; or, though it identifies the difference, it may not know the Tamil word, /vimpam/ for reflection. Therefore, it has extended the nature of `shadow' to that of reflection. Further, the idea behind a reflection is more complex than a shadow for a child to grasp easily. Sometimes, the child may consider, provided that the child knows the term /vimpam/, that both /ŋɨḻʌl/and / vimpam/ are synonyms.

The analysis at the pragmatic level

Contextual appropriateness and communicative intention

The child uses the one-word utterance /bɪsnəs/ to answer the question in U1. From a pragmatic point of view, language is a shared system of beliefs and inferences. Here, the child is aware that its one-word utterance is contextually appropriate. The child's communicative intention is vast when the question, "what is (your) father doing? is asked. The child communicates that (1). It is *'my father is doing business.' It is 'business that my father is doing.'* The child's answer is the same in U2. It is contextually appropriate. The communicative intention is that (1*) it is **I** who **is studying** at the convent (2). It is **'at the convent'** I am studying.*

The child's answer reflects a **pragmatic** interpretation in U3. To the question (Tamil version), *'what (did you) eat in (the) morning?* The child says,*"(I) drank tea."* The question is about "eating" not about "drinking" but the child answers that he drank tea. The communicative intention or the speaker's meaning can be that *it **did not** eat anything* in the morning. *He **only drank tea** in the morning.*The child abandons expressing verbally *"to the lion the king"* **f**or pragmatic interpretation in U10. The child thinks omitting this expression is also contextually appropriate in its narration.

In U15, the child says '/∂ŋɡ∂… ennama:ðɪrɪɔrura:jaɪɪllaɪɳðəka:ʈʈɪl∂/. The lion said to that hare, *"where… like me, no (any) king in this jungle."* In U16, /muyalsɔllɪtʒtʒɪ irɪkka:meɳdɪ / *(The hare told that (there) was another king)*. Here too, the child intentionally deleted the noun phrase, /ɪnnɔrɪʌrʌsan/ (another king) in the utterance, /muyal sɔllɪtʒtʒɪ ɪnnɔrɪ ʌrʌsan ɪrɪkka:meɳdɪ/. That means, pragmatically, it relates to the lions. Deletion also is contextually appropriate.

Semantic misinterpretation and pragmatic interpretation

In U17, the child gives much pragmatic information at the expense of making semantic errors. For example, in the first sentence, the child did not use the Tamil words for 'who' /muyal/ (the hare) 'whom' /sɪŋʌθθ∂/ (the lion). The full sentence would be like this /ʌppa muyal sɪŋgnθθ∂ ɔrukɪɳəθθɪkkuḻḻ∂ … kɔɳdɪ pɔ:yka:ʈʈe:kkuḻḻ∂ …. ʌðir∂ ɳɪḻʌḻ θeriɳɪða:m/. In the second sentence, the omission of the words/sɪŋʌθθɪkkɪ/ (the lion) and /innɔrɪ/ (another) has caused semantic misinterpretations. However, the child expects a pragmatic interpretation of the sentence.

The semantical misinterpretation is that the two lions (one is the original, and the other is its reflection in the water) are difficult to distinguish by the listener. Without these words, pragmatically, the context makes us understand and distinguish the lions with the child's sequential narration of the story's events. The complete sentence would be like this: /ʌppa ..sɪŋɡʌθθɪkkɪ ɪðɪkkuḻḻ∂ innɔrɪ sɪŋɡʌmɪrɪkkeɳdɪ θeriɳɪʈʈa:m./

The above examples show that the child has some pragmatic presuppositions in language communication.

DISCUSSION AND CONCLUSION

Lust and Eisele (1991) explored, "Garman's (1974) research on Tamil CLA and the resultant linguistic strategy and two prelinguistic strategies to explain the results of a question-picture choice task involving sentences with embedded and subordinate clauses." They proposed "four processing strategies and show that some of Garman's findings are better explained not as the outcome of prelinguistic strategies but as an artefact of the experimental design. The data provide evidence of a grammatical sensitivity - demonstrated in recent language-acquisition studies." When looking at the child's language acquisition overall, it seems that the child has already acquired the necessary knowledge in Tamil to communicate its thoughts and messages via experimentation, revealing unintended grammatical sensitivity. More or less, its speech skill is equal to an adult's speech except in some features analysed here, i.e., the errors and mistakes at some levels of analysis.

The child is six and a half years old. The child is a male studying in year one. It is a monolingual child though it uses three English words in its speech: "business", convent, and time. These terms have become very familiar in our society. We almost hardly use their Tamil equivalents. So, it is not surprising that the child also uses these terms in his speech.

This research has revealed substantial analysis and findings at each level of linguistic systems. At the phonological level, the child cannot distinguish voicing as a distinctive feature in English and not a distinguishing feature in Tamil. The phoneme/u/ is transformed to /ɪ/ in all three positions of a word: front, middle, and back. Internal and external sandhis are used. The consonant clusters are identified. The child is aware of assimilation. Here, in this utterance, /k/ is assimilated to /g/ to cluster with /ŋ/ in the utterance, /ni:ŋgʌḻ/. The phoneme, /k/ is assimilated to /h/ to cluster with /r/.

In the analysis at the morphological level, affixation is visible, especially in using suffixes. The morphemes indicating tenses are used significantly though there is confusion over the past and future forms. The morpheme indicating conjunction /im/ is appropriately used. The child correctly applies the morphemes indicating word classes with nouns and adverbs. The child is not very successful in using the morphemes indicating plurality.

In the analysis at the syntactic level, the elliptical expression and the critical sentence pattern are distinguished and adequately used in the correct context with co-text. It is interesting to note that subject, object and Verb are implied in the elliptical expression and sometimes in violation of the established order in the Tamil language, but it is a stylistic use. The significant feature is the reversion of subject-verb order. However, there are disagreements in numbers. The child learns English in school, so some English words are also used. Apart from that, the prepositions in English are functionally represented as inflectional suffixes in Tamil. The case suffixes or morphemic suffixes are handled satisfactorily, especially in their positions and functions in a sentence. The syntagmatic relationship of the sentence is maintained in its narration.

In the semantic level analysis, the verb inflexion featuring the subject's elliptical expression and the reverse are competently used. Though the child makes semantic generalisations, sometimes, they are not used pragmatically in the proper context. Another natural trend among children is the repetition of words, even morphs and morphemes. Here also, some expressions of semantic redundancy appear. Though generally, children can identify and use synonyms for most familiar and popular words, when the semantic complexity increases, the children struggle. Here too, the child is confused over the Tamil equivalents of 'shadow' and 'reflection.'

In the analysis at the pragmatic level, the child performs amazingly. The contextual appropriateness and communicative intention are apparent. They are correlated to elliptical expressions. However, the child sometimes commits semantic misinterpretation while providing time and space for the proper pragmatic interpretation of many expressions.

Since the child has passed its sixth year, more or less he has managed to internalise the linguistic systems of his mother tongue, the Tamil. However, although many observations have been made about CLA, little systematic work has been done on the Tamil language in Sri Lanka.

After analysing the child's language acquisition at the five levels, it is possible to say that the child owns considerable 'Language Universals' that form the basis of this story's narration. Though the story is not its creation or innovation but conditioned, reinforced by his teachers or parents and narrated by him, the utterances are not a simple variation of the elders' sentences. Most of the sentences he utters are of a good standard of his own making and the result of his precise acquisition. (e.g.) Analyses on Elliptical Expression and the Key Sentence Pattern, Reversion of subject-verb order and its disagreement and The Syntagmatic Relationship of the Sentence.

The elder could not have narrated some of the sentences uttered by the child to him!. He changed them. So it enforces the idea that he has captured the 'rules' and 'systems' of the Tamil language and not just the sentences, phrases, and words of this story narrated by the elders to him. Analysis on Morpheme Indicating Conjunction and Morpheme Indicating Word Classes clearly show this capacity for generalisation and forming rules.

So here it verifies Chomsky's (1959) mentalist approach to language as well. In addition to the linguistic output from the elders or environment outside, his innate language faculties also contribute to uttering these sentences. The "constructionist" perspective (Elman *et al.*, 1996) accounts for general and nonlinguistic learning capacities for linguistic competence. However, this perspective domain declined due to Chomsky's (1959) anti-behaviourist position. Nevertheless, the research on nonlinguistic learning capacities, such as tracking the statistics of words or sounds in language input, continues. (Saffran, Aslin, & Newport, 1996). The past research examined children's ability to use distributional aspects of language input (Saffran, Pollak, Seibel, & Shkolnik, 2007). They revealed the child's potential for informative content of the language data statistically and their accessing ability.

Since this child belongs to Piaget's 3rd stage of a child's development (Intuitive thought: four and a half years to seven years) though he can perceive the things in the environment, he is unable to conceive time, space, relations of temporal order, duration and their classifications in a systematic 'logical manner'. For example, he is not able to identify the two lions, the lion and here (analysis 5.2), and the two terms "shadow" and "reflection" (analysis 4.5). These examples show his inability to conceive classifications properly. Utterance No (15) is an example of his inability to conceive time, space and temporal order and duration relations. In

this utterance, he skips from an incomplete sentence to another incomplete sentence without any order or system in the timing and the space of the story's events. The sentences are incomplete because sometimes the verbs are incomplete, and sometimes the subjects are incomplete or confused. Perhaps his power of perception is quicker than that of conception, appropriate for this stage of cognitive development.

