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Dr. Panduka Karunanayake

Editorial

This is the Volume 15, Number 2 of the OUSL Journal, the Journal of The Open University of Sri Lanka which is published biannually. The articles published in this Volume include research based on Education, Health Sciences, Folkloristics, Legal Studies and Management.

Enhancing organizational effectiveness has been a discourse in the area of educational leadership and management. Induction and socialization for newly appointed employees in this context have been useful to harness the organizational effectiveness and productivity. Induction and socialization are the processes of receiving employees, introducing them to their co-workers, facilitating and engaging them in organizational activities, customs, and traditions in the attempt to ease the transition they experience so that they have the wherewithal to cope with their instantaneous responsibilities. In this connection, the major focus of the paper titled “*Induction and Socialization of New Teachers in Institutional Schools*” explores how newly hired teachers become adjusted to the institutional schools’ culture, their work group, and how they learn the information necessary for effective job performance. This study reveals that teachers who are newly appointed in the institutional schools of Nepal tend to struggle with their tasks; are seemingly nervous of the new work challenges, and tend to fail in conducting day-to-day activities in the absence of proper orientation about the job they are expected to perform. Therefore, induction and socialization as strategic human resource management tools that help employees to connect to the new working environment through their head and heart.

The study on “*The Status of Intimate Partner Violence-Related Education for Nurses in Sri Lanka: A Cross-sectional Survey of Curricula in Nursing*” is a review of the nursing education programs in Sri Lanka to describe the current situation of intimate partner violence education for nurses. Intimate Partner Violence (IPV) is one of the common forms of violence against women affecting their physical, mental, sexual and reproductive health and, also leading to injury and disability. Nurses are first-contact health care providers

for women seeking health care for acute and chronic health problems due to IPV. They need to be knowledgeable of such health problems and sensitive to the emotional and psychological needs of women who are subjected to IPV in order to provide care with appropriate attitudes and skills. Although IPV is considered a global public health problem, the previous studies revealed a lack of IPV education for nurses. The participants of this study, who are nursing educators, reviewed the existing pre and post-registration nursing curricula and their views on including IPV as a topic in their curricula were obtained. The results of the study showed that most of the nursing curricula have not incorporated content related to IPV, but the students of some of the institutions were taught IPV by external resource persons during their training in the community and mental health. The participants have highlighted the importance of teaching student nurses IPV expressing its relevance to their professional and personal lives. The study revealed barriers to incorporate IPV content into nursing curricula including lack of curricular time, lack of competent nursing educators and attitudes of nursing educators on teaching the topic. The findings of this study highlight the necessity of revisiting the pre-registration nursing curricula to incorporate the topic IPV and capacity building of nursing educators to enhance the quality of care for women survivors of IPV.

In a folkloristic study titled, “*When Generous Gods Offer ‘Backhoe-Arm Load of Gems’: Folk Ideas Found Among Gem Miners of the Sabaragamuwa Region*”, the researcher engages in a literary reading of a sample of folktales narrated by those involved in gem mining in Sri Lanka’s Sabaragamuwa Province, where the gem industry of the nation is located. Reading under the folkloristic premise that folktales are carriers of cultural conventions, the researcher undertakes a close reading of the selected folktales for their ‘folk-ideas’ or what the tales suggest about the modalities by which the gem miners engage the material world of their vocation. The findings offer important insights into the mindset of gem miners who are involved in a trade that supports the modern economy of Sri Lanka.

Stress is an everyday reality for everyone regardless of age, gender, religion, occupation, or profession. Past decades have seen an unprecedented upsurge in research studies into stress. This

emanates from the severe negative consequences stress could have on employees' wellbeing and productivity. Job satisfaction is a desirable work-related attitude that guarantees increased worker productivity and job performance. The study on "*Work Stress and Job Satisfaction among Nursing Staff in Public Hospitals in Nigeria*" examines the link between work stress and job satisfaction among nursing staff in public hospitals in Nigeria. Work stress was decomposed into role ambiguity, role conflict, job overload, poor social support, and poor physical work environment. The results of the study indicated that job overload, poor social support, and poor work environment had a significant influence on the job satisfaction of nurses. The findings of the study, however, revealed that role ambiguity did not have any significant relationship with the job satisfaction of nurses. In conclusion, role conflict, job overload, poor social support, and poor work environment are the key predictors of job satisfaction among nurses in public hospitals in Nigeria. The capacity of nurses in public hospitals in Nigeria to cope with work-related stress would be enhanced if more hands are recruited. Moreover, the physical work environment of public hospitals needs to be improved. Also, nurses in public hospitals in Nigeria should be assigned work activities and tasks that are compatible with their level of skills and training.

Hettiarachchi, Arnold, Muhandiram and Wardle's study explores the legal view of food labelling claims in Sri Lanka and compares Sri Lankan provisions of food labelling claims with international standards and legal provisions in Australia. This study titled "*Claims on Sri Lankan Food Labels: A Comparative Legal Analysis with Selected Jurisdictions*" is an in-depth desk review of 'claims of food labels' which is a very confined area in the food law. The authors had successfully identified areas to be modified in the Sri Lankan law on food labelling claims. They have cited scholars who have explored manufactures' and consumers' behavior on food labeling claims and actual implementation of existing legal provisions. Authors have broadly analyzed the existing Sri Lankan legal meaning of 'claims', types of claims, and regulatory framework and have located lapses in their definition, classification, and provisions. By addressing the issues in the legal framework pertaining to food labeling claims in Sri Lanka, the authors recommend the amending of the existing law, the

Food (Labeling and Advertising) Regulations of 2005, so that the health of Sri Lankan consumers would be more protected.

Electronic Procurement System (EPS) is an electronic platform that enables organizations to link directly with business allies and contractors to enable the process of procurement of materials and supply of goods. In recent time, there have been several criticisms on the traditional mode of procurement process in the federal public hospitals in Nigeria. In order to improve business efficiency, many healthcare institutions today are shifting their operational mode of performing businesses from the old-style procurement system to the adoption of electronic procurement system. In pursuit of a suitable model for the determination of explanatory attributes for the likelihood of the adoption of new innovations such as the use of EPS in the federal public hospitals in Nigeria, the Rogers' theory of diffusion of innovations offers the best explanation. Against this backdrop, knowledge of the factors affecting e-procurement system and its rate of adoption in the federal public hospitals in Edo State of Nigeria become critical. The findings of the study, "*Employee Perceptions of the Electronic Procurement System (EPS) and Rate of Adoption of EPS by the Federal Public Hospitals in Edo State of Nigeria Based on the Diffusion of Innovations Theory*" reveal that the greatest challenge faced by the federal public hospitals and management staff in the adoption of the EPS was the lack of EPS infrastructure due to inadequate funding and lack of adequate knowledge and technical expertise to operate the e-procurement system. It was also revealed that management staff of Federal Public Hospitals in Edo State of Nigeria emphasized more on relative advantage of the use of the technology and complexity of the e-procurement system has the least significant effect on management staff of the hospitals' rate of adoption of the EPS. Thus, the study pointed out the importance of determining the characteristics of process innovations that should be highly embraced in enhancing the rate of adoption of EPS in organizations. In order to reap the full benefits of EPS by the Federal Public Hospitals in Edo State of Nigeria, the study recommends that those hospitals should brace up effort towards simplicity of design of new innovations. The simpler the innovations are in terms of understanding, the quicker it will be adopted by the employees of organizations.

In addition, this issue includes the Open University Research Sessions 2020 (OURS 2020) keynote speech delivered by Dr Panduka Karunanayake titled “*Academia and Medical Education in A Post-Covid World*”. This speech stresses that the COVID-19 pandemic will become the most important event of peoples’ lives due to the change and disruption it will bring forth through both direct and indirect contact with peoples’ lifestyles and the resultant responses and adaptations people would have to make. These will invariably impact education, including higher education in general and especially medical education. In this keynote address an attempt was made to explore the uncertainties, make predictions and propose actions in relation to higher education in Sri Lanka, in order to find ways to face the situation successfully.

We welcome your suggestions for further improvement of this Journal. We are looking forward to publishing your current research findings in our next issue.

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Induction and Socialization of New Teachers in Institutional Schools

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Abstract

The purpose of this paper is to explore how schools in Kathmandu practice the ideas of induction and socialization among new teachers appointed to the organization. The major focus is on exploring how newly hired employees become adjusted to the organization's culture, their work group, and how they learn the information necessary for effective job performance. The paper is developed on the basis of information collected through narrations shared during our interviews with administrators, human resource managers and teachers in the institutional schools of Kathmandu based on few guiding ideas like: framework institutions apply for teachers' induction and socialization during the transition and the issues and challenges inherent in the teacher induction process. In our engagement with the participants, we understood that the new entrants tend to struggle with their tasks; are seemingly nervous of the new work challenges, and tend to fail in conducting day-to-day activities in the absence of proper orientation about the job they are supposed to perform. Therefore, we conclude induction and

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socialization as strategic human resource management tools that help employees to connect to the new working environment through their head and heart. It could have direct influences on the quality of work expected from the new intake. Thus, it is undeniable that only those new intakes who are well oriented about organizational goals, who have prior information as to what is expected of them, who possess mechanisms to counter their early anxiety through familiarizing themselves with the working environment with the help of senior staff are able to deliver the service as per the expectation of the organization.

Keywords: *induction and socialization, New teachers, Institutional School, Human Resource Management*

Setting the scene

In the process of recruiting new teachers, suggests Kelley (2004), it is important that the organizations taking in these new employees have good strategic plans for induction and socialization of the new comers so that they experience comfort in their new work place. According to Feiman-Nemser (2001), “Sink or swim” induction encourages novices to stick to whatever practices that enable them to survive whether or not they represent ‘best’ practices in that situation”. Therefore, teacher induction programs are of essential value to the development and quality of novice teachers.

Having spent a long time working in the organizational setting of institutional schools in Nepal, we have seen and experienced teachers facing enormous challenges in their workplace. At times such difficulties arise because of being a new employee in the new organization with new structure, goals and objectives. It could also happen as a result of friction in relationship among the senior staff or one’s own confusion in the initial days to exactly adjust to the new environment. Whatever the reasons are, it is a fact that new employees struggle to experience the perceived advantages and comforts of a new work place. Among many causes, one could be the lack of proper induction and socialization strategies in the institutional schools in Nepal because of which the new employees go through this tough task of breaking the preexisting constraints to develop comfort zones and maintain good relationships among all.

Induction is the supportive introductory stage for new employees to settle quickly into their job and soon become active and efficient workers (Foot & Hook, 2011). The theory was initially formed in the United States and has been developed worldwide over the past few

decades (Aswathappa, 2005). Based on Nankervis et al. (2009), induction is the final stage of recruitment and selection, and the first phase of training and employee development. The process of induction and socialization starts from the recruitment stage. It emphasizes the very first days of employees at work and continues throughout their development process in the company. The program can be different depending on the roles, status and the variety of program activities of the new employees (Wesson & Gogus, 2005). Usually, the term induction is combined with orientation. There exists an assumption that the two concepts could be understood as a synonym. In fact, they vary in meaning and application. Induction signifies the comprehensive preview of the firm typically in a form of presentation, whereas orientation is the practical overview that comprises socialization and the learning-process. Orientation helps formalize and improve a new hire's level of comfort. In a nutshell, an induction and socialization program are organized by the HRD and conducted by every member of the company. It is the process of receiving employees, introducing them to their co-workers, facilitating and engaging them in organizational activities, customs, and traditions in the attempt to ease the transition they experience so that they have the wherewithal to cope with their instantaneous responsibilities. Such exposure should be a natural process when one steps in to a new environment and responsibilities (Khanduja, 2013).

People are motivated to personal performance, development and attachment only when their needs are fulfilled. The employees refuse to contribute to a company that they do not feel comfortable and secured within. Psychologically, need satisfaction, employees' performance, and retention strongly relate to each other (Huges et al. 2012). Therefore, affording employees' needs is essential for employers to maximize the profitability from human resources. Induction and socialization can be the prior step to reconcile and motivate employees into organizational operations. In other words, it could be a meaningful attempt in fulfilling the needs and expectations of the new employees. The understanding of employees' needs is required on behalf of employers to conduct the program successfully. In 1943, psychologist Abraham Maslow developed a theory that clarified five basic needs of a human in an organization. The theory is chosen because it clearly addresses the stage of employee needs that requires employers to fulfill early and, as is often the case, delaying them for a future time period. According to Maslow, every individual requires certain needs fulfilled in order to survive.