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RESEARCH ARTICLE

Nutritional and psychological interfaces in enhancing the quality of life

Saman Ijaz[1]* and Adeela Rehman[2]

[1]*Department of Clinical Psychology, Foundation University, Islamabad, Pakistan.*
[2]*Fatima Jinnah Women University, Rawalpindi, Pakistan.*

Abstract: Nutrition is an important determinant of one's brain performance and ultimately the mental health. Similarly, the pattern of one's eating behaviour defines one's health. Unhealthy eating patterns from childhood can lead to physical, psychological, and behavioural problems in later stages of life. In this context, the purpose of this research is to study the eating behaviour patterns of young adults, the association between eating patterns and the quality of life, and the differences in mental health conditions determined by demographic factors like age and gender. The research was conducted in Rawalpindi and Islamabad in Pakistan, under a quantitative research design, that used a questionnaire with close-ended questions to assess the individual respondents' eating patterns and their quality of life. The responses of (385 respondents) were collected online through a survey link, shared on multiple platforms. The findings indicate that the eating patterns like low-fat eating, meal skipping, emotional eating, snacking and sweet, haphazard planning and cultural lifestyle. do have an impact on one's physical and psychological health. It was also deduced that males have relatively better physical and psychological health as compared to females. The study concludes that healthy eating among young adults will lead to a better quality of life. Hence this study promotes awareness of healthy eating patterns among the younger generation because healthy eating behaviours when initiated from the childhood will lead to a high quality of life ahead.

Keywords: Eating pattern, healthy eating, quality of life, physical health, psychological health.

INTRODUCTION

Nutritional psychology comprehensively focuses on how disciplined intake of nutrient-rich food can alter one's mood, stress, energy, sleep, tolerance, and behaviour (Centre for Nutritional Psychology, 2021). It establishes a link between mind and body and focuses on what we choose to eat, how we eat, and its effect on one's health. Eating not only affects one's body and mind, rather it has a huge influence on one's mood and impacts psychologically, and in return, helps one make one's dietary choices (Institute for the Psychology of Eating, 2020). Studies show that the eating pattern is associated with a brain-rewarding system of body hormone regulation. Delicious food not only enhances one's mood in emotional terms but also helps the brain centre release dopamine which is a neurotransmitter as well as a hormone to elevate one's psychosomatic condition in biochemical terms (Gahagan, 2012).

In a healthy eating pyramid, daily exercises, weight control, and supplementary intakes are placed at the bottom because they are considered indispensable for a healthy lifestyle. It is followed by vegetables, fruits, and wholegrain along with other dairy and poultry products as well as nuts, beans, and seeds. The top of the pyramid is made up of meat and butter along with grains, pasta, rice, sugar, *etc*., which shows that intake of these items should be kept small and occasional (The Nutrition Source, 2021).

Unfortunately, people's lifes have drastically changed today, and so have their food patterns. This shift in the trend from healthy to the unhealthy can be attributed to numerous developments, including the technological advancements like the use of social media

*Corresponding author (skhanyousafzai17@gmail.com ID https://orcid.org/0000-0002-4340-9004)

as well as interpersonal and social influences (Chung *et al*., 2020). People have now got less time and more work to do to keep up with their surroundings. They prefer the modern trends of fast foods or junk foods over traditional, vegetable, or homemade foods (Yahya, Zafar and Shafiq, 2013). Most people's food choices depend on the amount of time they have (Lappalainen *et al*., 1997). Modern foods are preferred by the young generation because it takes less time to be prepare, to be delivered, and more gastronomically appealing. Studies show that these unhealthy and poor dietary conditions lead to non-communicable diseases like obesity, cardiovascular diseases and diabetes. (Anand *et al*., 2015). High in calories and sugar and low of nutritional value, they also contribute to different diseases that emerge in the later stages of life.

Similarly, the quality of life and the quality of the diet are also interlinked (Gezer *et al*., 2021). Eating unhealthy foods regularly can be hazardous, in terms of damaging the body physically, causing obesity (Junk Food, 2021), harming the mind and body equilibrium, and affecting the whole lifestyle. People eventually lose interest in physical activities like walking or running, and everything else. Regarding the children, their academic performance gets affected due to the lack of concentration. All the above negative psychosomatic imbalances are resulted in by unhealthy eating patterns (SA Health, 2021).

Hence the present research aims to study different eating behaviour patterns, and their relationship with the desired quality of life, along with their results in relation to the demographic differences that prevail among young adults.

LITERATURE REVIEW

Along with the trends that develop in the course of time, people's lifes are affected by many cataclysmic social and environmental factors. Among the many factors that cause physical as well as psychological diseases, one's dietary pattern figures prominent (Heidari *et al*., 2019). Many studies help to establish a link between the nutritional and psychological aspects of life and to realise that the improvement towards a healthy eating pattern will eventually enhance the quality of life (Amarantos, Martinez and Dwyer, 2001). However, the root cause of many diseases is traced back to lifestyle and eating patterns during childhood and adulthood, respectively. Similarly, with time as the norms and patterns change, that also leads to changes in diet, and people become either obese or underweight or develop certain behavioural issues (Kumcağız, 2017).

Diets in the Asian and Pacific region have changed drastically due to modernisation and globalisation, leading to a high rate of obesity and overweight (Pingali, 2021). Consumption of fruits and vegetables remains low in many regions and while intake of highly processed foods, white rice, staple carbohydrates, *etc*. has risen drastically over the years. Similarly, processed food sales have also rapidly increased in middle-income countries as these fast-food chains are rapidly penetrating markets and attracting people's attention (Baker and Friel, 2016). the second largest industry of Pakistan, the food and beverage, accounts for 27% of the value-added food processing production with an annual average of $223.5 million (Invest, 2021). This diversification has led to an over-access to animal and vegetable fat oils. Foods cooked in these oils highly linked to the heart diseases as well as contribute about 15% of the calories in consumers in the countries like Pakistan, China, Malaysia, the Republic of Korea and Fiji. In Pakistan, there is a high prevalence of heart diseases due to the consumption of diets high in fat oils containing 14.2% -34.3% of trans fatty acids (TFA) (Iqbal, 2014). Likewise, the consumption of sugar has also increased across the region which again negatively impacts health (Hills *et al*., 2018).

Unhealthy eating behaviour patterns like meal skipping, snacking, and high intake of sugar cause mental health problems and emotional disorders, problems of conduct, hyperactivity disorder, and emotional disorders (Howard *et al*., 2010, Lien *et al*., 2006). Meal skipping, specifically, the first meal of the day that is breakfast is always later followed by excessive intake of junk food that is extremely unhealthy (Khalid, Khalid & Shah 2018). There exists a positive relationship between mental health problems, dietary intake, and the quality of life. Similarly, studies show that high-fat food intake for one week also causes impaired learning, memory issues, and alteration in dopamine levels in different parts of the brain (Farhangi, Dehghan & Jahangiry 2018). Furthermore, the children who are involved in physical activities reportedly are healthy with normal body mass indexes compared to those who with poor quality of life including a lesser amount of physical activity (Anokye *et al*., 2012). Eating vegetables and nuts is also associated with a positive and healthy body mass index (Gutierrez-Pliego *et al*., 2016). Those who prefer fast foods over healthy foods are found to be obese with larger body weight (Fernando *et al*., 2019). The average age for the onset of anxiety and mood disorders among children is 6 to 13 years, and therefore, special attention to the diet of the children can lead to better mental health in the later stages of their life (O'Neil *et al*., 2014). Likewise, food choices and food priorities play an equally important role. Preferring snacks, frozen foods, contaminated

drinks, and chocolate, candies and animal food (red meat, processed meat) over traditional food (vegetables, oatmeal) can cause an onset of psychological problems (Errisuriz, Pasch & Perry, 2016). High intake of a diet rich with sugar like sweets and fizzy drinks are also linked to behavioural problems among the adolescents (Oellingrath, Svendsen & Hestetun 2013) whereas consuming traditional foods is less associated with such issues (Weng *et al*., 2011). Indeed, food intake is a complex process influenced by many factors like availability, cost, variety, taste, *etc*. that affect one's combined physical and mental health (Singh, 2014). Furthermore, diet can also affect academic performance. A decline in the nutritious rich diet of the Mediterranean style and an increased intake of a saturated fat diet delays cognitive development and functioning in children (Barchitta *et al*., 2019). Ares *et al*. (2015) highlight another aspect of the perception of well-being in the context of food habits and how that can impact one's food choices. Some of the major dimensions of physical and psychological health get along with food, environment, society, economics, *etc*. Consumers do acknowledge that food does affect their well-being through their physical and mental health. They have the knowledge that foods high in salt, fat, sugar, sweet products, junk foods, and fried foods are harmful and hazardoust to health.

Low fat eating comprises foods with a calory level of 30% or less than that. These include vegetables, fruits, whole grains, beans, lentils, chicken, & other dairy products. Such a diet has been approved and endorsed by many clinicians as it reduces the mortality rate and promotes the healthy lifestyles (Bhandari & Sapra, 2021). A low fat diet reduces the rate of coronary heart disease along with cancer as well (Jéquier & Bray, 2002). Foods like vegetables, fruits, whole grain, meat, and protein are more nutritious and essential needs of one's mind, body, and well-being. They have also been associated with a lower risk of depression and related disorders (Sutter Health, 2021). Similarly, emotional eating has increased food consumption in response to either positive or negative emotions, both can be harmful if done excessively (Bongers & Jansen, 2016). Skipping meals, another important effective component, also has a great impact on energy levels. Skipping breakfast or lunch or dinner is often followed by an increased intake of food, a low level of energy and a negative impact on health (Zeballos & Todd, 2020). So, to improve the mental health at the primary level, a good healthy diet should be prioritised and maintained (Meegan, Perry & Phillips, 2017). World Health Organization (WHO) developed a global strategy on diet, physical activity and health, that focuses on improving the population's diet, environment, and policymaking by the government

to control the widespread of such diseases. They advise educating people through public service messages about the relationship between a healthy, unhealthy diet, and its effect on the mental and physical health. Even the slightest change and improvement in our diet pattern can contribute towards the betterment of our society (Jacka *et al*., 2014).

The number of studies investigating the association between the quality of life and eating patterns is very limited. Health-related quality of life is a combination of physical health, psychological health, social relationship, and environment (Gil-Lacruz *et al*., 2021). A recent study involving a group of Brazilian students shows that an unhealthy diet reduces the quality of life (Lanuza *et al*., 2020). In Pakistan, specifically, no such research has been carried out previously to study the relationship between food patterns and the quality of life. Hence, the current study aims to examine this relationship specifically among the young adults to better understand the food preference's along with their impact on physical and psychological health. It also focuses on the differences based on the demographics such as gender and socio-economic status that have not been previously targeted.

Hypotheses

Upon reviewing the literature, the current study was formulated the following hypotheses:

- H1: There is a relationship between the eating behaviour patterns and the quality of life among young adults.

- H2: Males have better physical health compared to females.

- H3: Males have better psychological health compared to females

- H4: There is a positive effect of one's family income on one's eating patterns and the quality of life.

Objectives of the Study

The current study is designed,

- to study the eating behaviour pattern of the young adults.

- to study the relationship between the quality of life and eating behaviour patterns among young adults.

- to study the variations in the relation between the quality of life and eating behaviour patterns based on demographics (age, gender, socioeconomic status)

Methodology

Participants and Procedure

Under the principles of a cross-sectional study, using a quantitative research method, the data was collected from the cities of Rawalpindi and Islamabad. A non-probability sampling method was used combined with purposive and convenient sampling techniques due to the proximity and easy accessibility of the data within the research venue. The collected data was then analysed through a statistical package pertaining to social sciences (SPSS). The target population involves both the male and female young adults of the age range from 18 to 35 years. Under Raosoft, the sample size is found to be 385 participants.

Due to the COVID-19 pandemic, the data was collected online by sharing a link to a designed questionnaire on different social media platforms relevant to the inclusion criteria. The target sample of 385 participants was achieved in two months, starting from 2nd June 2020 to 2nd August 2020. The participants were informed about the nature of the study and obtained the informed consent.

Measures

Demographic Sheet

The purpose is to obtain more detailed information about the participants. The demographic sheet includes cues to age, gender, marital status, working status, family income, education, university, height, and weight.

The two instruments used along with a demographic sheet:

Eating Behaviour Pattern Questionnaire (EBPQ)

The eating behaviour pattern of participants is assessed through EBPQ scale developed by David G. Schlundt which consists of 51 items. The questionnaire comprises 6 factors assessing low-fat eating (14 items) along with, emotional eating (10 items), snacking and sweets (6 items), cultural/lifestyle behaviours (7 items), haphazard planning (9 items), and meal skipping behaviour (5 items). The 51-item Likert-type questionnaire with a total of 5 questions of reverse scoring is adopted as it does not require any changes. Its Cronbach alpha value calculation result is considered .86.

Some sample questions appear as:

1. I count fat grams.

2. eat when I'm upset.

3. My emotions affect what and how much I eat.

World Health Organization Quality of Life (WHOQOL-BREF)

To assess the quality of life, a scale developed by the World Health Organization was used. It comprises a total of 26 questions under the 4 domains: physical health (7 items), psychological health (6 items), social relationship (3 items), and environment (8 items). The remaining two questions; questions number one and two are examined individually, not under any domain because they focus on the overall health and quality of life of the subject. The scoring of the Likert scale-based questionnaire was calculated to receive a Cronbach alpha value of .90.

Some sample questions appear as:

1. How much do you enjoy life?

2. Are you satisfied with your sleep?

3. Do you have enough energy for everyday life?

Procedure

Unfortunately, due to the ongoing COVID-19 pandemic situation data could not be collected by visiting the subjects in person. Hence, the online survey link was shared multiple times on different social media platforms as well as among friends and family. Standardised and valid questionnaires were converted to create a Google form and then the link was shared among different people, personal contacts, and social media sites to be filled. It was made clear that their participation was considered voluntary and the confidentiality of the responses was ensured.

Initially, a pilot study was conducted with 30 participants to ensure the reliability of the questionnaires and the eligibility of the participants. After establishing reliability, the final data collection (with a sample of 385) was carried out over a period of 2 months.

RESULTS

Table 1 illustrates the correlation between the age and the subscales EBPQ and QOL to test the first hypothesis. It was found that there is a significantly positive correlation between snacking and sweet, cultural lifestyle, haphazard planning, meal skipping, psychological health, and environment whereas there exists a negative correlation between the physical health and emotional eating.

As shown inTable 2, there is a significant effect of family income on both the eating behaviour pattern F (2, 382) = 3.70 and the quality of life F (2, 382) = 8.87, p < .05. This shows that these groups have significantly different means and approves the hypothesis on the effect of income on both the eating pattern and the quality of life.

On an average, the male participants have better physical health (22.05 ± 4.14) compared to the female ones (21.01 ± 3.9). The difference is found to be significant, i.e., t (383) = 2.006, p < .05. Similarly, the male participants also have a better level of psychological health (20.12 ± 3.63) compared to the female ones (19.13 ± 3.75). The difference is found to be significant, i.e., t (383) = 2.056, p < .05. This helps accept the second hypothesis that aims to see the mean difference between gender and the physical and psychological health.

As shown in table 4, there is a significant relationship between the low fat eating and the quality of life,

Table 1: Pearson's correlation of age, eating behaviour pattern and quality of life (N = 385)

Variables	1	2	3	4	5	6	7	8	9	10	11
1. Age	-										
2. Low-fat eating	.08	-									
3.Emotional Eating	-.08	-.06	-								
4.Snacking & Sweet	-.09	.00	.61**	-							
5. Cultural & lifestyle Beh	.04	.26**	.42**	.43**	-						
6.Haphazard Planning	-.11*	.03	.50**	.52**	.42**	-					
7.Meal Skipping	-.06	.18**	.36**	.34**	.22**	.42**	-				
8.Physical Health	.17**	.13*	-.11*	-.01	.03	-.08	-.10*	-			
9.Psychological health	.18**	.16**	-.10*	-.00	.12*	-.05	-.06	.64**	-		
10.Social Relationship	.16**	.14**	-.07	.01	.04	-.11*	-.03	.45**	.47**	-	
11.Enviroment	.19**	.06	.04	.09	.05	-.04	-.04	.58**	.59**	.50**	-

*Note: **Correlation is significant at p < .01. *Correlation is significant at p < .05.*

Table 2: One way Anova test between eating behaviour pattern, quality of life and family income (N = 385)

	Less than 50,000 PKR		50,000- 100,000 PKR		More than 100,000 PKR			
Variable	M	SD	M	SD	M	SD	F(2,382)	η2
EBPQ	146.7	18.1	150.9	19.8	154.3	23.0	3.70*	0.019
QOL	81.6	12.3	83.2	12.7	88.8	14.2	8.87*	0.04

*Note: *p < .05*

*Table 3:*Mean, standard deviation and t-test of gender differences for physical and psychological health (N = 385)

	Male		Female		t	p	Cohen's d
	Mean	SD	Mean	SD	2.006	0.046	0.257
Physical health	22.05	4.17	21.01	3.9	2.006	0.046	0.257
Psychological health	20.12	3.63	19.13	3.75	2.056	0.040	0.268

Df = 383, p < 0.05

Table 4: Multiple regression analysis for quality of life (N = 385)

	B	SE B	β	R²	ΔR²	P
Step 1						
Constant	72.843	3.829		.023	023	.000
Low fat eating	.287	.095	.152*			.003
Step 2						
Constant	73.834	4.948		.044	.021	.000
Low fat eating	.317	.101	.168			.002*
Cultural lifestyle Beh	.134	.183	.043			.465**
Meal Skipping	-.523	.190	-.150			.006*
Snacking & sweet	.195	.167	.069			.241**

Note: *p < .05, **p > .05

F (1, 383) = 9.020, p < .05 for step 1 and for step 2 F (4, 380) = 4.417, p < .05. With 1 standard deviation increase in low-fat eating, there is a significant increase in the quality of life by .152 units. Similarly, 1 standard deviation increase in cultural lifestyle, there is an increase in quality of life by .043 units. However, 1 standard deviation increase in meal kipping significantly decreases the quality of life by -.150 units and 1 standard deviation increase in snacking and sweets also increase the quality of life by .069 units. From the magnitude of the t statistic, only low-fat eating and meal skipping are the significant predictors of the quality of life and has more impact compared to the others.

DISCUSSION

The sample of 385 participants composed of both males and females within the age range of 18 to 35 years reported their demographics and answered questions on their dietary patterns and quality of life.

The first objective of the study was achieved through a bivariate analysis to study the relationship between the variables (Table 1), which revealed that low-fat eating is positively and significantly related to the physical and psychological health, similarly there exists a significant relationship between meal skipping and emotional eating that lead to more addiction to snacking and intake of sweets that have adverse effects on the physical and psychological health, establishing the fact that there exists a negative correlation between physical health and emotional eating. Similar results were reported through a study conducted in Iran with a group of female adolescents, which concluded that high intake of snacks and sweets, emotional eating, high fat intake, and meal skipping are the positive predictors of psychological problems like emotional disorders. These unhealthy eating patterns and the decline in health can further lead to a decline in mental health causing depression and anxiety along with attention deficit disorder (Farhangi, Dehghan & Jahangiry, 2018). Hence the first hypothesis confirms that there exists a relationship between the eating patterns and quality of life. An additional analysis further supports the hypothesis that there is a significant negative relationship between the meal skipping and quality of life, which means that skipping meals from time to time can affect the social, physical, and psychological health. However, low-fat eating is positively related to the quality of life, and eating vegetables and fruits along with low-fat foods will eventually impact the life and health positively.

The study findings also reveal social relationships, cultural lifestyle, and environment to be significantly and positively correlated. There are multiple social environmental and personal factors that explain the external influences on the eating pattern. The social cognitive theory (SCT) is one of the models that argue that self-efficacy along with observational learning and reinforcement can shape one's cognition. Similarly, the ecological model states social and environmental connections can be influential in food culture. The surrounding environment shapes and maintains the human behaviour but this relationship is inverse, which means that people can also alternatively change and create their behaviours through the environment.