Through our own experience and observations of our colleagues experiencing the same difficulties, we have been inspired and

motivated to work in this project to study and explore how schools in the Nepalese educational settings undertake the practices of conducting induction and socialization programs among new teachers who enter these organization with hopes of achievement. Based on our experiences as new teachers, where we faced disappointments that could have resulted in a pessimistic perception about the profession as a whole, we wanted to verify if our experiences hold true at present and if there are new experiences related to the same crisis. Therefore, to analyze the state of human resource development in the schools of Nepal in areas of induction and socialization of employees, we decided to visit few schools and interview the management, human resource department and teachers about their existing practices in their organizations so that their narratives could help us explore how schools have been contributing in the areas of employees' development on this specific area of induction and socialization.

Background of the study

Over the last two decades staff induction and socialization in organizations have advanced as a central topic in the field of HRM (Cable and Parsons, 2001). At the same time, this stream of research has also attracted increasing attention in mainstream management research particularly in relation to research on learning and knowledge sharing in organizations (Danielson, 2004). Thus, even in the Nepalese context, despite the subject gaining attention in educational research, the importance of organizations offering proper induction and socialization sessions to new employees seemingly has not been understood by many an education institution. On the other hand, it is also important that the organizations are empathetic when handling new human capital and induction and proper socialization programs can be the best mechanism to address this need. It can be a key process in ensuring that new employees effectively integrate into the organization that they are recruited.

Organizational socialization and induction refer to the learning process by which newcomers develop attitudes and behavior that are necessary to function as a fully-fledged member of an organization. Cable and Parsons (2001) describe induction as an arrangement made to familiarize the new employee with the organization, safety rules, general conditions of employment, and the work of the section or department in which they are employed. Organizational induction and socialization extend the action of introducing a new employee to the organization with the process of imparting the norms on how to behave in a way that is acceptable to the social group one joins.

In regard to the above-mentioned definition, it is important to draw attention to the importance of exploring the connections between staff induction, socialization and organizational recreation. It also becomes a necessity to highlight inter and intra practice dynamics of staff induction and socialization as part of a wider field of HRM practices. This can provide a basis for a more consistent and coherent pursuit of organizational development. In addition, the practice can contribute to promote reciprocity in the interaction that governs the way newcomers interact with the organization, their team, supervisors and their underlying values, rules, procedures and ways of doing things. Thus, we think it important to explore the HRM practice of induction and socialization in the schools of our social setting and critically review, analyze, and discuss the conceptual and empirical contributions to the staff induction and organizational socialization debate in our context. Therefore, the objective of this paper is to review the existing trend of HRM in this particular topic and highlight the main insights about these important organizational processes and practices, and also identify the critical extensions that could usefully be made to advance the debate in the field.

Problem statement

Human resource management strategies clearly position the need of induction and socialization as an essential tool for the proper mobilization of human capital to derive the desired goals and objectives of any organizations (Darsons, 2001). In the international context, there has been a great input from organizations in this matter. However, in the Nepalese context, the practice is new and is limited to few corporate organizations. Therefore, it is important that the very practice is taken to all organizations including institutional schools. Based on the significance of the topic, our paper focuses on exploring how schools in this context practice this HRM strategy through finding answers to the following problems:

- What is the current status of interpersonal behavior among teachers in institutional schools? How do they adjust in their new work place?
- What is the practice of human resource management strategies in addressing the areas of induction and socialization in institutional schools in Kathmandu?

We are interested to explore the ground realities in the above-mentioned arguments and investigate the issue through interviews with new teachers and management in the institutional schools of Kathmandu.

Purpose of the study

The purpose of this paper is to explore the practice of induction and socialization for new teachers in the institutional schools with focus on understanding how teachers demonstrate socialization skills at their new work place and adapt to the new work environment to achieve what is expected of them.

Research questions

Based on the above purpose, the following research question has been formulated for the study:

How do teachers and management narrate the stories of their organizational practices related to induction and socialization strategies for newly recruited teachers?

Rationale of the study

This study is important in the field of education in the Nepalese context for a number of reasons. First, at some point, all new employees could have certain level of stress and anxiety as they walk into a new work place. They may be nervous in deciding where to start from and what to start with? It could be confusing to all about how to communicate with the senior staff and how to start building good interpersonal relations for effective team work. How to start building relationships with students in the new class? How does one begin to teach a lesson? All these questions could be difficult for a new teacher who has just walked into the organization. In this context, this paper will help both teachers and organization to ensure that they have pre-planned strategies for induction and socialization so that an easy platform for the new comers to adjust in the new environment could be developed.

Research Methodology

This study employs qualitative approach to understand the ongoing practice of induction and socialization of new teachers in institutional schools from the perspective of the teachers, management and human resource department who work to coordinate the functioning of these employees. It is a qualitative research based in interpretative research design. Three participants for the research were taken through purposeful sampling and information from participants were collected through interviews. After generating narratives of the participants, they were transcribed into English language and then narratives of the participants were coded in order to develop themes out of them.

Finally, meanings were made linking signature literature and relevant theories

Insights from the study

The given chapter contains information collected from the research participants that are interpreted into different themes blending their stories to established literature. Based on the themes generated on the background of our participants' narrations, the practices of induction and socialization are explored using interpretative and reflective analysis. As researchers, our interpretation through understanding of the topic is also contained in this section of the paper.

Theme 1: Employees expectation verses reality

Participant 1: A newly recruited teacher in an institutional school said:

Teachers' induction and socialization program is very new to me. This is my third organization that I recently joined and I have spent 9 (nine) years in this field already. Telling you openly, I am not very clear to the idea of induction and socialization.

From the explanation of the first participant, it can be understood that employees are confused about what induction and socialization is and what influences it could have in their work place. Furthermore, it seems like employees are also tend to misunderstand training and development programs with induction and socialization. This became even more prominent when the participant said, *"Trainings and workshops are the only tool for human resource development in schools. In these nine years, I have attended almost around ten such programs. Let me share to you, though training and workshops are organized, our classrooms are not transformed as per the objectives of those programs and it just remains a learning least applied"*.

After our attempt to explain the topic to clear the participant's confusion, the participant presented his ideas explaining that his present organization had explained and oriented him to the job, facilities and work areas. He also shared the story where he was taken to the staff room and introduced to other members and was told about the perks, benefits and taught about the good prospects of professional growth in the organization.

Yes, I completely agree that application of proper induction and socialization technique will make employees feel better at their new work place. A new intake would be nervous, stressed and confused to take on with the responsibility from the very first day of appointment. So, it will help to develop better team spirit at work place.

From the above conversation, it can be stated that the participant acknowledges the importance of induction and how it could help to comfortably adjust at the new work place and better understand the goals and objectives of the organization and what one could expect from the institution and what is expected by the management from the employee when they are taken into the new work place. Furthermore, it would also help to update the members with organizational changes and developments (Armstrong, 2008).

Participant 2: A newly recruited teacher in an institutional school said:

It has been my privilege that I have always been a part of A-graded school in the town and wherever I have been I have always received a wonderful welcome in the new organization. I know how it feels to be at a new place and how imbalanced you are both psychologically and pathologically.

The above statement from the participant clearly states the need for empathy and assistance to cope with the new environment for all employees. In this case, induction and socialization could be an important tool to draw the best performance from the new intake. Furthermore, she described her transition where she explained how it had helped her to be well oriented and supported through good sessions by the senior team along with proper explanation of the organizational goals and objectives.

The comfort I been experiencing in my work place is because I am privileged to be well oriented about my job and my organizational expectations.

During her sharing, she also agreed with a narrative her friend, who remembered the difficulty she had in adjusting to her new work place and how often she complained about her immediate supervisor who did not take her problems seriously and how she had to work in a state of confusion, both in the areas of her immediate responsibilities and in maintaining good relations with her colleagues.

A friend of mine who is a fresher tells me about her struggle, I can feel how it must have been for her to adjust in the new place. Often, she keeps complaining that her immediate manager doesn't properly explain what she is supposed to do and neither her old colleagues in the work place cooperate well.

Thus, in this case, it is pretty evident that induction and socialization can be an effective human resource development tool to facilitate employees and make them comfortable at the new work place. On the other hand, the other teacher who has been struggling at her new place seems to lack proper orientation for her job and the organizational management seems to have failed to offer a proper induction program to help her.

Theme 2: Induction and socialization can't be an option

Participant 3: A Founder Principal of an institutional school said: It is common that new employees are usually perplexed, clumsy, slow, anxious and insecure on the first days of work. Their performance is often not as good as expected. The candidate can feel embarrassed, stupid, stressed, meaningless and hopeless. They worry about their performance and doubt their ability to "fit in." In the course of interview with the principal, he explained that during the induction, the instructors elaborated on the necessary information and knowledge the new teachers required to take on with their task at the new work place. For instance, the information included organization's overview, objectives, work portfolio, line managers, job-related techniques, technologies, legal requirements, key contacts and expectations in the form of standards.

I prepare job description as per the vacancy and recruitment is done on the basis of written tests and interview. During the selection process, I also keep along with me the in-charges from the respective areas to ensure that we make the best hire. After we feel that we have taken the best candidate from the process, we do take some days to orient the candidate about the organizational rules and regulations.

Besides, induction program plays motivational factors in long-term teacher retention. Induction program acclimates and engages a new employee with the organizational environment and culture. It displays their "duty of care" to arm the new employee with knowledge and skills so that he or she feels "fit in" and truly becomes a part of the organization. The participant stated, "*The program can be different depending on the roles, status and the variety of program activities of the new employees. According to need, we also organize training*

sessions to employees whom we think is necessary to reorient about the job that will also include old teachers who are to be induced at times for better performance”.

When the new hires are not well-prepared for practical situations, they easily panic and feel insecure when serving clients. The emotional instability effects their job performance-quality. In this case, they tend to have negative behaviors, pessimistic attitude and deficient job performance. Those people refuse to pay attention to their tasks and personal development to cope with the job requirements (Barrick, 2003). In this case, they seem to be off-track on the technique and could be doubtful about the quality of work expected of them. Hence, induction and socialization are important tools of strategic human resource management that inspire the new intakes and the senior ones to commonly pursue personal development and performance improvement in the future.

Conclusions

The induction program is a knowledge and information transfer process – a period of knowledge dissemination to equip the new entrants. The program aligns the new teachers with what the firm stands for and how it expects them to take on with their task from the very first day so as to meet the goals and objectives of the firm. Strategic application of induction and socialization techniques works as a motivational tool in building memorable impressions and positive inner feelings in employees towards the institution. The activity helps employees to connect to the new working environment in their head and heart. The program has direct influences on the quality of work expected from the new intake. A disoriented teacher tends to struggle in his/her tasks; tends to be nervous, and could fail in conducting day-today activities. Moreover, the new entrants need attention and courage to promote their emotional health or emotional stability. When new teachers feel supportive, oriented and active, they are willing to make a long-term commitment and remain within the organization. Therefore, based on this research, we conclude that induction and socialization is an integral aspect of strategic human resource management that can help employees to connect to the new working environment in their head and their heart. The program has direct influences on the quality of work expected from the new intake. It is undeniable that only well-trained newcomers can deliver the service as per the expectation of the organization.

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The Status of Intimate Partner Violence-related Education for Nurses in Sri Lanka: A Cross-sectional Survey of the Nursing Curricula

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Abstract

Intimate Partner Violence (IPV) results in serious short and long-term health consequences, and is a global health problem. Nurses can play a key role in identifying and addressing the health concerns of women subjected to IPV. Yet, nursing curricula often do not adequately-cover this topic.

The objective of this study was to examine and describe the current status of the IPV-related education for nurses in Sri Lanka.

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This study used a descriptive cross-sectional design. A purposive sample of nurse educators from the 24 educational institutions that conduct pre- and post-registration nursing programs in Sri Lanka reviewed their curricula using a pre-tested self-administered questionnaire with closed questions and one open question. Data were analyzed using descriptive statistics and manifest content analysis.

Results show that none of the curricula included contents on IPV except for two pre-registration programs. Some institutions reported that the topic was addressed sometimes by resource persons during student clinical or field experience. The nursing educators expressed the importance of including IPV content in the nursing curricula. Lack of content, curricular time, nursing educators' lack of competence to teach the topic as well as attitudinal problems, ethical concerns related to women survivors, and lack of continuing education opportunities for nurses were identified as barriers to IPV-related education.

The current IPV education in nursing in Sri Lanka is inadequate. There is an urgent need to incorporate IPV content into nursing curricula and train nursing educators in order to improve nurses' preparedness to care for women experiencing IPV.