Individual influences like beliefs, attitudes, and lifestyle behaviours along with the availability of and easy access to various foods are determinant factors of various eating behaviours. Besides these, the social factors like friends, family, peers, and acquaintances also impact the food choices. These preferences are formed through multiple complex interactions that an individual makes in their environment. Therefore, self-realisation and social change along with exposure and proper education are required in one's onward march towards a healthy diet and a better quality of life (Story, Neumark-sztainer & French 2002). Good nutrition improves the quality of life by promoting health, preventing dietary deficiency diseases and secondary malnutrition that can be caused by or associated with other diseases. Such a nutritive dietary pattern includes a high intake of legumes, seafood, whole grain, and vegetables, a low intake of meat and processed food, sweets, *etc*. and has been suggested to be related to positive health benefits (Vajdi and Farhangi, 2020).

Family income is another important predictor of high quality of life and healthy eating patterns (Table 2). Low socioeconomic status and low-income family can inhibit access to a healthy diet. Similarly, high income is a positive predictor of a high-quality diet often leading to unhealthy patterns due to overly access to an unhealthy diet. However, malnutrition is also prevailing in lower socio-economic classes due to a lack of income and an increased risk of poor diet quality (Shariff *et al*., 2015). Studies show that there exists a strong association between family income and the nutritional quality of the foods being purchased. Food purchase data shows that people from lower socio-economic status purchase less healthy foods, including fewer fruits and vegetables and more sugary beverages compared to those of higher economic status. Hence specific food assistance programmes need to be initiated among the target groups to educate them and promote healthy foods with a focus on leading them towards a healthy diet and high-quality lifestyle (French *et al*., 2019).

There is also a significant difference between the male and female perceptions of the quality of life. Results indicate males have greater and better physical as well as psychological health compared to females, which proves another hypothesis. A study at Kuwait university identifies gender-specific dietary patterns, which show males consuming a protein-rich diet, compared to females who are more inclined towards potato chips and fatty salty foods. Females also tend to show higher dietary restraint levels than men which in turn damages their minds and body (Alkazemi, 2018). Men, however, have more time for leisure activities and intensive physical activities which keeps them physically fit compared to women. (Azevedo *et al*., 2007).

Hence the findings fulfil the aims and objectives that there exist in the relationship between the eating behaviour patterns and the quality of life. Unhealthy eating patterns influence the quality of life. However as explained above, human beings tend to formulate certain behaviours under various influences or exposures as well as recognise and change them if they are educated about the timely developments.

CONCLUSION

Nutrition is an extremely important and readily modifiable factor for disease prevention (Govindaraju *et al*., 2018). Multiple factors can affect the quality of life of a person, one such being one's dietary pattern. The present study is an effort that specifically focuses on studying eating behaviour patterns among young adults and their relationship with health and the overall quality of life. It is found that meal skipping from time to time has drastic effects on physical health, and low-fat eating has a positive effect on physical health. Similarly, compared to females, males have better physical and psychological health because of their dietary preferences and maintenance and engagement in extracurricular activities and physical exercises that keep them healthy. One's behaviour along with one's attitude is shaped by one's environment. However, as human nature is bound to change it is equally possible to follow and adapt to a trend and then change towards a healthy lifestyle. Self-realisation, social change, and exposure to desirable food habits can guide one towards a better lifestyle and help control the onset of many physical and psychological diseases, only if eating patterns are changed towards healthier (Story *et al*., 2002). This research will be effective in managing the onset of many physical and psychological diseases like obesity, cardiovascular diseases, depression, anxiety, *etc*. It can also be a source of information for parents, students, teachers, and everyone to bring about positive lifestyle and eating behaviour changes leading to health-related high quality of life.

Limitations

This cross-sectional research was carried out during COVID 19 Pandemic for which data was collected through an online survey. It focused on a specific age range, i.e., 18 to 35 years and targeted a specific area of Pakistan, i.e., Rawalpindi and Islamabad. Hence a wider scale study needs to be done to study different

eating patterns among the Pakistani population in its entirety to generalise the findings logically. Future studies incorporating interviews can prove beneficial, to understand the participants' perception of their food choices against various health issues.

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RESEARCH ARTICLE

Food safety knowledge, attitude, and practices among school children: a cross-sectional study based in the Colombo educational zone, Sri Lanka

Piyumi Chathurangi Wanniarachchi[1], Piumi De Abrew Abeysundara[1*] and Hashan Savinda Peiris[2]

[1]Department of Food Science and Technology, Faculty of Applied Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka.
[2]Department of Mathematics, Faculty of Applied Sciences, University of Sri Jayewardenepura, Gangodawila, Nugegoda, Sri Lanka.

Abstract: The study focuses on assessing the knowledge, attitude, and practices (KAP) of food safety among school children in the city of Colombo, Sri Lanka, based on a questionnaire survey conducted from September to October 2020, with a sample of 380 teenagers from a selection of schools in the Colombo Educational Zone, Sri Lanka. It reports that the mean food safety knowledge, attitude, and practice scores of the participants were 59.949 ± 0.833, 84.336 ± 0.448, and 79.597 ± 0.616 (mean $\pm$ SE) respectively and hypothesises that the food safety practice score and the attitude score of school children both significantly increase relative to their food safety knowledge score ($r_p = 0.205$, $p < 0.001$ and $r_p = 0.359$, $p < 0.001$). A multiple linear regression analysis of the data establishes that the food safety knowledge score of the male participants is higher than that of the female participants and that poor food handling practices are common among the males in the population. The results further demonstrate a correlation between the individual schoolchild's academic performance, the educational background of his/her parents, and his/her knowledge of food safety. The present study reveals that the school children in Colombo Education Zone maintain an average level of food safety knowledge and satisfactory levels of food safety attitudes and practices. Thus, the authors suggest that school children should be provided with appropriate education and training to enhance their current level of food safety knowledge, especially about proper temperature control during food processing and food handling.

Keywords: Food safety, attitude, knowledge, practices, school children.
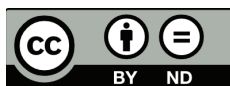
INTRODUCTION

Food safety and food-borne illnesses are two globally researched topics interlinked with each other. Thousands of people are reported to be in danger and many are vulnerable to foodborne illnesses and die each year owing to the consumption of food contaminated with biological, chemical, or physical hazards (Tewari & Abdullah, 2015; Azanaw *et al.,* 2021). Foodborne disease outbreaks remain of the prominent public health concerns globally. Trends such as mass-scale production and distribution of food, expansion of the global food supply chain and consumption of ready-to-eat food from street vendors and restaurants, and the advent of new foodborne pathogens expediate foodborne disease outbreaks (Nyachuba *et al.,* 2010; Quested *et al.,* 2010; King *et al.,* 2017).

To combat the growing number of food poisoning cases, the governments of almost all countries globally strengthen their efforts to upgrade the food safety aspects within their territories. It is a well-known fact that infants, youngsters, immune-compromised people, pregnant women, as well as older people are particularly at a higher risk of foodborne illnesses (Kendall *et al.,* 2003). Moreover, undernourished infants and children are two major risk groups, often vulnerable to foodborne diarrhoeal diseases (World Health Organization, 2020). This fact is quite evident from the data WHO which highlights that unsafe food contributes to more than one billion incidents of diarrhoea among children annually, leading over three million deaths (World Health Organization, 2020).

Accordingly, enhancement of food safety education among the target population is considered the most suitable approach to improving their knowledge of the

food safety aspects (Diplock *et al.,* 2017). As Redmond & Griffith (2003) claim, it is difficult to prevent/reduce foodborne illnesses without proper knowledge and practice regarding food safety. Even though childhood is identified as a decisive time for upgrading food safety knowledge and skills (Mullan*,* Wong & Kothe, 2013), most of the published works address issues pertaining to adult food consumers and food handlers in restaurants or the households.

According to the UN data, Mid-year population of Sri Lanka in 2020 was estimated at 21,413,249 people (worldometers.info). Among them 4,214,772 represented the School children (Ministry of Education, School Census Report, 2020) which is nearly 20% of the entire population in Sri Lanka. Thus, school children population can be considered as a major social category that can have a long-term impact on the food safety. Therefore, research on the food safety aspects of school children can be of great importance. Some might express controversial points of view on the above statement because School children are not the only category directly involved in the field of food handling, preparation, and distribution. Nevertheless, it is highly crucial to make them aware of and enhance their knowledge and attitudes about every aspect of food safety as that will be useful for their lives in the future regardless of what their destinies will be.

Although there are many studies conducted about the School children's food safety concerns in countries like the USA, Canada, China (Osaili *et al.,* 2011; Majowicz *et al.,* 2015; Cheng *et al.,* 2017; Majowicz *et al.,* 2017; Moghaddam *et al.,* 2020; Tutu *et al.,* 2020; Al ahdab, 2021), only a few studies have been published on the same subject in the South Asian context (Gavaravarapu *et al.,* 2009; Norazmir and Noor*,* 2012). Similarly, in the Sri Lankan context, such publications in recognised research journals are almost non-existent. Careful and systematic identification of gaps in the current status of the food safety knowledge and practices among the School children which is aimed at in this study will be useful when filling apertures to further enhancement of their knowledge.

In modern research, the knowledge, attitude, and practice (KAP) model is regarded as one of the promising theoretical approaches for many health-related education programmes (Watt, 2005). Experts generally agree that safety knowledge and attitudes are the most crucial cognitive elements that influence food safety practices of an individual (Mihalache *et al.*, 2021). According to the KAP model, if individuals are provided with adequate knowledge, food hygiene practices could be improved (Zanin *et al.*, 2017). Additionally, if a person

adopts a positive attitude toward food safety, food quality, or food integrity, it can increase their awareness of food safety.