Keywords: education, intimate partner violence, nursing curricula, Sri Lanka

Introduction

Intimate Partner Violence (IPV), defined by the World Health Organization (WHO, 2012) as “any behavior within an intimate relationship that causes physical, psychological and/or sexual harm to those in the relationship” (p. 1), is a global health problem. The IPV affects one third (30%) of women worldwide (WHO, 2013a). Women subjected to IPV by their partners are presented to health care institutions with a range of serious health problems including fractures, sexually transmitted diseases, unsafe abortions, suicidal attempts and post-traumatic stress disorder (WHO, 2012). Women seeking help for these and other health consequences of IPV tend to visit primary care, mental health care, emergency care, and

outpatients' departments more frequently than non-abused women (WHO, 2013a).

Nurses spend most of their time in close contact with patients, thus are in a key position to identify and provide care for women as well as refer them to specialized services (Colombini, Mayhew & Watts, 2008). Women generally do not reveal that they are subjected to IPV unless specifically asked about it (McGarry & Nairn, 2015). As such, it is critical that nurses have a solid understanding of IPV, the associated health problems, presenting problems and symptoms, and the skills to identify and care for women subjected to IPV (Crombie, Hooker & Reisenhofer, 2016; Di Giacomo, Cavallo, Bagnasco, Sartini & Sasso, 2017; Tambağ & Turan, 2015). Although the importance of such education for nurses at pre and post-registration levels has been recommended and guidelines developed by the WHO (2013a, 2013b, 2017), the nursing curricula in many countries are lacking content related to IPV (AbuTaleb, Dashti, Alasfour, Elshazly & Kamel, 2012; Beccaria et al., 2013; Bradbury-Jones & Broadhurst, 2015; Clark, Renner & Logeais, 2017; Crombie et al., 2016; Doran & Hutchinson, 2016; Gorman et al., 2016; Hutchinson et al., 2019; Lovi, Hurley & Hutchinson, 2018); Sundborg, Saleh-Stattin, Wändell & Törnkvist, 2012).

Some of the effective strategies to IPV-related education include: using interactive learning opportunities (Bradbury-Jones & Broadhurst, 2015; Wyatt, McClelland & Spangaro, 2019), providing experiential learning with simulated patients for students to gain confidence in screening for IPV (Blumling, Kameg, Cline, Szpak & Koller, 2018; Gomez-Fernandez, Goberna-Tricas & Paya-Sanchez, 2017; Johnson & Montgomery, 2017; Tufts, Klements & Karlowicz, 2009), improving communication skills using role plays (Zachor, Chang, Zelazny, Jones & Miller, 2018), having adequate time and space (Lovi et al., 2018) to address nurses' attitudes towards and stereotypical assumptions about IPV and the victims and perpetrators (Baird, Saito, Eustace & Creedy, 2018; Di Giacomo et al., 2017; Doran & Hutchinson, 2016; Rigol-Cuadra, Galbany-Estragué & Fuentes-Pumarola, 2015), focus on women-centered, compassionate and supportive care (Saletti-Cuesta, Aizenberg & Ricci-Cabello, 2018), and cross-disciplinary

approaches that capture health, psychological, sociological and ethical perspectives (Gomez-Fernandez et al., 2017).

This paper focused on the current situation of IPV-related education in nursing curricula in Sri Lanka – a middle income country in South Asia, where according to a recent scoping review, the prevalence of IPV ranged between 25-35% (Guruge et al., 2015).

IPV-related education for nurses in Sri Lanka could possibly take place at four levels in nursing education: a three-year diploma nursing education (pre-registration); a four-year (bachelor's) degree program in nursing (pre-registration); a diploma-to-degree program (post-registration), and various specialized courses and programs (post-registration). The Schools of Nursing (SoN) began under the Ministry of Health have been offering three-year nursing education since 1939. Currently there are 17 SoN in the country. The diploma curriculum, last revised in 2004, is followed by all SoN (Jayasekara & Amarasekara, 2015). Starting in 2005, five state universities began to offer a four-year bachelor's degree programs in nursing, and these programs follow institution-specific nursing curricula (Jayasekara & Amarasekara, 2015).

The post-registration level education encompasses a diploma-to-degree program offered by The Open University of Sri Lanka (OUSL) which began in 1994 (OUSL, 2019), as well as certificates and diploma courses offered to practicing nurses by the Post-Basic College of Nursing (PBCN) that began in 1960 (Marthenesz, 2007). The PBCN is the only government institution that conducts training programs for nurses to develop skills in a range of specialties (Ministry of Health, Nutrition and Indigenous Medicine, 2015) for example, a 1 ½ year-Diploma in Management and Supervision (leading to a position of nurse manager), a 1 ½-year Teaching and Supervision (leading to a position of a nursing tutor), and six month certificate courses in Mental Health and Psychiatric Nursing and Midwifery training (Jayasekara & Amarasekara, 2015). The PBCN also provides short courses (3-month each) in other specialized areas of nursing, such as, intensive care nursing, operating theatre nursing and nephrology nursing (Ministry of Health, Nutrition and Indigenous Medicine, 2015). In addition, the 1 ½ year post-basic Diploma in Public Health

Nursing that leads to a position of Public Health Nursing Sister is conducted at the National Institute of Health Sciences (NIHS) under the Ministry of Health (National Institute of Health Sciences, n.d.).

In 2012, in a qualitative study with 30 nurses from across the country, Guruge reported that nurses in Sri Lanka were inadequately prepared to care for women subjected to IPV (Guruge, 2012). The National Health Strategic Plan 2016-2025 of the Ministry of Health identified a mismatch between the health care needs and the outcomes of the training programs of the health workforce due to non-aligned training curricula, and recommended revisions to pre-service curricula and trainer capacity development (Ministry of Health, Sri Lanka, n.d.). However, the policy analysis by Colombini et al. (2018) pointed out that the commitment by the Sri Lankan health sector was low in the initial policy response to violence against women which focused on judicial and legal response. The budget allocations in the 2019 Annual Action Plan of the Ministry of Health, focusing on programs to improve public health, do not include training of nurses related to IPV (Ministry of Health, Nutrition and Indigenous Medicine, 2019). The in-service training programs for nurses were aimed at developing technical, managerial, and soft skills (Ministry of Health and Indigenous Medicine, 2017). Given the Policy Framework and National Plan of Action (2016-2020) to address Sexual and Gender-based Violence (SGBV) in Sri Lanka (Ministry of Women and Child Affairs, 2016), which proposed to introduce a training module for nurses under the Ministry of Health to address this significant health and social problem, nursing curricula in Sri Lanka might have incorporated this content. However, no evidence was found in the recently-published studies on this topic which provided the impetus for this study: to examine and describe the current status of the IPV-related education for nurses in Sri Lanka.

Methodology

Study Design

A cross sectional survey with a combined quantitative and qualitative design was used.

Study Settings and Participants

In total, a purposive sample of 24 participants – one each from the 24 institutes comprising of SoN, universities conducting pre-registration nursing degree programs, PBCN, and the OUSL, took part in the study. All the participants were senior educators in nursing with more than 10 years of experience in teaching (Table 1).

Table 1. *Socio-Demographic Characteristics of Participants (N=24)*

Characteristic		Number	(%)
Gender	Male	05	20.8
	Female	19	79.2
Teaching Experience	10 – 20 yrs	21	87.5
	>20 yrs	03	12.5
Type of Institution	SoN (pre-registration)	17	70.8
	University (pre-registration)	05	20.8
	PBCN (post-registration)	01	4.2
	University (post-registration)	01	4.2

The Data Collection Tool

A data collection tool was developed through a literature review and using WHO guide for curriculum review in nursing courses (WHO, 1985). It was reviewed by two senior educators who are subject experts on IPV. The tool elicited information on content related to IPV (introduction to IPV, health effects of IPV, care for women subjected to IPV, IPV-related services, legal and ethical aspects, counselling skills, attitudes towards IPV, and responses to IPV), under which subject in the curriculum this content was included, academic year, time allocation, resource persons, and methods of teaching and assessment on the topic. An open-ended question was included at the end of the tool to obtain views regarding inclusion of the topic of IPV in nursing curricula. The tool was pre-tested with three nurse educators with more than 10 years of experience, and reorganized to elicit information on diploma, post-basic, and university courses, separately.

Data Collection Process

Following approval from the Heads of the 24 nursing programs, an invitation letter including information and purpose of the study, and the data collection tool were sent to 24 participants by registered post along with a self-addressed stamped envelope. A reminder was sent by e-mail, and a phone call was given if no response was received within two weeks' time.

Ethical Considerations

The study was approved by the Ethics Review Committee, Faculty of Medical Sciences at University of Sri Jayewardenepura and written permission was obtained from the Ministry of Health and the relevant Heads of the study settings. The participants were informed about the voluntary nature of their participation. Confidentiality of their participation and information was maintained by keeping their responses and any identifying information separately in locked file cabinets at the university office of the first author. At the end of the data collection, all identifying information was destroyed. In this paper, participants have been identified by a code number.

Data Analysis

Data from the 24 completed (returned) forms were analyzed using descriptive statistics. Manifest content analysis (Bengtsson, 2016) was performed on responses of the open question, "staying close to the text" (Kondracki, Wellman, & Amundson, 2002). The answers to the open-ended question were read several times, to obtain the sense of the whole before it was broken down into smaller meaning units, coded, and categorized according to similarities and differences.

Results

Pre-registration Nursing Education on IPV

Content related to IPV was not present in curricula for courses conducted at SoN by the Ministry of Health. However, nine SoN participants (53%) reported that the topic was covered during student

visits to other institutions for special training as requirements in their diploma course. Of these nine SoN participants, eight reported that the topic was covered during the second-year student visits to Health Units for one month of field training as part of the Community Health Nursing subject. These IPV sessions ranged from 2-12 hours in length, and were conducted in an ad-hoc manner by the guest speakers including the Medical Officer of Health (MOH) and Medical Officer Maternal and Child Health (MOMCH), Medical Officers at NIHS, Police/Probation Officers or resource persons from a Non-governmental organization (NGO) involved in helping affected women. The other (ninth) SoN participant reported that the topic was covered by a Consultant Psychiatrist attached to the National Institute of Mental Health (NIMH) during the psychiatric nursing clinical training. Participants from all (17) SoNs reported that the students were not assessed on the topic. The above findings are illustrated in Table 2.

Table 2. *Pre-registration Nursing Education on IPV at SoN*

Responses of participants		Number	(%)
Curriculum content related to IPV (n=17)	Yes	0	0
	No	17	100.0
IPV related teaching (n=17)	Yes	09	52.9
	No	08	47.1
Number of hours taught (n=9)	1-3 hours	04	44.4
	4-7 hours	04	44.4
	8 -12 hours	01	11.1
Year of study (n=9)	2 nd year	08	88.9
	2 nd /3 rd year	01	11.1
Teacher/resource person (n=9)	Internal/Nurse educator	0	0
	Guest/Medical Officer*	07	77.8
	Guest/other#	02	22.2
Method of Teaching/learning (n=9)	Lecture /Discussion	07	77.8

	Lecture+Group methods	01	11.1
	Lecture+visits to service centers	01	11.1
Subject under which IPV is taught (n=9)	Community Health Nursing (2 nd year)	08	88.9
	Psychiatric Nursing (2 nd /3 rd year)	01	11.1
Formal student assessments (n=9)	Yes	0	0
	No	09	100.0

*Medical officer: Medical Officer Maternal and Child Health (MOMCH), Medical Officer of Health, (MOH) or Consultant Psychiatrist

#other: Women in Need (NGO), Police Officer from Children and Women's Bureau/ Probation Officer, Department of Probation and Child care Services.

Two out of five of the state universities offering pre-registration nursing education have reportedly included content related to IPV in its curricula. Of these two, the content was taught during a 2-hour lecture by its own teacher at one university while the other had used a guest lecturer from a service center for women, in a teaching hospital, to teach the content for eight hours including lectures for six hours and 2-hour small group discussions. In addition, educational visits were made by students to the service centre for women for eight hours over a 2-day period. Participants from the two universities reported learning about IPV as part of the Community Health Nursing subject in the 2nd year of the program. One university has reportedly assessed the students on the topic using Multiple Choice Questions in summative evaluation, while the other university participant reported formative methods.

Post-registration Nursing Education on IPV

According to the participants, five of the main post-registration courses conducted by the Ministry of Health and the diploma-to-degree program in nursing at the OUSL did not include content on IPV in their curricula. However, PBCN participant reported that while their curricula did not have IPV content, the topic was addressed by

Table 3. Post-registration Nursing Education on IPV

Name of the course and duration	IPV content in curriculum (Yes/No)	Duration (hours) of teaching	Subject under which IPV is addressed	Resource person /Institution	Teaching/ Learning Method	Assessments (Yes/No)
1. Diploma in Management & Supervision (1 ½ years)	No	05	Psychiatric Nursing	Consultant Psychiatrist/ NIMH	Lecture/ Group Discussion	No
2. Diploma in Teaching & Supervision (1 ½ years)	No	10	Psychiatric Nursing	Consultant Psychiatrist/ NIMH	Lecture/ Group Discussion	No
3. Diploma in Public Health Nursing (1 ½ years)	No	12	Maternal Health	Medical professionals, Public Health Nursing Tutor /NIHS	Lecture/ Group activities	No
4. Certificate in Psychiatric Nursing (06 Months)	No	05	Mental Health and Psychiatric Nursing	Consultant Psychiatrist/ NIMH	Lecture/ Group Discussion	No
5. Midwifery training (06 months)	No	-	-	-	-	-
6. B.Sc.(Hons.) Nursing (Open & Distance learning)	No	-	-	-	-	-

NIMH- National Institute of Mental Health, NIHS- National Institute of Health Sciences

resource persons from the institutions where their students engage in clinical training on mental health and psychiatric nursing (i.e., at NIMH for Courses 1, 2, and 4) or training on public health (i.e., at NIHS for Course 3). The teaching activities were scheduled by the relevant resource persons on voluntary basis, acknowledged by the PBCN. The above findings are illustrated in Table 3.

Responses of Nursing Educators on Inclusion of IPV in Nursing Curricula

Results of the manifest content analysis of the responses to the open-ended question of the data collection tool are presented under three categories: Relevance of including IPV in nursing curricula; IPV-related content and its delivery and assessment; and Barriers for inclusion of IPV in nursing curricula. The numbers within parenthesis indicate particular participants. No other demographic information is included alongside to ensure confidentiality of the participants.

Relevance of including IPV in nursing curricula

All participants reported that IPV-related content is relevant and necessary in nursing curricula to enhance nursing care for women experiencing IPV. Some of the view points on this are provided below:

“IPV is an important aspect that nurses have to deal with inward setting as well as in the community. So, there is no doubt about the relevance of it in the curriculum.” (Participant 4)

“Nursing students have no opportunity to learn about this topic but it is relevant for both personal and professional lives of students.” (Participant 2)

Participants highlighted women’s reluctance to disclose IPV, and as such the importance of healthcare providers being trained to ask and provide timely care.

“IPV is an essential field of study for basic nursing (pre-registration)

students as well as post-basic (post-registration) students. In Sri Lanka, many women do not like to expose their hidden sufferings and feelings regarding IPV to others, though they are victims at many times. So as curriculum developers in medical, nursing, and other social fields, should accept the necessity of addressing these issues.” (Participant 18)

“This is a burning issue in urban to rural communities, as majority of territory in Sri Lanka is representing this demography, the severity of the problem is very critical. It is therefore not surprising that women affected by IPV annually have increased use of health care services including emergency units and in-patient hospitalizations.” (Participant 15).

Further, the participants suggested that IPV teaching will become mandatory if it is included in the curriculum which is evident in the excerpt below:

“Though we have identified this as an important area to teach, without a curriculum nobody teaches IPV to students. If it is included in our curricula then we are abided by the rules and regulations to cover it in our curricula. So, it is very important to include it in our curricula.” (Participant 18)

Yet, some were concerned about the time needed for IPV related teaching. One participant noted that while it is important to include this content it should not take up much space in nursing curricula:

“Few such cases are being reported... it can be included in curriculum as a minor social problem.” (Participant 12)

IPV-related curriculum content, its delivery and assessments

The participants expressed the need to include key theoretical and practice content areas on IPV in nursing curricula. Suggestions were made about the content to be delivered, the mode of delivery, the duration, and the program/the level of the as well as changes to the instructional strategies and assessments. Some of these ideas are reflected in the following quotes:

“The essential knowledge and skills the students need to develop should cover especially the legal aspects, communication, and basic counselling skills.” (Participant 20)

“I feel that IPV should be included as part of Community Health Nursing since students deal with families and they can understand their situations in real life. Second semester of second year or first semester of third year would be the correct level to include the topic since they are mature enough by then.” (Participant 8)

“The causes and preventive aspects could be included in the Community Health Nursing and health effects, caring, legal/ethical aspects and counseling aspects of affected persons could be included in Psychiatric Nursing.” (Participant 22)

“We can spare 10 hours from the community health nursing course in the 2nd year. If this is not enough, we can find more hours from our (Diploma) curriculum because there are many repetitions.” (Participant 10)

The participants also expressed their preferences for ways in which theory and practice could be connected in order to enhance deep learning.

“Reflective interactive sessions are preferred and useful instead of lectures in teaching this type of subject.” (Participant 21)

“Just awareness is also not sufficient to handle these issues, some practical experiences and theoretical parts also needed. That means adding this as a compulsory part of their practical exams by utilizing OSPE or OSCE methods.” (Participant 18)

Further, as can be seen from the above excerpts, how the assessments should be utilized to enhance competencies in addressing IPV as well as the importance of objectively testing the clinical and practical knowledge and skills acquired during their training were highlighted.

Barriers for inclusion of IPV in nursing curricula

Participants identified many barriers in incorporating IPV into nursing curricula. The key barriers identified included the lack of competence of nursing educators, attitude of the nursing educators, and lack of or limited curricular time and related issues in the existing curriculum were expressed by participants.

“We have more barriers than strengths. Main barriers are lack of teachers those who are competent in these areas and attitudinal issues of some teachers.” (Participant 18)

“Few others are also requesting to include new topics into the nursing curriculum, but it is not possible to find curricular time, we are facing great difficulties in delivering the existing content within the available time, within the duration of the course.” (Participant 5)

The overlaps and repetitions of content in existing curriculum were expressed by the participants as a barrier for incorporating IPV in the curriculum.

“However, the amount of learning on the topic is not enough to develop students’ competencies. More time should be allocated, considering that there are many overlapping areas (in other topics) and repetitions in the Diploma curriculum which was not revised after 2004.” (Participant 11)

The knowledge and skills for nursing educators to teach IPV- related curricula content were also suggested by the participants to be important barriers in the system for effective delivery of IPV content.

“The lecturers need to have a thorough understanding of the topic; especially about legal aspects and communication skills, related to such incidents (IPV) to teach students.” (Participant 21)

“For us to conduct such teaching, we need enough resource persons with improved and new knowledge. We need tutor training programs and curriculum revision. Low payment for external resource personnel also is a problem in getting services from qualified persons. Attitude of health authorities towards developing of nursing specialties is also another barrier.”

(Participant 15)

Further, the lack of confidence or the reluctance of some nursing educators who have already obtained training to teach the topic was reported.

“Two teachers from each school were trained on this sometime back, by the Ministry of Health. Those who are trained still are not confident to do the teaching, they are reluctant.” (Participant 17)

The necessity of having discussions with the health authorities in order to overcome the barriers for inclusion of IPV in curriculum was expressed as a possible solution:

“I feel it is a timely need to include this topic in Diploma curriculum, but challenges and barriers to be considered; strategies should be planned to overcome the barriers. Further, discussions are needed with the relevant authorities, probably with the curriculum committee members of the Ministry of Health.” (Participant 9)

Participants indicated the need to revise the existing curriculum, for inclusion and allocation of time for new topics subsequently. Lack of continuing education programs for nurses/nurse educators on this topic, and attitudes of health authorities towards developing specialties of nursing were the other barriers reported.

Discussion

The current situation of IPV education in Sri Lanka includes IPV-related content that is minimally incorporated in pre and post-registration curricula, even though it is recommended by the WHO (2013b) in order to train nurses to identify and support women subjected to IPV. This finding is consistent with the study in Sri Lanka by Guruge in 2012, and several studies from other countries who reported lack of IPV content in formal nursing curricula (Bradbury- Jones & Broadhurst, 2015; Hutchinson et al., 2019; Lovi et al., 2018; Alsafy et al., 2011; Rocha, Landerdahl, Cortes, Vieira & Padoin, 2015; Tambağ, & Turan, 2015).

However, the results of this study showed that the IPV knowledge has been imparted to some extent through other sources (during students' clinical and community training in specialized health care settings), though SoN and PBCN curricula do not contain contents on IPV. The inclusion of such content and training has been conducted on an ad-hoc basis by a variety of non-nursing resource persons without any guidance or prior approval/endorsement from IPV content experts, or any student assessments. Therefore, the participants were unaware of the nature and the contents of the said training. The reported mode of assessment is only at recall level, and does not incorporate practical aspects that are stipulated by the WHO (2014). The participants highlighted the importance of IPV education for their students. IPV is a sensitive but critical health and human rights issue that must be addressed by professionals who are trained appropriately (Tufts et al., 2009). As implied by the findings of the current study, the inadequacy of preparation of nurses affect the quality of care they provide to women experiencing IPV (Morse, Lafleur, Fogarty, Mittal & Cerulli, 2012).

In Sri Lanka, Gender and Women's Health Unit, which is the focal point of National Gender & Women's Health program under the Ministry of Health, conducts in-service education for selected groups of hospital staff on gender-based violence (Ministry of Health and Indigenous Medicine, 2017), and the National Institute of Mental Health (NIMH) conducts training for health professionals on gender-based violence (NIMH, 2017), where IPV is considered the main component in violence against women (Ministry of Health, Sri Lanka, 2012). Until very recent, the Ministry of Health training programs cater for capacity-building of health care providers attached to One-stop Service Centers for women subjected to violence, named "Mithurupiyasa" (Ministry of Health, Sri Lanka, 2012). In 2017, the training was expanded for curative and preventive staff and a module on GBV was included in the medical curriculum (Family Health Bureau, 2017).

The need to revise the existing nursing curricula in order to incorporate IPV contents and the ways of implementation were stressed by the participants. These findings corroborate with existing evidence from the United States (Tufts et al., 2009), and from Australia (Lovi et al., 2018). Lack of curricular time for the above inclusion was expressed as a barrier in the current study, which also has been raised as a concern in other

countries such as Australia (Lovi et al., 2018) and Spain (Gomes-Fernandez et al., 2017). Similarly, study findings from the United Kingdom also report that nursing curricula are already ‘squeezed’ in terms of content and that all health-related issues cannot be included (Bradbury-Jones & Broadhurst, 2015). Findings of the current study suggest that overlapping content in curricula could be removed to make space for inclusion of IPV-related content, considering the fact that Diploma in Nursing curriculum was last revised far back in 2004 (Ministry of Health Nutrition and Welfare of Sri Lanka, 2004), and PBCN curricula has not been regularly updated to reflect the current needs of the nursing profession (Jayasekara & Amarasekara, 2015). The results of this study also show that IPV was not included even in most of the newly commenced degree courses.

The current study revealed a lack of competencies among educators to implement IPV content in nursing education, which confirms the findings of Lovi et al. (2018) in Australia. Providing formal education and skills training to nurse educators is essential while helping them to examine various pedagogic approaches to teaching IPV content (Gomez-Fernandez et al., 2017; Rocha et al., 2015). Surprisingly, the nurse educators who had received formal training were reported to be reluctant to teach IPV, which needs to be further investigated to understand the cause of this reluctance. Educational programs for teachers should be developed to address resistant attitudes towards teaching nurses on IPV (Lovi et al., 2018) while simultaneously facilitating the development of self-confidence in teachers (Tufts et al., 2009). Content on legal issues and communication skills were identified as one of key components in education programs on IPV, which is in line with findings from other studies, such as, those by Tufts et al. (2009) and Reis et al. (2010).

The skills in communicating with women who are subjected to IPV are of special importance in the Sri Lankan context where women, in general, do not disclose abuse due to patriarchal gender role beliefs and expectations and stigmatizing attitudes of hospital staff (Guruge, 2012; Jayasuriya et al., 2011; Lee et al., 2015). Therefore, the curricula should include reflective and interactive sessions, and role plays to facilitate students’ learning to critically reflect on their own and others’ behaviour and attitudes (Tufts et al., 2009), and build trusting relationships to

enable women to disclose IPV.