Therefore KAP models were utilised in numerous studies to reveal the significant associations between the food safety knowledge and attitude of individuals (Lim *et al*., 2016; Baser *et al*., 2017; Mihalache *et al*., 2021). Accordingly, the theory of KAP is used in the preset study to determine the significant relationships between the food safety knowledge, attitude and practices of school children and their connection with the sociodemographic profile. Thus, a cross-sectional study was conducted using school children of a randomly selected set of schools in the Colombo Educational Zone, Sri Lanka to evaluate their current level of KAP and suggest evidence-based recommendations for the improvement of their knowledge, attitudes, and practices of food safety.

MATERIALS AND METHODS

Study design

The study was conducted in the Colombo Education Zone, Sri Lanka. The target population was school children of 14 to 16 years of age in government schools, which represents child population of 35462 (Zonal Educational Office, Colombo). The formal approval to conduct the study in the twelve respective schools of the Colombo Education Zone from the month of September to October 2020 was first obtained from the Director of Zonal Education Office, Colombo, and the respective Principals. The data were collected through a self-administered questionnaire from volunteer anonymous participants (n = 380) from those schools. The questionnaire was administered as a paper copy and the school children were allowed to complete it under the supervision of their class teachers during school hours.

Questionnaire design

The questionnaire was modeled after previous similar studies carried out in Slovenia and China using school children as participants (Ovca*,* Jev & Raspor, 2014; Cheng *et al.,* 2017). It consisted of 3 main sections and a particular field to include the respondent's demographic details. The 1ˢᵗ section was designed to evaluate the respondent's attitudes about food safety risks using seven statements. His/her knowledge about food safety was evaluated in the 2ⁿᵈ segment using 14 questions, under six basic categories; A-cleanliness of food contact surfaces, B-prevention of cross-contamination, C-handling leftovers, D- temperature control to ensure the microbial safety of food, E- making the correct food safety decision

during purchasing, and F-personal hygiene. Finally, the 3rd section was designed to evaluate the participant's self-reported food safety practices and it was composed of 13 previously described actions. The questionnaire was amended after a pilot test carried out with ten school children of 14-16 years in July 2020 to check the clarity of the questions, identify the participants' response options, and estimate the average time required to conclude the respondses.

Data analysis

Software packages of SPSS Statistics version 23 and Microsoft Excel 2010 were used to analyse the data collected. The descriptive statistics and inferential statistics were created and used to define and explain the results. The descriptive statistics (frequencies, percentages, means, and standard errors) were computed to provide basic information about the variables in the tested sample. The inferential statistics were computed to make inferences of the interested population based on the tested sample.

Accordingly, three different scores were developed to evaluate food safety knowledge, attitude, and practices of school children. To develop food safety attitudes, and

practice scores, a scale was created based on the coding method as shown in Table 1. However, the food safety knowledge score was calculated based on the number of correct responses given by each participant for the food safety knowledge section of the questionnaire.

Based on the individual participant's score, three overall mean scores were obtained for the food safety attitude, knowledge, and practices among school children and were credited with the following scale to get better insights into the overall knowledge, attitudes, and practices of school children. Score of 50% was considered 'poor', score between 51% - 69% considered 'average' and score above 70% is labelled as 'satisfactory'. Thereafter Shapiro-Wilk test was performed to check the normality of data. Then Mann Whitney U test and Kruskal-Wallis test were carried out at 5% significance level to determine the relationship between the socio-demographic factors and food safety KAP scores based on the medians. Later, the correlations of the three main scores (knowledge, attitude, and practice) with socio-demographic factors were analysed separately using Pearson-correlation coefficients. Finally, a multiple linear regression analysis was carried out to develop statistical models to assess the participants' knowledge and practice regarding the food safety.

Table 1: Scale created to evaluate food safety attitude and practice scores

Options in the food safety attitude section	Attributed score	Options in the self-reported practice section	Attributed score
Disagree	1	Never	1
Do not know	2	Sometimes	2
Agree	3	Always	3

RESULTS

Demographic details of the participants

Of the 380 participants who participated in the study, 56.32% were male and 43.68% were female, respectively, while 34.74%, 31.32%, and 33.95% of the participants were in 14, 15, and 16 years age groups. The sample thus represents a nearly equal percentage of school children from each age group. The education background of their parents surveyed was identified under 4 main categories which include primary education only (16.58%), General Certificate of Education (Ordinary level) - G.C.E. O/L (28.68%), General Certificate of Education(Advanced level) - G.C.E. A/L only (30.53%) and Diploma/Degree holder (24.21%). When they were asked about their academic ranking in the most recent term, 41.8% reported rank between 1-10, 25.8% reported rank between 11-20, 19.5% reported rank between 21-30 and 12.9% reported rank between 31-50. Similarly, when asked to report their Science scores in the same term test, 31.32 % of them reported marks (out of 100) between 0-49, 42.63 % reported marks between 50-74 and 26.05% reported marks between 75-100.

Attitudes about food-related risks

According to the survey results on school children's attitudes about food-related risks in Table 2, the mean food safety attitude score of the participants was satisfactory (84.33 $\pm$ 0.44/ mean $\pm$ SE) and there was no significant gender difference observed ($p > 0.05$).

It was observed that the majority (77.4%) of the participants agreed that food poisoning can be fatal, indicating a good attitude toward possible risks associated with food. Also, about 86% of the participants understood that there's a higher possibility of being sick by eating food from outside home and were quite dissatisfied regarding the safety of the food items sold in small makeshift restaurants and by street food vendors in Sri Lanka. The school children's confidence regarding the general food safety state in Sri Lanka were not satisfactory (47.4%). Notably, over 92% of the participants believed that their food safety knowledge could be further improved through formal sessions on food safety education.

Table 2: School children's attitude about food-related risks

		% of Participants		
Statement No.	Statement	Disagree	Do not Know	Agree
		(%)	(%)	(%)
1	Food poisoning can be fatal.	8.2	14.5	77.4
2	Properly cooked food cause relatively fewer food poisoning cases.	39.7	28.4	31.8
3	The likelihood of getting sick by consuming food from outside is higher than consuming food from home.	5.8	8.2	86.1
4	Food poisoning is possible not only in developing countries but also in developed countries.	7.1	19.7	73.2
5	I'm dissatisfied with hygiene of the food sold in small restaurants and by street food vendors in Sri Lanka.	15.3	13.9	70.8
6	The general food safety situation in Sri Lanka is not satisfactory.	27.6	25.0	47.4

Knowledge of food safety

According to the survey results on the school children's food safety knowledge in Table 3, the mean food safety knowledge score of the school children was 59.94 ± 0.83 and it reveals that the members of this age category have an average knowledge of food safety.

The participants showed a satisfactory level of food safety knowledge related to taking the correct food safety decisions during purchasing (77.7%) and maintaining personal hygiene during food handling (70.4%). They also showed an average level of knowledge about the importance of cleanliness of food contact surfaces (61.7%) and preventing cross-contamination (59.05%) in assuring food safety. However, their knowledge of proper handling of leftover foods (43.7%) and correct temperature control during food handling (37.5%) was comparatively poor. Notably, the majority of the participants (~80 %) were unaware of the danger zone concerning the food storage temperature.

Table 3: School children's knowledge of various aspects of food safety

Category^Φ	Statement	% of Participants*			
		True	False	Do not Know	Correct answers- category wise
A	Before commencing food preparation, it is mandatory to make sure all food contact surfaces are cleaned.	<u>95.8</u>	2.9	1.3	
	Cleaning food contact surfaces by only using cold running water removes dirt, debris, and the majority of the microbes.	50.0	<u>27.6</u>	22.4	61.7
B	Proper cleaning of previously used utensils before using them again for cutting fruits is important.	<u>35.5</u>	45.3	19.2	
	It is okay to use the same cloth for drying hands and wiping dishes and working surfaces.	10.0	<u>82.6</u>	7.4	59.05
C	Hot food should be held at 65°C or warmer or cold food should be held at 4°C or colder until they are served	<u>32.6</u>	10.0	57.4	
	Any leftover food kept at room temperature for more than 2 hours should be discarded.	<u>43.2</u>	22.4	34.5	43.7
	Cooked leftovers should be used within 4 days or less.	<u>55.3</u>	25.5	19.2	
D	The ambient temperature for the growth of most pathogenic microorganisms is between 4°C and 65°C.	<u>27.9</u>	14.5	57.6	
	The temperature inside the domestic refrigerator is 3-5°C.	<u>47.1</u>	13.7	39.2	37.5
E	Food with damaged packaging must be avoided during purchasing.	<u>87.9</u>	7.9	4.2	
	Foods which have undesirable traits concerning appearance, odour, and taste are not suitable for consumption even if the expiry date has not been reached.	<u>81.6</u>	12.1	6.3	77.7
	There is no risk in consuming foods that come in a bulged can.	20.5	<u>63.7</u>	15.8	
F	Washing hands only with clean running water prior to food preparation is enough to remove germs and bacteria.	29.5	<u>62.6</u>	7.9	
	It is important to take off jewellery from your hands before commencing food preparation.	<u>78.2</u>	8.7	8.7	70.4

*Correct response for each statement is underlined.

Φ A-cleanliness of food contact surfaces, B-prevention of cross-contamination, C-handling left over foods, D- temperature control to ensure microbial safety of food, E- making correct food safety decisions during purchasing, F-personal hygiene

Furthermore, lack of knowledge about the importance of proper temperature control to assure microbial safety of food during its processing and storing was evident from the results in Table 3.

Self-reported food safety practices

The results of the participants' self-reported food safety practices shown in Table 4 reveal that the mean self-reported food safety practice score was 79.59 ± 0.6, indicating a satisfactory level of food safety practices among school children of the age category between 14-16 years old.

In response to the most queries on food safety practices, the participants reported satisfactory behaviour except for items 4, 5, 6, and 7 (Table 4). A significant number of participants in the study were ignorant about the fact that open wounds could contaminate food while cooking (Statement 4). As Table 4 depicts, most school children did not seem to engage in proper safety practices when handling leftover foods (Statements 5 & 6). Lack of interest in correcting the food safety-related mistakes made by the members of their households were observed during the study (Statement 7).

Correlations among School children's food safety knowledge, attitudes, practice, and socio-demographic factors

The results of the Mann-Whitney u test, Kruskal-Wallis test followed by Dunnett T3, and Tukey's HSD indicate that gender ($p = 0.035$), academic ranking in the class ($p = 0.002$), marks scored in Science ($p < 0.001$), and the educational background of their parents ($p < 0.001$) to have significantly different distributions across their' food safety knowledge score while gender ($p < 0.001$), academic ranking in the class ($p = 0.022$), grades scored in Science ($p < 0.001$) to have significantly different distributions over their' food safety practice score. Similarly, their Science grades ($p = 0.001$), their academic ranking in the class ($p = 0.011$), and the educational background of their parents ($p = 0.025$) also had significantly different distributions across their food safety attitude scores.

Consequently, there were significant correlations between the food safety knowledge score and practice score ($rp = 0.205$, $p < 0.001$), food safety knowledge score and attitude score ($rp = 0.359$, $p < 0.001$) and the food safety practice score and attitude score

Table 4: Self-reported food safety practices of School children

Statement no.	Statement	Never (%)	Sometimes (%)	Always (%)
1	I do not eat any food that comes in a damaged package.	2.4	26.1	71.6
2	I do not use the unwashed cutting board and/or knife which was previously used by someone else in the family while preparing food for myself/family.	12.9	21.8	65.3
3	I do not use the same kitchen towel to dry hands and clean dishes.	9.5	28.7	61.8
4	I do not prepare food if I have an open wound on my hands.	35.0	20.0	45.0
5	I store leftover foods in the refrigerator within 2 hours after preparation.	22.6	51.3	26.1
6	I reheat leftovers to at least to 74°C/165°F temperature before eating.	24.7	42.6	32.6
7	I warn my parent/siblings if I notice that they are making any food safety-related mistakes at home.	16.1	42.95	41.1
8	I wash used plates using clean water and a dishwashing agent.	14.7	28.7	56.6
9	I clean the countertop and used utensils using clean water and a cleaning agent after food preparation.	18.2	15.5	66.3
10	I take off any jewelry from my hands and tie my hair up and tight before food preparation.	22.6	20.5	58.8
11	I inform my parents or throw away by myself if I notice any suspicious-looking, smelling, or tasting food at home.	17.1	17.1	65.8
12	I wash my hands using clean water and soap before preparing or eating food.	11.6	17.6	70.8
13	I read the information on the food labels before purchasing.	13.2	22.1	64.7

(rp = 0.293, p < 0.001) (Table 5). Pearson Correlation coefficients and the relevant sig. values, the three main scores of food safety knowledge, attitude, and practices are presented in Table 5.

Statistical models for School children's food safety knowledge and practice with predictors

Before carrying out a multiple linear regression analysis, assumptions pertaining to the situation were checked. Scatter plots were used to check linearity, Durbin-Watson test statistic was used to check the independence of residuals, the homoscedasticity was checked with patterns of the residuals versus fitted plot, and the normality of the residuals was checked using histogram/ normal P-P Plot and multicollinearity was checked using VIF (variance inflation factor) values.

Table 6 is a summary of the results of the multiple linear regression analysis performed to build statistical models to represent the food safety knowledge and practice of the participants.

R^2 value (coefficient of determination) indicates that 14.4 % of the variation in food safety knowledge score ($R^2 = 0.144$) and 11.5% of the variation in food safety practice score ($R^2 = 0.115$) are completely explained by the predictor variables. Although the adequacy of the two models is somewhat low, here, both models are significant (p = 0.000) as in Table 6.

Based on the regression analysis results (Table 6), the regression equation was obtained to represent the average food safety knowledge score of participants.

Regression Model 1

Average food safety knowledge score = 42.400 - 4.716* G.C.E. O/L or below + 1.080* G.C.E. A/L + 3.579* Male + 3.887* Science marks + 3.294* rank in the class.

Among the predictors of the food safety knowledge score model, gender and the education background of the parents are categorical variables, while particpants' rank in the class and their grades in Science are quantitative. In the regression analysis, both categorical variables were defined as dummy variables. Accordingly, gender has two categories; male and female (reference group). The education background of parents has three categories, G.C.E. O/L or below, G.C.E. A/L, and diploma/degree holder (reference group). As Table 6 depicts, the average food safety knowledge score is expected to decrease by 4.716 for school children with parents having an education up to G.C.E. O/L or below compared to diploma/degree holder parents while other factors are held constant. Similarly, an increase in average food safety knowledge score by 3.579 can be seen for males compared to females while all other factors are held constant. It is shown that the average food safety knowledge scores of the school children tend to increase from 3.887 and 3.294 by one unit in their grades in Science and academic rank, respectively, while the other factors are kept constant.

Similarly, based on the regression analysis results (Table 6), the regression equation was obtained to represent the average food safety practice score of the participants.

Regression Model 2

Average Food Safety Practice Score = 74.125 + 4.228* Grade achieved in Science - 4.902* Male

According to the above model, both the gender and the grade achieved in Science by the participants are found to be significant (p < 0.05). Hence, their average food safety practice scores tend to increase from 4.228 by one unit as per their achievements in Science when all other factors are kept constant. When the effects of their grades in Science are taken into consideration, the

Table 5: Correlations between scores of food safety knowledge, attitude, and practices among school children

		Attitude	Practices	Knowledge
		Pearson Correlation coefficients (rp)		
Attitude	rp	1	.293**	.359**
	Sig.		.000	.000
Practices	rp	.293**	1	.205**
	Sig.	.000		.000
Knowledge	rp	.359**	.205**	1
	Sig.	.000	.000	

**Correlation is significant at the 0.01 level (2 tailed)

Table 6: Results of multiple linear regression on factors associated with food safety knowledge and practice

Predictors of the model	Unstandardised Coefficients		Standardised Coefficients			Model	
	B	Std. Error	Beta	t	Sig.	R Square	Sig.
1 Knowledge						.144	.000
(Constant)	42.400	3.927		10.796	.000		
Science marks	3.887	1.202	.181	3.234	.001		
Rank in the class	3.294	.746	.216	4.413	.000		
Male	3.579	1.584	.109	2.259	.024		
G.C.E. O/L or below	-4.716	2.240	-.145	-2.106	036		
G.C.E. A/L	1.080	2.155	.031	.501	.617		
2 Practice						.115	.000
(Constant)	74.125	1.750		42.348	.000		
Science marks	4.228	.769	.267	5.501	.000		
Male	-4.902	1.171	-.203	-4.186	.000		

males will score -4.902 lower on the average food safety practice score than the females (Table 6). It is evident that although the food safety knowledge score of the male school children was greater than the females, poor food handling practices were often practiced by males.

DISCUSSION

Participants' attitudes about food-related risks

The main objective of the discussion was to demonstrate and evaluate the attitude of school children toward food safety and as shown in Table 2 to assist decision makers in formulating their recommendations as to on what type of attitudes school children should be built up through educational interventions for better awareness of food safety.

Even though the results indicate a satisfactory attitude of the school children towards many aspects of food safety, the majority of the participants did not know that the risk of microbial food poisoning can be reduced through cooking at high temperature conditions (Statement 2). Therefore, it can be suggested that those in this age group should be educated more on how cooking at high temperatures can reduce the harmful microorganisms present in food by emphasizing the effects of temperature on microorganisms.

Based on the following 3 main reasons, 1) a high number of food poisoning cases reported yearly, 2) lack

of facilities for national food safety monitoring, and 3) recent research studies reporting the presence of harmful levels of food safety hazards in various types of foods, it can be confidently stated that Sri Lankas' general food safety situation is not that satisfactory (Munasinghe *et al.,* 2015; Wimalasekara & Gunasena, 2016; Dayasiri *et al.,* 2017; Dayasiri, Jayamanne and Jayasinghe, 2018; Buckley *et al.,* 2021). However, in this study, only 47.4% of the participants agreed with this statement in their responses. This may be due to lack of awareness of the current food safety situation of the country as children in this age group are mostly interested in entertainment activities such as watching cartoons, playing video games, and doing sports than watching the TV news or reading newspapers. In Sri Lanka, even though most individual food poisoning cases are not frequently reported, food poisoning cases in garment factories, school canteens, university canteens *etc*. and serious food safety issues such as aflatoxin contamination in coconut oil, agricultural chemical residues in milk powder are often broadcasted in electronic media and published in newspapers and conveyed via text messages in layman language for making the public aware about such scenarios (Kariyakarawana, 2013; Aloysiu, 2014; Liyanage, 2022). Even though, many school children in Sri Lanka have access to either TV news, newspapers or text messages directly or indirectly, most of them do not use that information effectively when making food safety related decisions. Hence, it can be suggested that making them awere of the country's current food safety issues

by parents and school teachers is important. However, in a similar study carried out on school children in Beijing, China, the majority of them did not seem to show much confidence in the country's general food safety situation (Cheng *et al.,* 2017) suggesting that they may be more aware of the food safety situation in their country than the participants in the present study. May be due to school children in China receive effective food safety education through their school curriculum starting from the elementary school and from the parents. However, the nature and the level of food safety education in Sri Lankan school system is still questionable and in-depth studies on this matter will be useful in improving the food safety situation in the country.

Furthermore, it is important to note that the food safety context of a country is subjective and can vary depending on factors like the country's rules and regulations regarding food safety, economies of scale (such as developed/developing/under-developed), food safety culture, and analytical and technological developments. For example, since developed countries are capable of investing more money on improving laboratory facilities, adapting new technologies and trained human resources, they have the potential to perform more food sample analysis on safety hazards, do risk assessments and make appropriate decisions faster than a developing country in assuring food safety (Rahmat, Cheong and Hamid, 2016). The vast majority of the participants in this study agreed that their food safety knowledge could be further improved through proper education. In a recent study carried out in China, the majority (more than 80%) of the participants have shown a strong willingness to expand their food safety knowledge and to abandon their wrong food handling habits *(*Luo *et al.,* 2019).