The clinical competencies for nurses related to care for individuals who have experienced IPV were identified in a Delphi study in Taiwan (Lee et al., 2015) in three dimensions comprising a total of 38 items of competencies encompassing knowledge, attitudes, and practice. The participants in the current study proposed to include the content related to IPV into curricula in Community Health Nursing subject and legal and ethical aspects in Psychiatry Nursing subject. Similarly, Gomez-Fernandez et al. (2017) reported that competencies in knowledge, skills, and attitudes could be incorporated into curricula in Community Health subject as a public health problem, in the Maternal and Child Health subject as IPV in pregnancy and its impact on the children, in Health Ethics and Legislation to inform legal responsibility and ethical conflicts and under the Health Psychology subject to inform about social inequality derived from patriarchal power. The nursing curricula in Sri Lanka could incorporate such competencies at different levels of study programs to ensure nursing students' awareness of and preparedness to address this critical health problem in order to strengthen the health sector response to IPV.

Limitations of the Study

While the participants were senior educators in nursing with more than 10 years of experiences in teaching, most of the participants were not involved in actual teaching of IPV at the time of data collection. As a result, some details pertaining to the existing teaching on IPV by external resource persons may not have been captured fully.

Conclusions

The current situation of IPV training of nurses in Sri Lanka is inadequate in providing care for women subjected to IPV due to problems in inclusion of the topic and related training within nursing curricula.

The pre-registration nursing education curricula in Sri Lanka need to be reviewed to ensure that women who are subjected to IPV are cared for according to the WHO's recommendations. Training of nurses and nursing students on communication and basic counseling skills was

suggested for better patient outcomes. Moreover, training of nurse educators as well as continuing education of nurses would be necessary to further enhance competent care for women experiencing IPV. Further qualitative research to explore knowledge, skills, and attitudes of nurses towards women experiencing IPV as well as the experiences of the care received by women subjected to IPV is warranted in order to identify the nuances related to the gaps in nursing education.

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When Generous Gods Offer “Backhoe-Arm Load Of Gems”*: Folk Ideas Found among Gem Miners of the Sabaragamuwa Region

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Abstract

Global research into folkloric speech acts, like folktales, folksongs and folk drama, have revealed a rich body of concealed cultural conventions and concepts, prompting the folklorist Alan Dundes to identify such events as ‘autobiographical ethnography,’ or the way in which a group of people would portray themselves. The present study focuses on potential cultural conjecture that could be located in a body of regional folktales found among a group of people engaged in a specific vocation, gem mining. These folktales are published as

* This is a direct translation of the quote “dena deviyo denekota backhoe atha purola denava kivvalu” found in Tale No. 14 of *Sabaragamuwe Menik Kathandara saha Sinharaje Withthi* by Tharindu S. Abeysinghe (2018).

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Sabaragamuwe Menik Kathandara saha Sinharaje Withthi (Gem-related Tales from Sabaragamuwa and the Happenings of the Sinharaja Forest) by their collector Tharindu Sudharshana Abeysinghe. This study intends to locate the folkloric postulate of ‘folk ideas’ embedded in the tales with the objective of cultural comprehension, especially considering the important role attributed to the gem industry in Sri Lanka’s contemporary economy. Texts in public circulation tend to reproduce the material sphere of their surroundings—literally and metaphorically—and could lend themselves to an analysis of the social conditions of their production. This study intends to achieve such an objective through a close-reading of a group of texts whose creators/raconteurs/audience were people involved in gem mining in the Sabaragamuwa province. Through a close analysis of ‘folk ideas’ this study intends to understand how the miners involved in extracting valuable stones from the bowels of the earth position themselves against their material conditions.

Keywords: Folktales, Cultural Conjecture, Folk Ideas, Gem Industry, Material Condition

Introduction

Folktales, or for that matter any folkloric speech event, like folksongs, folk drama etc., are carriers of cultural axioms though there is a tendency to overlook such concepts owing to the problematic issue with the term ‘folk’ which connotes the ideas of “Illiterate, Rural, Lower stratum” (Dundes, 1980, p. 4). However, folkloristics, or scholarly study of folklore (folktales being an item of folklore), has opened up a world of cultural possibilities embedded in samples of folklore among which are issues ranging from cultural conjecture, cultural prejudices to “folk fallacies”[†] (Dundes, 2007, p. 56). Although bodies of folktales have been studied for historical inquiry,[‡]gender

[†] According to Dundes (2007) an example of a ‘folk fallacy’ is a stereotypical idea projected onto a specific ethnic group

[‡] Anthropologist Gananath Obeyesekera studied folktales from the village around Sigiriya for an alternative perspective of the reign of the kings Kasyapa

representations[§] and ethnic understanding^{**} in Sri Lanka, there have been no focused studies on folktales from the Sabaragamuwa region or on the ones narrated by gem miners in that region. This is despite the presence of a fair number of folktales from Sabaragamuwa in the print medium^{††} and the importance of the gem industry to the nation’s economy. The present study intends to address this research gap and create an interest in the folkloric body of knowledge found in this region. The focus of this study is a collection of folktales found among the gem miners of the Sabaragamuwa province. Currently these folktales are published under the title *Sabaragamuwe Menik Kathandara saha Sinharaje Withthi* (Gem-related Tales from Sabaragamuwa and the Happenings of the Sinharaja Forest) by their collector Tharindu Sudharshana Abeysinghe. This study intends to locate the folkloric postulate of ‘folk ideas’ embedded in the tales with the objective of cultural comprehension, especially considering the important role attributed to the gem industry in Sri Lanka’s contemporary economy. Texts in public circulation tend to reproduce the material sphere of their surroundings—literally and metaphorically—and could lend themselves to an analysis of the social conditions of their production. This study intends to achieve such an objective through a close-reading of a group of texts the creators/raconteurs/audience of whom were people involved in gem mining in the Sabaragamuwa province.

Folktale, Myths and Folk Ideas: Definitions

As far as folkloristics goes, for a narrative to be identified as a ‘folktale’ it should establish certain conditions. Two such conditions are antiquity and continuity, which are foregrounded in Thompson’s definition of folktales: “all forms of prose

and Mugalan. These folktales were published by his co-researcher, Ananda Tissa Kumara (2005) under the title *Sigiri Janashruti*.

[§] See Medawattegedara (2015).

^{**} Medawattegedara (2017).

^{††} Sabaragamuwa has been the geographical focus of at least three collections of folktales lately: one collection focuses on the patron deity of the region, God Saman; another on the legendary king of ancient Lanka, Ravana; and the other on gem-related folktales, which is the focus of the present study.

narrative, written or oral, which have come to be handed down through the years” (Thompson, 1977, p.4). Wickramasinghe, one of Sri Lanka’s foremost Sinhala novelists who wrote much about Sinhala folklore, adds the notion of ‘reality’ to his view on folktales. He argues that folktales were “born out of people’s real-life experience” (Wickramasinghe, 1968, p.x) where they constructed a “real approach” (Wickramasinghe, 1968 p. x) to life by restricting elaborate descriptions on the setting and characters unlike in a novel. Kirk (2011) echoes Wickramasinghe’s position when he views folktales as narratives with “high factual and low fantastic content” (Kirk, 2011, p. 58). These concepts of ‘reality’ and ‘factual’ would form the theoretical backdrop for the present study as it attempts to locate the ‘folk ideas’ embedded in a sample of gem-miners’ tales from Sabaragamuwa in order to understand the nature of their material conditions.

Another form of folkloric prose narratives that is found in Sabaraguma (in addition to folktales) are myths. Myths are distinguished from folktales owing to their close connection to rituals—as Hultkrantz maintains, “(t)he myth constitutes a ritual text...” (Hultkrantz, 1984, p. 154). Myths are also a way the primitive minds came to terms with natural phenomena and in the words of Gomme, a myth “belongs to the most primitive stages of human thought, and is the recognisable explanation of some natural phenomenon, some forgotten or unknown object of human origin or some event of lasting influence” (Gomme, 1984, cited in Boscom p.129). Frazer^{##} also agrees with Gomme when he maintains that myths are a result of human curiosity concerning the causes of events and objects. But he argues that myths lack authenticity, they are “mistaken explanation of phenomena.” (p. 75)

According to Dundes, ‘Folk Ideas’ are “traditional notions that a group of people have about the nature of humanity, of the world, and of life in the world” (Dundes, 2007, p. 185). However,

^{##} Frazer’s comments are extracted from an essay in *Scared Narratives. Reading in the Theory of Myths*, edited by Alan Dundes (1980).

Dundes also argues that ‘folk ideas’ need not be openly apparent in folkloric material and they could be “unstated premises” (Dundes, 2007, p. 185) which could underlie thought and action of individuals—the present study takes this argument into consideration when re-reading the tales for embedded ‘folk ideas.’ Dundes’ idea about ‘unstated premises’ is also a notion that is somewhat reflected in the work of the literary critic Pierre Macherey specifically in his recommended mode of reading literary texts. All speech, according to Macherey “envelopes in the unspoken in order to reach utterance” (Macherey, 2016, p. 93), and this “silence” (Macherey, 2016, p. 93), informs us of the “precise conditions for the appearance of an utterance, its limits...real significance” (Macherey, 2016 p.93). The entrenched ‘silences’ in the folktale sample under consideration here would be read for what they state about the gem miners’ views of the world and its nature. This study thus intends to add to cultural comprehension of a group of individuals from a specific geographical location and industry. The gem industry of Sri Lanka is a major foreign exchange earner and generates a total of about US \$350 million worth of foreign exchange on an annual basis.^{§§} The industry employs around 600,000 people, including miners, cutters, polishers, craftspeople, designers, dealers, manufacturers, salespeople and marketers.^{***} Prior to the Covid-19 crisis, there were industry-generated discussions on increasing the income generated by gems and such discussions focused on the nature of policy governing the industry. In the light of all this, it would be of interest and importance to understand the deep beliefs and ideas shared by the people involved in the industry. There has been no focused research on the folklore of the gem industry of Sri Lanka for this study to draw inspiration from. Thus, it is hoped that this study would generate interest among

^{§§} Extracted from: Sri Lanka Export Development Board (n.d.). Gems, Diamonds and Jewellery Export Performance. Retrieved from <https://www.srilankabusiness.com/gem-diamond-and-jewellery/about-sri-lanka-gems/export-performance.html>

^{***} Extracted from: Sri Lanka Export Development Board (n.d.). Gems, Diamonds and Jewellery Export Performance. Retrieved from <https://www.srilankabusiness.com/gem-diamond-and-jewellery/about-sri-lanka-gems/export-performance.html>

the academic community and cause other researchers to undertake related studies.

Sabaragamuwa Province^{†††}—A Short Introduction

Sabaragamuwa is one of the nine provinces of Sri Lanka, located in the south west of the island covering an extent of 4,968 km², or 7.6% of the total land area of the island. Considered the 8th largest province in Sri Lanka, it encompasses two administrative districts, namely Ratnapura and Kegalle. Ratnapura district, which is famed both locally and globally for its gems, is the larger area of 3,275 km² while Kegalle covers 1,673 km². In terms of inhabitants, Sabaragamuwa's total population according to the last census of 2012 was 1,928,655. Sinhalese comprise the majority ethnic community (86.3%) while Sri Lankan Tamil, Indian Tamil and Sri Lankan Moor population comprise 2.3%, 6.9% and 4.2% respectively. Sabaragamuwa is rich in its cultural heritage, possibly owing to the presence of the Sinharaja forest, veddas or the aborigines of Lanka with their own cultural traditions (and folklore) and a gem industry with its own folkloric trends and traditions.

Folkloric Analysis of the Research Sample

Gem-related Tales from Sabaragamuwa

Sabaragamuwe Menik Kathandara saha Sinharaje Withthi (or Gem-related Tales from Sabaragamuwa and the Happenings of the Sinharaja Forest), the collection of folktales under study here, is an assortment of folktales, myths and anecdotes collected and compiled by Tharindu Sudharshana Abeysinghe (2018). He neither claims to be a folktale collector nor does he claim any exposure to the science of folklore. He does claim however, that the objective of his endeavours was to help a reader acquaint herself with aspects of the gem industry. Of the 108 entries in the book, 45 folktales and myths were selected as

^{†††}Information for this section was extracted from the official website of the Sabaragamuwa Provincial Council, <http://sg.gov.lk/sgpc/about/>

samples for this study. One of the biggest drawbacks of this collection is that the compiler does not offer extensive reflections and information on his mode of collection of the tales, nor does he offer a comprehensive critical background to the society which gave him the tales. As Weerasinghe (1986) asserts, the entire context of the tale being told needs to be documented: the setting, biographical details of the tellers/listeners; the facial gestures/voice intonations of the teller; the response of the audience—all this needs to be recorded when collecting the tales. Abeysinghe (2018) has largely neglected these aspects. He does offer some sketchy information about the story narrators, but that effort lacks details and consistency. At the same time, the compiler does not explain to his readers why he chose folkloric material to acquaint an audience with the gem industry—which is an interesting suggestion in the sense that he has assumed folktales to be conveyors of a ‘reality.’ He does not provide a comprehensive study of the social and cultural conditions of the region and people which gave him the stories, whose presence would have added a rich facet to this academic study. Yet, in spite of these shortcomings, the collector has given us some rare tales narrated by the gems miners, an event a reader would have missed had Abeysinghe not undertaken the endeavour in the first place. These tales offer thematics that range from the difficulties and frustrations of gem mining, gem valuing and selling to the memories related to the beginning of the gem trade in ancient Lanka. Thus a careful reading of these tales could offer veritable insights into the mind set and the beliefs of the community of people involved in gems whose life experiences and narratives are seldom heard and told.

The present study is essentially a textual reading of the tales of the gem miners and not a field research of folkloric material and samples. Yet, a textual analysis also offers its own advantages such as the ability to undertake a parallel analysis of the considerably large sample of folktales to mine for insights hitherto unexplored. At the same time, texts tend to signify the material conditions that circumscribe their production and

would offer a reader fresh perspective into socio-cultural conditioning of a given material setting.

Literature Review

Abeysinghe's collection of folktales culled in from the gem miners is the first of its kind in Sri Lanka, though there has been no focused academic study of it. Since Abeysinghe's folktale collection involves a group of people engaged in a specific vocation, it would be of relevance to observe a similar folkloric study from elsewhere for inspiration and elucidation. Dundes (2007) has conducted a study of what he calls, Viola Jokes, the humorous stories told of the viola players in an orchestra, a group stereotypically considered as lacking substantial musical skills to play a more challenging instrument like the violin. After a close study of these tales centred on viola players Dundes concludes that despite their disparaging nature, the humorous tales about viola players help relieve the tension of the musicians and also act as bridges to bond them. The musicians "...not only share the jokes; they share the anxieties that produced the jokes in the first place" (Dundes 2017, p. 245). In other words, such jokes play a cathartic role in moderating tension in a musical setting. It would be of interest to observe the role played by imaginative tales that are related to a specific vocation—gem mining—in the Sabaragamuwa province to understand how narratives interact with lives and how lives interact with narratives.

Results and Discussion

A total of 45 folktales and myths in the sample were read for 'Folk Ideas.' This reading generated three primary Folk Ideas (represented as (a), (b) and (c) below), with one such Folk Idea offering five sub-ideas. They are arranged as follows for ease of discussion.

Folk Idea:

a) Magical aspects in gem mining: this Folk Idea is expressed in diverse modes of narrative and those narratives could be categorized as follows:

- a.1) Magical origin of gems in ancient Lanka
- a.2) Magical origin of gem mining in ancient Lanka
- a.3) Magic that governs the lives of gem miners
- a.4) Magic associated with gems
- a.5) Escaping magical forces

Folk Idea: b) Gems and karmic influences

Folk Idea: c) Unfair valuation of gems

Each of the above Folk Ideas and sub-ideas are discussed in detail below.

Folk Idea a): Magical aspects in gem mining

This was one of the frequently occurring Folk Ideas in the tales with diverse modes of narrative. Overall, the folktales almost always associate gems with magic. This magic posits the presence of constructive divine forces or disruptive supernatural forces associated with gems, gem mines and gem miners. These forces either take the personified idea of the patron deity of Sabaragamuwa, god Saman or earth-bound spirits possessively guarding gems. Gems in the ancient land of Lanka originated as a result of a magical intervention and such magical forces are still present around gem stones and their locations of discovery.

a.1) Magical origin of gems in ancient Lanka

Tale No. 11, titled Yakkina Hedu Dupatha (The Island Built by a She-devil), is a creation myth, in the sense that it offers an account of the creation of the nation called Lanka, its gems as well as the ubiquitous coconut tree. The land called Lanka was originally built as a pleasure garden for god Shakra^{###}—the

^{###} God Shakra is the ruler of the two heavens Thavathinsaya & Chatur Maha Rajikaya. The term Shakra is the Sanskrit version of the Pali Sakka (J.B,

pious god king who is featured frequently in Buddhist narratives. The construction work of the land was entrusted to a yakkina,^{§§§} a relative of Kuveni. In addition to fruits, flowers, forests and water bodies, she infused the soil of this garden with gems brought from heaven. God Shakra, her client, was overjoyed with this creation and he placed his walking stick firmly on the ground and it took root instantly and became the first coconut tree in the world. Just as much as this myth has narrativized the beginning of a nation (Lanka) and objects (gems and coconut trees), it has also syncretized two important cultural imperatives pertaining to the Sinhala race: Buddhism (through god Shakra), and the Vijaya-Kuveni myth (through yakkina, a relative of Kuveni) of ancient Lanka's historical chronicle *The Mahavamsa*.^{****} This myth acts as a prequel to the Vijaya-Kuveni myth. An extensive discussion of the cultural politics of this myth is beyond the scope of this study, but a discussion on the notion of gems is. Firstly, this creation myth disseminates the Folk Idea that gems are a sacrosanct 'event' that was inspired by a heavenly imperative of a Buddhist deity and local skills of the yaksa tribe. A pious god (representing Buddhist morality) and earthly inhabitants capable of magic (combining the idea of magic and hard work) merged their skills to infuse gems in a specific locality in ancient Lanka—namely the Sabaragamuwa province. This Folk Idea could have been the main inspiration for the creation of a body of imaginary folk narratives by gem workers of Sabaragamuwa whereby they infused the gruelling and testing gem trade with a moral imperative governed by Buddhist morality and other supernatural protective (and disruptive) forces. The narrative potential of the tales offer a means of reinterpreting the

Dissanayake 2020) ; Shakra is the "king of Gods...the lord over the celestial beings in the heaven of the 'Thirty Three'" according to *Buddhist Dictionary* by Nyanatiloke.

^{§§§} Understandably a member of the Yaksa tribe—who were believed to be the first inhabitants of pre-historic Lanka

^{****} Vijaya, a subversive prince from North India, was considered the forefather of the Sinhala race and his romance and subsequent betrayal of a princess named Kuveni, an original inhabitant of Lanka and who is also a member of the ruling yaksa tribe, forms the foundational myth of the Lankan nation-creation. It was written down in the 4th century historical chronicle called *The Mahavamsa Or the Great Chronicle of Ceylon* (1912).

inevitable strains, exertions and frustrations associated with locating gems, thus offering expectations and hope for the lonely and isolated gem worker in the deep bowels of the earth. This myth might also be the supporting reason for the existence of Folk Idea (b) which conceives of a connection between karmic forces (good karma = good morality) and discovering of a generous cache of gems (magic).

a.2) Magical origin of gem mining in ancient Lanka

If South India is etched in the national psyche for its destructive invasions of ancient Lanka, there are folktales from Sabaragamuwa that offer this region a positive and constructive role: that of imparting the finer skills of the gem trade to Lankans. Folktales frequently refer to a group of South Indian gem miners, identified as ‘Mukkaru,^{††††}’ who were the pioneering gem miners in ancient Lanka. They used a combination of skills (locating, sifting, cutting and polishing gems) and magic (they owned a ring that could locate potential gem sites) in their vocation. Mukkaru were human and were vulnerable to error. They would throw away Wairodi (Star Sapphire) gems believing that they were worm- infested.^{‡‡‡‡} A group of Mukkaru attempted to cheat god Saman and god Kataragama on a vow and faced a tragic end. This group promised to offer a ship load of gems to the gods if they were allowed to find seven ship loads of gems from Sabaragamuwa. They offered a ship load of low-quality gems to the gods and fled the country. The angry gods sank their ships in mid-sea. This image of a Mukkaru as a Folk Idea offers a model for potential gem miners as to what they should and should not do. Skill and hard work, this Folk Idea suggests, need to be combined with magic and morality to achieve success. Greed should be managed and gratitude paid. At the same time, the Mukkaru tales also locate human vulnerabilities, using a character that

^{††††} The compiler of the tales believes that the term might have originated from combining the two words: Menik+ Karu; yet, an entry in the Sinhala Dictionary (n.d), Vol. 19, Section 39., the term refers to a ‘group of people from Southern India who were experts in capturing elephants’.

^{‡‡‡‡} Wairodi (Star Sapphire) is a gem that displays a white star like shape inside the stone due to heavy aluminum oxidation

is essentially non-native. Thus, a Mukkaru from South India is a skilled miner, shrewd and calculating in his trade; he manipulates magic to his own benefit; he could be impetuous and throw away valuable gems; and he is vulnerable to covetousness when he discovers gems. Far from being a historical reality, Mukkaru is a reflection of a present 'reality' projected on to imaginative fiction.

a.3) Magic that governs the lives of gem miners

God Saman, who enjoys pride of place in Sabaragamuwa as its patron deity, protects gem miners according to the folktales. The earliest reference to this deity occurs in the tale *Yakku Kapapu Gal* (Stones Cut by Devils) which posits the deity in an entrepreneurial light as an owner of a gem-cutting factory employing members from the yaksa tribe. The perfectly faceted glass-like stones used in this factory, the tales say, are still found, the tale narrates, in Sabaragamuwa. God Saman's exotic perpetually-fruit-laden garden is a sanctuary for miners who get lost in the Sinharaja forest. Here the miners are protected and fed with fruits until they are ready to resume their journey. God Saman is quick to respond to firm believers of his jurisdiction. Thus an ardent believer who made a passionate plea for success prior to mining a pit struck a stone that fetched him 4 million rupees. Despite the presence of ferocious wild animals in the forest and the questionable morals of gem miners (good people tend to be protected by deities, goes a belief system in Sri Lanka) god Saman protects these miners from harm. For a gem miner, living in unforgiving terrain with potential for bodily harm from wild animals or mining accidents, and searching for elusive and rare valuable stones, this Folk Idea of a powerful supernatural force whose protective power overcomes the impossible-to-surmount dangers of their trade might balance off his frustrations, demotivation and fear. God Saman, the heavenly image of a Folk Idea, in that sense is a consolation for miners of Sabaragamuwa who are involved in a task whose success cannot be guaranteed.

a.4) Magic associated with gem stones

Just before the discovery of a gem there would be spirits who would attempt to disrupt the process. Thus, a miner might hear an ominous cough from an invisible person just as he is about to locate a gem, thus disrupting his work. There are gems that possess the power to kill a long-suffering heart patient; and if kept under the pillow of an ordinary person at night, the sleeper could die in the morning. Some gems are cursed perpetually and should be only given to museums. These Folk Ideas that underscore some of the Sabaragamuwa folktales are an indication to the listener/reader that gems are objects possessed with magical narratives and should be handled with care and concern. Bringing that idea closer to life, one could argue that these tales warn a gem miner of the stress and strain that would accompany his hard-won discovery of a gem—and the inevitable flooding of wealth.

a.5) Escaping magical forces

The magical fields that surround a gem could be neutralized using one’s spit or cow dung, several tales suggest. Thus, when a snake king vomits a large gem in order to attract insects, a young man steals the gem by dropping cow-dung on the gem. If not for the cow-dung, the mere sighting of this gem could curse the onlooker. If one remembers to apply saliva when he chances upon a gem, the gem would be considered his property. This act of sullyng a gem through spit/dung is a symbolic ritual of transferring its ownership—from magic to a miner. It is a rite of passage which defines how a gem stone possessed, guarded and protected by a supernatural entity could be safely transferred to another party. Once again, this Folk Idea acts as a warning to a gem miner that as he locates a gem, he also confronts forces that are beyond his grasp and control. Locating a gem would, as the Folk Ideas have suggested so far, requires hard work and magic. A part of that magic is to strip away the magic from the gem.