This is one of the most important outputs of the present study where school children showed strong willingnesss to learn more about food safety. Hence, this observation can be taken into consideration by the responsible parties in the education administration in Sri Lanka to incorporate the food education-related contents into the school curriculum. Moreover, school is the most effective place to approach and teach youngsters about food safety concepts (Osaili *et al.,* 2011) where training programes, the inclusion of subject matter into the school curriculum, seminars, and workshops can be suggested as effective tools to improve food safety knowledge of school children (Majowicz *et al.*, 2017).

School children's knowledge of food safety

The six basic categories of this section include cleanliness of food contact surfaces, prevention of cross-

contamination, handling leftover foods, temperature control to ensure microbial safety of food, making, correct food safety decisions during purchasing, and personal hygiene. The school children of this age category are found to have average knowledge on food safety (Table 3). However, in a recent study conducted in Canada, it was evident that the food safety knowledge amongst high school children is poor in general (Majowicz *et al.,* 2017) while in another study conducted in Beijing, China, the overall food safety knowledge among secondary School children is found to be relatively good (Cheng *et al.,* 2017). This variation can be normal as their knowledge can vary from country to country depending on the school curriculum, countries, food safety-related rules and legislations, *etc*. Notably, their lack of knowledge about the impact of temperature control on microorganisms has been reported during this study (Category C &D). In a similar study carried out in Slovenia, poor knowledge about food safety aspects has been reported (Ovca *et al.,* 2014). Therefore, the importance of proper heat treatment and correct temperature control during food processing and storage can be suggested as an important topic to be included in the school curriculum in Sri Lanka.

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Schoolchidren's self-reported food safety practices

The evaluation of the school children's food safety practices does not involve a long Likert scale as in most of the previously published studies (Ovca *et al.,* 2014), but only three options included in the questionnaire to make the statements less ambiguous. From face-to-face discussions carried out with the participants of this study prior to the questionnaire, it was revealed that many school children in this age group do not engage in meal preparation without an adult supervision. However, the majority of the school children mention that they support their parents by washing and cutting fruits and vegetables, scrapping coconut, preparing small dishes like pickels, sambols, instant noodles *etc*. which are also considered as active engagements in food preparation according to the research questionnaire.

Overall, the results depicted a satisfactory level of food safety practices among school children of this age category except for statements 5, 6, and 7 (Table 4). A satisfactory level of food handling practices among school children was also reported in similar studies carried out in Canada and Ghana (Majowicz *et al.,* 2015; Tutu *et al.*, 2019). However, in the present study, the school children do not seem to engage in good hygienic practices when handling leftover foods (Table 3, statements 5 & 6). This can be due to the lack of food safety knowledge on this matter as reported in Table 3. Similarly, in Slovenia, school children between the age of 10-12 years also reported poor practices when handling leftover foods,

especially with proper heat treatment and temperature control during food storage (Ovca *et al.,* 2014).

Results further indicate that even though school children are more careful regarding their own food safety practices during food preparation, they are not that serious about the malpractices done by their family members during the cooking (Table 3, statement 7). This observation suggests that it is important to let them know that ensuring food safety is everyone's responsibility and that even a single mistake can contaminate the food that is being handled/consumed.

Correlations among school children's food safety knowledge, attitudes, practice, and socio-demographic Factors

Modern food safety-related research often tries to investigate the relationship between food safety knowledge and practice with demographics (Grover*, *Chopra and Mosher, 2016; Rahman *et al.,* 2016; Woh *et al.,* 2016; Bou-Mitri *et al.,* 2018). The results of the correlation analysis in the present study indicate that gender, academic ranking in the class, science marks, and the educational background of parents have significant impact on the school children' food safety knowledge and practices while their age has no such effect.

Knowledge of food safety has a significant impact on the food safety attitudes of individuals, which may result in good hygienic practices while handling food (Rennie, 1995; Finch & Daniel, 2005). Results show that both food safety attitudes and practices increase along with that of their food safety knowledge (Table 5). Similarly, the results of a survey conducted by Tutu *et al.* (2019), show that there is a positive correlation between food safety knowledge and practices (r_p = 0.2 and p-value < 0.001). This reassures that better food safety attitudes and practices are associated with better food safety knowledge.

Statistical models for school children's food safety knowledge and food safety practice with their predictors

Results of the multiple linear regression analysis indicate that students' food safety knowledge significantly declines, when parents' level of education, students' academic ranking, and science marks (p < 0.05) are reduced (Table 6). Even though the food safety knowledge of male School children is higher than that of female, poor food safety practices are commonly shown by males in the population (p < 0.05). In this regard, the authors believe that anyone could gain food safety knowledge

through different sources such as TV, newspapers, radio, books, and social media. However, practicing the knowledge acquired can be a different matter. Moreover, in Sri Lankan culture, mothers tend to encourage their daughters to be engaged in household chores especially kitchen work from their childhood while, sons, are not expected to engage in cooking. Therefore, it can be assumed that the female school children gain more hands-on experience regarding the safe food handling practices at home than the male counterparts.

CONCLUSIONS

The participants of the study are reported to have maintained an average level of knowledge, attitude, and practice of food safety. Although it is noticed that the food safety knowledge score of the male school children is higher than that of the female, it can be concluded that the female school children follow safe food handling practices more than their male counterparts in this scenario. In addition, a lack of awareness among the school children on the impact of temperature control to assure microbial safety of food while handling food was prominent. Thus, it can be suggested that the school children's knowledge of these areas needs further improvements. Almost all participants were confident that food safety knowledge among them could be further enhanced through proper education. Since their food safety knowledge had a significant impact on their food handling practices, it can be suggested that conducting education programs on food safety in school settings would be a viable strategy to minimise/prevent school children contracting foodborne diseases.

DATA AVAILABILITY

The data and materials that were used in this study are available from the corresponding author upon formal request.

CONFLICT OF INTEREST

There is no conflict of interest for any of the contributors.

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BOOK REVIEW

International migration and development: survival or building up strategy by Sarathchandra Gamlath, ISBN 978-624-95361-0-4 (Kandy: Kumara publishers 2019, 266 pages)

Reviewed by Samitha Udayanga[*]

Department of Sociology, Faculty of Humanities and Social Sciences, University of Ruhuna, Matara.

"International migration and development: survival or building up strategy" by Sarathchandra Gamlath explores the community-level and family-level consequences of international migration in Sri Lanka while arguing that international migration cannot be positive in terms of the country's overall development. Migration can bring about different results at micro level compared to its positive impact on the well-off social segments of the Sri Lankan community, but it does not adequately benefit the low income segments. Gamlath claims that it is noteworthy to understand whether the migrants who come from badly-off segments are benefited from their migration because of their belief that migration would help them alleviate poverty. He has observed that many people below the poverty line suffer from several socio-economic problems because of the inappropriate pattern of development influenced by different biases or prejudices, such as favouring urban areas over rural areas. Consequently, the remittances sent by labour migrants who are predominantly from the badly-off segments of the community do not help their dependents at home when the national level resource distribution is discriminatory while the well-off segments continue to receive thereby more and more funds for their opulence.

The community-level and family-level impacts of international migration have been significantly analysed in the book. The primary emphasis is placed on labour migration and the impoverishment of migrant families in Sri Lanka, who are hampered in their efforts to promote sustainable development due to inadequate resources and a disturbed socio-economic environment. The author

asserts that for a majority of labour migrants, migration has become a "survival strategy", even though they had expected to consider overseas employment as a "building up strategy" to overcome socio-economic adversities while ensuring a prosperous future. Although migration is generally considered a positive contributor to the development of a country, Gamlath demonstrates, on the basis of Sri Lanka's experience with it, that international labour migration cannot contribute to the progress of the families concerned unless it enhances their existing resources. The lower the existing resources of the relevant families remain, the less progress the families achieve from labour migration. One of the key findings of this research is that the contribution migration should make in procuring resources for development, particularly at the community level, is closely linked with the level of existing services and facilities the relevant families should enjoy at home. The author, therefore, implies that the community level of development has to be prepared systematically to captivate migration resources so that it can contribute to the process of national development.

Divided into nine sections, the book carefully draws the reader's attention to international migration. It then introduces different themes, of which labour migration in the Sri Lankan context has received significant attention. The author also elaborates on why the contribution of migration to the development of a less-developed country is being widely debated. To understand the situation of labour migration in the Sri Lankan context and its relationship with development, the author asserts that development should not be understood merely

[*]Corresponding author (senithsrisami@gmail.com ⓘD https://orcid.org/0000-0002-9826-691X)
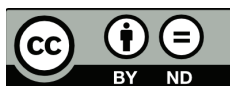
as inducement of economic growth but as a broad phenomenon that cannot be defined solely on the basis of macro-economic performance because it might limit a holistic understanding of migration-development links. Here, Gamlath employs two main conceptual frameworks: "migration-development link" and "nature of development processes in less developed countries". Moving on to the Sri Lankan situation, significant development challenges contributing to migration pressure is described, drawing on various sources of information that further include a conceptual explanation of different themes such as "migrant families" and "community". Although some significant issues related to labour migration in contemporary Sri Lanka have been explained in this chapter, the subjective dimension of migration has been less highlighted. How lifestyle changes and the changes in migrants' worldviews were not adequately described by the author despite their significant influence on the migration process.

Secondly, the chapter entitled "Contemporary International Migration" provides a conceptual understanding of different themes related to international migration and the complexity of migration types that consist of temporary migrants, permanent migrants, forced migrants, and illegal migrants. Although the author explains different migration types and their complexities, some emerging migration patterns are not given significant attention. For example, student migration is one of the emerging types by which students from the developing world largely migrate to developed countries to obtain higher education, but what is noteworthy is that they are highly likely to remain in those countries instead of returning to the country of origin. This has made a significant change in the socio-economic landscape in the developing world.

In addition, how the destination of migrants has changed after the first-half of the twentieth century is described alongside delineating diversity in the areas of their origin. Arabic countries were the most popular destinations earlier, although now East Asian countries such as South Korea, Singapore, and Japan have become the predominant migrant-receiving countries. The shift from the west to the east has been described in the book. However, the influence of gender and subjective experiences in this process was not adequately explained. Furthermore, the author focuses on south-north migration while giving significant attention to migration pressure in less developed countries.

Next, the chapter on "Theoretical Perspectives of Migration" presents different theoretical frameworks that can be used in understanding international migration;

therein, both macro and micro theoretical perspectives are presented. Recently, the international organisation for migration asserted the importance of the cognitive orientation of the migrants because that influences how migrants configure their behaviour, so a large body of research on migration now focuses on the behavioural changes and the subjective dimension of migration that could have been included in this discussion. All classical theories of migration somehow focus on the structural dimensions of migration, although the discussion of how the cognitive orientation of migrants influences their overt behaviour is much more restricted.

Drawing from different sources, the author reviews the relationship between development and migration in the third chapter. The focus of this chapter is to understand what 'development' is meant to be. The United Nations, as one of the leading international organisations that initiates a discourse on 'development' has declared four development decades in order that the member countries work towards overall progress. Gamlath asserts that those endeavours have often been inappropriate since their overemphasis on individual and corporate functions has brought about unexpected repercussions on people's lives. Thus, the concept of 'distorted development' has become a widely documented concept, because, in the name of 'development', populations seem to have experienced unexpected catastrophes. The author has thus recognised some of those distorted trends in development. There he focuses on neglecting rural localities, ignoring urban marginal groups, avoiding equal participation, changing values, and boosting undue competition. This discussion then emphasises the state of migration pressure in the context of distorted development, distinct strategies for development, the development outcomes of different policies, the social base for building migration pressure, and the dominant types of migration movements.

The chapter on "Labour Migration: Characteristics, Reasons, and Preparation" presents and discusses data obtained from fieldwork during seven months with regard to the characteristics of labour migrants in the Sri Lankan context, reasons for migration, and preparation for the move. Because the characteristics of the migrants are closely related to the family-level socioeconomic success they achieved through migration, the author analyses how different attributes of migrants influence their socio-economic attainments. Age, gender, the general pattern of marital status, education and skill levels of migrants, reasons for migration, and resource levels for migration are some of the important themes presented in this chapter. Moreover, the author demonstrates the differences between the characteristics of migrants, reasons, and preparation for migration

between the rural and urban sectors, which pave the way for understanding the state of international labour migration in two different social settings in the country. As Gamlath carefully observes, the rural and urban differences in terms of relative development differences can influence the migrants differently; migrants from relatively less developed rural areas are less benefitted than those from urban areas.

Furthermore, three types of migrants were identified based on their socio-economic situation, such as low-level, middle-level, and high-level. This analysis implies that migrants coming from those categories adopt migration as a strategy to overcome respective problems, in that sense, migration serves as a 'survival strategy' for the low-level socio-economic groups. It is a 'building up strategy' for the middle-level socioeconomic groups, whereas it is considered a 'broad building up strategy' for the high-level socioeconomic groups. Because many migrants originate from the rural sector, it is implied that labour migration has largely become a 'survival strategy'.

As far as the chapter on "Labour Migration: Income, unemployment, and skill acquisition" is concerned, the author provides an analysis of community and family-level income from labour migration, the potential impact of labour migration on unemployment levels, and the effects of labour migration. There he shows that the income consequences of labour migration at the national level are beneficial to the country. Moreover, a significant finding is that unemployment is characterised by a relatively high-level educated labour force. In contrast, the educational characteristics of the labour migration show that it was made up of a large number of relatively less educated people from rural areas. The next chapter is an extension of the previous two chapters dedicated to presenting the impact of labour migration on education, housing, and community living. Based on the findings, the author indicates here that the effects of migration on education, health care, and housing are positive, not only because of labour migration but also due to other factors such as the pre-migration family-level socioeconomic

situation and the degree of post-migration community-level services and facilities available.

The conclusion precedes the analysis o policy implications. Based on the knowledge obtained, the author provides some important policy implications to be considered. In order to avoid the negative consequences of a *purely-growth-oriented-economic policy,* it is suggested to consider a people-centred approach that includes human resource development, gender-sensitive policies, and a targeted development approach that gives sufficient attention to the rural and urban informal sectors. Because distorted development would exclude a large number of the lower socio-economic sections, they have less capability for involving in international labour migration as unskilled migrant workers. This study thus recognises the relevance of having a minimum human resource base at the family level in order to capture the advantages in post-migration. On the other hand, should the migration–development link be benevolent and ubiquitous without discrimination? Gender-sensitive policies must be attributed to macroeconomic development policies, as the author argumentatively suggests. Moreover, to bring people in need back to the macro process of economic development, Gamlath emphasises targeting sections that are lagging and providing them with some facilities and services instead of a classical blanket approach or urban-targeted policies as a policy initiative. In addition, how community-based migration-related programmes are planned and implemented is given significant attention in the policy implication chapter, with the ultimate purpose of linking the micro-level migration-purposive activities to local development programmes.

"International migration and development: survival or building up strategy" is thus an insightful work because it provides empirical evidence embedded in a sound theoretical argument about international labour migration in contemporary Sri Lanka. The strength of the book depends on the theoretical framework used and the empirical approach employed, which will bring about a comprehensive understanding of the situation of "international migration and development" in Sri Lankan society.

List of Referees (2022)

Prof. S.W. Amarasinghe
Department of Sociology,
Faculty of Humanities & Social
Sciences,
University of Ruhuna,
Sri Lanka.

Dr. Harini Amarasuriya
33B, Janatha Mawatha,
Mirihana,
Kotte,
Sri Lanka.

Dr. B. M. S. G. Banneheka
Department of Statistics,
University of Sri Jayawardenapura,
Sri Lanka.

Dr. R. C. Bamunusinghe
Visiting Faculty Member,
Post Graduate Institute of
Management,
Universityy, Sri Jayawardenapura,
Sri Lanka.

Prof. Sunil Chandrasiri
Department of Economics,
Faculty of Arts,
University of Colombo,
Sri Lanka.

Prof. Ajantha Dharmasiri
Postgraduate Institute of
Management,
Colombo 08,
Sri Lanka.

Dr. Nishara Fernando
Department of Sociology, Faculty
of Arts,
University of Colombo,
Sri Lanka.

Dr. P. D. H. D. Gunatilaka
Dr. P. D. H. D. Gunatilaka
Department of Business
Administration,
Faculty of Management Studies and
Commerce,
University of Sri Jayewardenepura,
Sri Lanka.

Prof. Hettige
University of Colombo,
Sri Lanka.

**Dr Yasangi Auradha
Iddagoda**
University of Sri Jayawardenapura,
Sri Lanka.

Dr. A. A. Kadirgamar
Department of Sociology,
University of Jaffna,
Sri Lanka.

Prof. S. P. Karunanayaka
Faculty of Education,
The Open University of
Sri Lanka.

Dr. P. H. T. Kumara
Department of Public
Administration,
Uva Wellassa University,
Sri Lanka.

Dr. Seelagama Poornika Kumari
Department of Sociology,
University of Peradeniya,
Sri Lanka

Dr. K. A. Lalithadheera
National Human Resource
Development Council of Sri Lanka,
Ministry of Policy Planing,
Sri Lanka.

Dr. J. H. C. Liyanage
Department of Sociology,
Faculty of Arts,
University of Colombo,
Sri Lanka.

Dr. F. M. Nawastheen
Department of Secondary &Tertiary
Education,
The Open University of Sri Lanka,
Sri Lanka.

Dr. I. D. L. Pathirana
Department of Commercial Law,
Faculty of Law,
University of Colombo,
Sri Lanka.

Dr S. P. Premaratna
Department of Economics,
Faculty of Arts,
University of Colombo,
Sri Lanka.

Dr. T.A. Mahinda Pushpakumara
Department of Economics,
Faculty of Arts,
University of Colombo,
Sri Lanka.

**Dr. R. M. Samantha
Pushpakumara**
Postgraduate Institute of
Management,
Colombo 08,
Sri Lanka.

Dr. T. C. Sandanayake
Department of Interdisciplinary
Studies,
Faculty of Information Technology,
University of Moratuwa,
Sri Lanka.

Prof. Gameela Samarasinghe
Senior Lecturer - Department of
Sociology ,
Faculty of Arts,
University of Colombo,
Sri Lanka.

Dr. M. L. K. C. K. Senaratne
Department of Law,
University of Peradeniya,
Sri Lanka.

Dr. Viruli Ajanta de Silva
Research Supervisor - MBA/MFRP,
Postgraduate Institute of
Management,
University of Sri Jayewardenepura,
28, Lesley Ranagala Mawatha,
Colombo 8,
Sri Lanka.

Dr. K. T. Silva
Department of Sociology,
University of Peradeniya,
Sri Lanka.

Dr. A Sivagowry
16-4/6,
Vanderwert Place,
Dehiwela,
Sri Lanka.

Dr. Dinesh Manoj Sivaguru
310/1,
Hansagiri Road,
Gampaha,
Sri Lanka.

Ramila Shadina Ali Usoof
Department of psychology,
Faculty of Arts,
University of Peradeniya,
Sri Lanka.

P. R. K. A. Vitharana
Senior Lecturer,
Department of Education,
Faculty of Arts,
University of Peradeniya,
Sri Lanka.

C. J. Warnasuriya
 Head – Law School,
Award Coordinator – LLM
Programme,
Asia Pacific Institute of Information
Technology,
No. 388, Union Place,
Colombo - 02,
Sri Lanka.
.

Roshani Shermal Wijewardene
Department of English,
Faculty of Arts,
University of Colombo,
Sri Lanka.

Dr. Nilmini Rose Wijeyesekera
Department of Private and
Comparative Law,
Faculty of Law, University of
Colombo,
Sri Lanka.

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Guide to preparation of manuscripts