Folk Idea: b) Gems and karmic influences

Another recurring Folk Idea found in the Sabaragamuwa folktales is the notion that gems are closely bound to one's spirituality, specifically to one's karmic forces. The folktales feature two types person who find gems: those who possess financial, technological and human resources to operate mines and insignificant people who find gems by chance. The presence of the latter outnumbers the first in the folktales. Thus, an unsuspecting householder realizes that there is a massive gem embedded in the miris-gala (grinding stone) in his kitchen; thieves visit abandoned gem mines frequently and find valuable stones that have been mistakenly thrown away (repetition of an act similar to Mukkaru, they threw certain valuable stones acting under ignorance); a backhoe operator finds gems in the midst of his hard toil on a road; a priest locates gems hidden under the statue of a deity in a kovil; a farmer finds gems amidst mud in a paddy field; in the night, a gem falls upon a man's head from the roof. Stories that feature this Folk Idea achieve a task equivalent to Buddhist missionary work: they inculcate the notion that meritorious work done in a previous existence is never exhausted, and could transform into events of prosperity in the present birth. Another significant aspect of this Folk Idea is that it maintains consistency with the Buddhist imperatives found in the gem-origin myth discussed above. God Shakra's motivation was responsible for the presence of gems in the nation state, and thus those who were passionate believers and practitioners of Buddhism are bound to find success in the gem trade.

Folk Idea: c) Unfair valuation of gems

The process of valuation of a gem is posited in the tales as an event rigged with dishonesty and deceit. Gem merchants are depicted in the tales as cunning and crafty men who would resort to lying, pretending and even thieving to obtain a gem for the lowest price. Thus, several gem merchants conspired and humiliated an elderly female who insisted that the stone she had discovered was extremely valuable. They suggested otherwise, but she persisted with her assumption—she turned

out to be right. Another gem merchant who offered a ridiculously low price for a valuable gem stone and whose offer was rejected, broke into the room of the gem finder to steal this gem. A gem buyer of (unknown) foreign origin offers a low price for a gem stone on display at a saloon. The saloon owner was unaware that it was a valuable stone. This Folk Idea conveys the notion that the hard work that is invested to locate gems is rarely rewarded. As one narrator in a story says, the one who has the merits to find a gem stone is always poor and is languishing on a road side. It is interesting how the magic seems to have abandoned the hardworking gem miner as he discovers a gem. That could be related to the notion that the gem by now is sullied (with his pit) and is devoid of magic—thus exposing itself and the owner to the deceitful practices of the material world.

Conclusions

Folktales and myths related to gems created/told/heard in Sabaragamuwa primarily carry Folk Ideas about the nurturing and destructive presence of magical forces particularly in the act of searching for and finding gems. In addition, they expose the grievances caused by the unreasonableness of the material world. These two dichotomies—magic and the material world—create tension in the narratives. This tension could be interpreted as a response to the discontents, botches and frustrations in the material world of gems. Magic does not exist in the ‘real’ world—yet the presence of magic in the fictitious world makes the ‘real’ world manageable and acceptable. The folkloric space is a parallel universe to the existing universe where the imagination could project the tension of the material world into its fold. In this imaginary ‘world’ there is hope for the hard-working gem mine worker. Here he would be compensated provided that he is a morally superior person; his good work in another life would act upon him positively in this space; and benevolent deities would protect him even in the middle of the harsh Sinharaja forest. By defining their material reality in terms of Folk Ideas, which are narrativized in folktales, the gem

mine worker goes deep into the bowels of the earth to ply his trade. Folk Ideas are his motivation and inspiration. And perhaps one could argue that it is a folktale narrated at a fire place in the cold Sinharaja forest that motivates a miner to soldier on until he locates a gem that might bring him comforts and the nation, economic progress.

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Work Stress and Job Satisfaction among Nursing Staff in Public Hospitals in Nigeria

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Abstract

Stress is an everyday reality regardless of occupation or profession. In the past decades, work-related stress has become a major source of health-related issues among workers in organizations around the globe. Numerous research studies have examined this biological phenomenon given its negative consequences on employees' wellbeing, and threat to organizational survival and competitiveness. Job satisfaction is a key work attitude that is highly desirable in the workplace if organizational goals and objectives are to be achieved. This study investigated the relationship between work stress and job satisfaction among nursing staff in selected public hospitals in Benin City, Edo State, Nigeria. The dimensions of work stress examined include role ambiguity, role conflict, job overload, poor social support, and poor work environment. A cross-sectional survey research design was adopted for the study. Three hundred and five (n=305) nurses in

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public hospitals in Benin City were selected for the study. Data generated for the study were analyzed with ordinary least squares regression techniques. The results indicated that except for role ambiguity, other work stressors investigated, which are role conflict, job overload, poor social support, and poor work environment, had a significant and negative relationship with job satisfaction of nurses. It was recommended that more nurses should be employed in public hospitals in Nigeria, and that management of public hospitals in Nigeria should ensure that the physical work environment is conducive for nurses to perform their job tasks and responsibilities.

Keywords: Hospitals, Job satisfaction, Nurses, Public hospitals, Work stress

Introduction

Stress is an everyday reality that is experienced by everyone regardless of gender, age, religion, or nationality (Kadiri & Akinmayowa, 2015; Radhakrishnan, 2013). Work stress is the mismatch between the expectations or requirements of the job and resources available to meet these requirements or expectations (Kadiri & Akinmayowa, 2015). Work-related stress could have severe consequences for employees' well-being if left unattended to. For instance, work stress could trigger depression (Adegoke, 2014), burnout, and fatigue in employees (Ojekou & Dorothy, 2015). Further, work-related stress could stimulate emotional wear and tear in employees, which may further manifest in decreased productivity, lowered employee commitment, and job satisfaction (Gulavani & Shinde, 2014).

Job satisfaction is the optimistic feelings an employee has about various aspects of his or her job or work situation (Hans, Mubeen, Khan & Al Saadi, 2014; Spector, 1997). The importance of a satisfied workforce cannot be overemphasized. For instance, organizational participants that derive satisfaction from their jobs are more likely to be highly involved and committed to the organization than employees that are dissatisfied with their jobs. Other benefits of a satisfied workforce include reduced absenteeism, a high level of organizational trust, and the likelihood of organizational members engaging in

creative work performance which have been theorized to be key to organizational competitiveness, profitability, and survival (Bokti & Talib, 2009).

Evidence from extant literature indicates that workers in the public sector in Nigeria of which the health sector is no exception, no longer experience low-stress work environment that they once did due mainly to maladministration, poor conditions of work, mismanagement, and high level of corruption (Ogungbamila & Fajemirokun, 2016; Kadiri & Akinmayowa, 2015; Ogungbamila, 2013). Over the years, work-related stress has emerged as a major challenge faced by health officials in Nigeria hospitals. While the consequences of work-related stress have been well documented in the extant literature, its links with nurses' job satisfaction in Nigeria is yet to be fully known to the best of the researchers' knowledge. Moreover, empirical studies revealed mixed findings as it pertains to the link between work stress and employees' job satisfaction. For instance, while Yaacob and Long (2015) found a positive relationship between work stress and job satisfaction, Mathew (2013) found a negative relationship between work stress and job satisfaction among nurses. These contradicting findings need further verification. The objective of this study, therefore, is to examine the relationship between work stressors, decomposed into role ambiguity, role conflict, job overload, poor social support and poor physical work environment and job satisfaction among nurses in public hospitals in Benin City, Edo State, Nigeria.

Review of Literature

Concept of Job Satisfaction

From a general perspective, job satisfaction describes the overall well-being of an employee in terms of the different work-related issues which affect an individual's quality of work-life (Gulavani & Shinde, 2014). In a similar vein, job satisfaction is a multi-dimensional concept and as such, is explained from different perspectives depending on the orientation of the author(s). For example, Essiam, Mensah, Kudu and Gyamfi (2015) described job satisfaction as

employees' reactions towards their work experiences. Venkataraman and Ganapathi (2013) explained job satisfaction as an emotional reaction to one's job. According to Spector (1997) job satisfaction is the positive feeling employees have about their jobs. Similarly, job satisfaction is defined as a positive feeling employee have about their work situations (Hans *et al.*, 2014). Numerous determinants of job satisfaction have been identified in the extant literature. However, the determinants of job satisfaction have been categorized into two broad factors namely: extrinsic factors and intrinsic factors. Extrinsic factors include salary, supervision, workload, working conditions, interpersonal relationship, and work schedule. Intrinsic factors consist of achievement, feedback, job security, value of work, accepting responsibility, and cooperation across departments.

Concept of Work Stress

Sinha, Chatterjee and Iskanius (2011) defined work stress as the negative feeling that employees have when they are uncomfortable or irritated in their work environment such that it reduces their interest in the job. Also, work stress is defined as the mismatch between the expectations or requirements of the job and resources available to meet these requirements or expectations (Kadiri & Akinmayowa, 2015). In a similar vein, Ogungbamila (2013) posited that work stress is the mismatch between the expectations of the job and the requisite skills or experience needed to cope with these expectations. From the foregoing, we define work stress as the physiological, psychological, and behavioural response of employees to work demands which may have harmful or behavioural consequences.

In the extant literature, different forms, types, and levels of stress have been identified. The most common ones according to Gupta, Gupta, Mishra and Sharma (2011) are eustress and distress. Eustress also referred to as positive stress, is the type of stress which occurs when employees react or respond positively to work conditions, events, and circumstances in their workplace or work environment. It usually manifests in the form of thrills and excitements, which may be predisposed by the offering of awards or prizes, a recommendation for an increase in salary, promotion, and challenging job (Folkman & Lazarus, 1984). Elucidating on this, eustress is usually short but exerts a healthy effect (Gupta *et al.*,

2011). It stimulates energy among employees which help them to generate optimum output by putting more effort into their work performances (Shinde & Mane, 2014). Distress, also referred to as negative stress is usually triggered by a reaction to troubled events which include the death of loved ones, sickness, financial crisis, heavy workload, work-family conflict, sack, job insecurity, and unemployment (Gupta *et al.*, 2011). Distress can be categorized into two types, which are acute stress and chronic stress. While acute stress comes quickly on the individual and oftentimes throws him off balance, chronic stress tends to occur regularly. The difference between acute stress and chronic stress is the intensity of the reactions to stress. This is because acute stress is often short-term, and it is usually triggered by a loss of contract, documents as well as thinking of recent past events and anticipation of future job demands (Ogungbamila, 2013). Chronic stress, on the other hand, may leave the individual feeling drained and might result in burnout if it is not properly and effectively managed. When triggers, stress can lead to psychological distress, tension, headaches, stomach upset, and other symptoms (Sinha, Chatterjee & Iskanius, 2011). Several factors can induce stress in employees in the workplace. These factors include an unhealthy work environment, inadequate support from management or unit/department heads, role ambiguity, role conflict, poor social support at work, and job overload (Ogungbamila, 2013). Examining the relationship between work-related stress and job satisfaction among university teachers, Siddique and Farooqi (2014) did not establish any link between the variables. A similar study by Gulavani and Shinde (2014) did not find any link between work-related stress and job satisfaction among nurses. Mardhiah and Choi (2015) investigated the relationship between job stress and job satisfaction among teachers and found that there is a significant negative relationship between the variables. They specifically demonstrated that role ambiguity had a significant but negative relationship with job satisfaction.

Theoretical Framework

This study adopts the conservation of resources theory as developed by Hobfoll (1989). According to this theory, stress occurs when available resources are insufficient to execute work tasks, when the

available resources are threatened or when people invest their resources without substantial gain (Hobfoll, 1989). Matthew (2013) posited that when employees are given too much workload with little available time or resources to perform the given task(s) work-related stress occurs. According to Gulavani and Shinde (2014), poor resources or inadequate resources could result in job dissatisfaction. Locke (1976) notes that the withholding of resources to perform the job has been recognized as one of the greatest factors eliciting negative feelings among employees.

Figure 1 shows the research model. Specifically, the parameters of the model which include job overload, role ambiguity, role conflict, social support, and physical work environment are proposed as work stressors which may impact job satisfaction of nurses. The researchers intend to empirically verify the relationship that exists between these work stressors and job satisfaction.

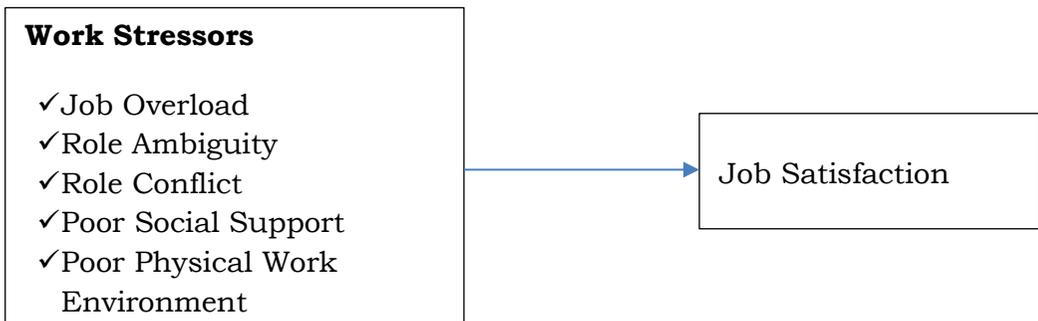


Figure 1: The Conceptual Framework

Research Hypotheses

The following hypotheses which were stated in their null forms were tested in the study.

H₀₁: There is no significant relationship between job overload and job satisfaction of nurses in public hospitals in Benin City.

H₀₂: There is no significant relationship between role ambiguity and job satisfaction of nurses in public hospitals in Benin City.

H₀₃: There is no significant relationship between role conflict and

job satisfaction of nurses in public hospitals in Benin City.

H₀₄: There is no significant relationship between poor physical work environment and job satisfaction of nurses in public hospitals in Benin City.

H₀₅: There is no significant relationship between poor social support and job satisfaction of nurses in public hospitals in Benin City.

Methodology

A cross-sectional survey research design was adopted for the study. Using a population of 987, 226, and 68 nurses respectively for the University of Benin Teaching Hospital, Central Hospital, and Stella Obasanjo Hospital, the study's population comprised 1281 nurses in the selected public hospitals in Benin City, Edo State. Since the population is known, Yamane (1967) statistical formula was used to determine the sample size for the study. The formula is given as follows:

$$n = \frac{N}{1 + N(e)^2}$$

Where: n =Sample size, 1 =Constant value, N= Population size, e = Level of precision or acceptable sample error (0.05).

$$n = \frac{1281}{1 + (0.05)^2} = 304.82$$

Hence, a sample size of approximately 305 nurses was involved in the study. Furthermore, a proportional allocation formula was used to ensure a proportionate survey of the 305 respondents across the three hospitals in Benin City. The formula is given as;

$$n_h = \frac{N h_x}{N} n$$

Where:

n_h = sample size for stratum h ; N_h = population size for stratum h ; N = total population.

The formula was applied as follows:

$$\text{UBTH: } n_h = \frac{987}{1281} \times 305 = 235$$

$$\text{Central Hospital: } n_h = \frac{226}{1281} \times 305 = 54$$

$$\text{Central Hospital: } n_h = \frac{68}{1281} \times 305 = 16$$

This means that 235, 54, and 16 nurses in UBTH, Central Hospital, and Stella Obasanjo Hospital were surveyed respectively. However, to minimize the low response rate, the sample size was increased by 10% for each of the hospitals, bringing the sample size to 258, 59, and 18 respondents for UBTH, Central Hospital, and Stella Obasanjo Hospital respectively. Out of 335 questionnaires that were proportionally distributed to respondents in the three hospitals, 235, 54, and 16 questionnaires were returned and found useful for data analysis for UBTH, Central Hospital, and Stella Obasanjo Hospital respectively.

The questionnaire was divided into sections A and B. Section A contained questions eliciting information on respondents' demographic variables. Section B contains questions measuring work stress and job satisfaction. A 24-items research instrument tagged "Nurses Job Stress Scale" (NJSS) was used to measure job stressors. The job stressors measured were job overload, role ambiguity, role conflict, physical work environment, and social support. Items on the scale were validated by three senior academics in the Faculty of Management Sciences, University of Benin, Nigeria. A pilot test was carried out among 50 nurses spread across the sampled public hospitals in order to confirm the reliability of the scale. The selected respondents were not part of the sampled respondents. Job satisfaction was measured using Macdonald and MacIntyre (1997) 10-item scale.

Table 1.
Reliability Scores for the Variables of the Study

Construct	Sub-constructs	Number of Items	Cronbach's Alpha Value
Job Stressors	Job overload	6	0.751
	Role ambiguity	4	0.812
	Role conflict	5	0.875
	Physical work environment	5	0.711
	Social support	4	0.778
Job Satisfaction		10	0.770

The reliability examined for each scale is shown in Table 1. The scales were rated with a 5-point Likert scale using the anchors: 1= strongly disagreed, 2= disagreed, 3= not sure, 4=agreed, and 5=strongly agreed.

To examine the relationship between work stress and job satisfaction, the study employed the following model.

$$JSN = f (JOV, JAB, RCO, PEN, PSS)$$

In this study, the regression model is specified as follow:

$$JSN_t = \beta_0 + \beta_1JOV + \beta_2JAB + \beta_3RCO + \beta_4PPE + \beta_4PSS + e_t$$

Where:

JSN = Job satisfaction of nurses

JOV = Job overload

RAB = Role ambiguity

RCO = Role conflict

PPE = Poor physical work environment

- PSS = Poor social support
- β_0 = constant
- $\beta_1 \dots \beta_5$ = coefficients of the independent variables
- e_t = Error term at time t.

The Apriori expectations for our variables are $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5 < 0$. This indicates that all the independent variables are expected to have negative relationships with job satisfaction, which is our dependent variable. Simple percentage, mean, and ordinary least square (OLS) regression technique was used for data analysis. All tests were conducted at $\alpha = 0.05$ using Eview version 8.0.

Results and Discussion

Demographic Characteristics of the Participants

A descriptive analysis of the demographic information of respondents was undertaken in this section.

Table 2.
Demographic Characteristics of the Participants

Variables	Respondents' Category	Frequency (N=302)	Percentage (%)
Gender	Male	141	47.0
	Female	161	53.0
Age (years)	Under 25	70	23.4
	25 -35	101	33.3
	36-45	69	22.8
	46and above	62	20.5
Marital status	Single	72	23.8
	Married	225	74.5
Length of service (years)	Separated/Divorced	5	1.7
	0-5	60	19.8
	6-10	195	64.6
Educational	11 and more	47	15.6
	NCE/Diploma/OND or	42	13.9

qualifications	Equivalent		
	HND /B.Sc. Equivalent	or 156	51.6
	M.Sc or Equivalent	94	31.1
	Ph.D. or Equivalent	10	3.4

Key: NCE: National Certificate Examination; OND: Ordinary National Diploma; HND: Higher National Diploma

Table 2 shows that out of 305 questionnaires that were distributed to respondents, 302 questionnaires were returned and found useful for data analysis. Table 2 revealed that the majority of the respondents were females. This accounted for 53% (n=161) of the total respondents. Table 2 also revealed that the majority of the respondents were aged 25-35 years (n=101, 33.3%); married (n=225, 74.5%); spent 6-10years (n=195, 64.6%); and have HND/B.Sc degree (n=156, 51.6%).

Univariate and Correlational Analyses of Work Stressors and Job Satisfaction

Pearson correlation analysis was conducted to establish the relationship among the study's variables. The results are shown in Table 3.

Table 3. Mean, Standard Deviation and Pearson Correlation between Work Stressors and Job Satisfaction

Variable	1	2	3	4	5	6
Job Satisfaction	1	-0.509**	-0.163**	-0.086	-0.548**	-0.384**
Role Conflict	-0.509**	1	0.403**	0.272**	0.675**	0.518**
Poor Physical Work Environment	-0.163**	0.403**	1	0.118*	0.277**	0.577**
Role Ambiguity	-0.086	0.272**	0.118*	1	0.244**	0.150**
Job Overload	-0.548**	0.675**	0.277**	0.244**	1	0.443**
Poor Social Support	-0.384**	0.518**	0.577**	0.150**	0.443**	1
Mean	3.91	3.09	3.07	3.27	3.52	3.57
SD	0.86	0.76	0.74	0.81	0.84	0.85

***. Correlation is significant at the 0.01 level (2-tailed)*

**. Correlation is significant at the 0.05 level (2-tailed)*

Table 3 shows that job satisfaction is negatively related to role conflict (RCO), job overload (JOV), poor social support (PSS), poor physical work environment (PPE), and role ambiguity (RAB). Table 3 further revealed that except for role ambiguity, other work stressors (role conflict, job overload, poor social support, and poor environment) investigated have a significant relationship with job satisfaction (JSN). Job satisfaction has a mean score of 3.91. This indicates showed that the respondents strongly agreed with the items used to measure the construct. Similarly, the majority of the respondents agreed with the items used in measuring the independent variables as their values are greater than the mid-point of 3.00.

To determine the dimensions of work stressors that impact job satisfaction, regression analysis was carried out. The results are shown in Table 4.

Relationship between Work Stress and Job Satisfaction

Table 4. Regression Analysis for Work Stressors and Job Satisfaction

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.174653	0.302003	3.889543	0.0001
PPE	-0.152450	0.065785	-2.317397	0.0212
JOV	-0.376931	0.068131	-5.532430	0.0000
PSS	-0.255415	0.084975	-3.005766	0.0029
RAB	-0.086813	0.052146	-1.664807	0.0970
RCO	-0.235718	0.064442	-3.657817	0.0003
R-squared	0.363691	Mean dependent var		3.403974
Adjusted R-squared	0.352942	S.D. dependent var		1.268996
S.E. of regression	1.020779	Akaike info criterion		2.898676
Sum squared residual	308.4288	Schwarz criterion		2.972393
Log-likelihood	-431.7001	Hannan-Quinn criter.		2.928171
F-statistic	33.83651	Durbin-Watson stat		2.355295
Prob(F-statistic)	0.000000			

The results in Table 4 indicated that the R-squared and Adjusted R-squared were 0.363691 and 0.352942 respectively when the explanatory variables (role conflict, job overload, poor social support, poor physical environment, and role ambiguity) were regressed on job

satisfaction of nurses (JSN). By implication, the independent variables, which are role conflict, job overload, poor social support, poor physical environment, and role ambiguity jointly explain 35% of the systematic variation in the dependent variable. Durbin-Watson of 2.355295 indicates that there is no serial autocorrelation in the regression results. Specifically, the results in Table 4 indicated that except for role ambiguity ($t=-1.664807$, $\rho<0.05$), all other work stressors investigated, that is, role conflict ($t=-3.657817$, $\rho<0.05$), job overload ($t=-5.532430$, $\rho<0.05$), poor social support ($t=-3.005766$, $\rho<0.05$), and poor physical environment ($t=-2.317397$, $\rho<0.05$) have a significant and negative relationship with job satisfaction. While role ambiguity has a negative relationship with job satisfaction ($t=-1.664807$, $\rho<0.05$), the relationship is however not significant. Given the results, as shown in Table 3 and Table 4, it can be deduced that except for role ambiguity, the work stressors investigated, that is, role conflict, job overload, poor social support, and poor physical environment are significant predictors of job satisfaction among nurses in public hospitals in Benin City, Edo State, Nigeria.

Discussion

The study revealed that job overload has a significant and negative relationship with job satisfaction. This is somewhat consistent with the study of Yaacob and Long (2015) who found that job overload is a significant predictor of job satisfaction. The findings of this study also confirm the results of Gulavani and Shinde (2014) that revealed that workload is a predictor of employees' job satisfaction. In alignment with these studies, Rita, Atindanbila, Portia and Abepuoring (2013) posited that work overload induced job dissatisfaction among employees considerably through depression, psychosomatic complaints, and irritations, which are associated with it.

The study further revealed that there is a significant and negative relationship between role conflict and job satisfaction among nurses in public hospitals in Benin City, Edo State, Nigeria. This is consistent with the study of Radhakrishnan (2013) that revealed that job satisfaction decreases with an increase in role conflict particularly

when employees are given two or more incompatible roles to perform at the same time by different supervisors. The findings of this study also aligned with that of Ekienabor (2016) which showed that the incompatibility of expectations and demands associated with the role can make employees confused, dissatisfied, and increase their boredom. It also confirms the study of Gulavani and Shinde (2014) who revealed that conflict with doctors, supervisors, and peers is significantly associated with job dissatisfaction among nurses.

This study showed that poor physical environment has a significant negative influence on job satisfaction of nurses in public hospitals in Benin City. This finding is somewhat consistent with Ojekou and Dorothy (2015) that revealed that work-settings significantly influence mental health and wellbeing among student nurses in Nigeria. The results also align with those of Gupta *et al.* (2011) which revealed that constant interruptions from noisy colleagues, telephones, machines, and people moving up and down in hospitals because of the non-availability of comfortable chairs for patients to wait for doctors induce stress and, invariably, job dissatisfaction. Consistent with these findings, Ogunbamila (2013) suggested that noise, temperature, heat, pollutions, work safety conditions, and poor lightings are sources of strain, which contribute to low job satisfaction. Ogunbamila (2013) further noted that occasioned by the epileptic power supply and decaying infrastructural facilities, poor physical work environment in most public hospitals in Nigeria are associated with low morale among health care workers and could have detrimental effects on the wellbeing of employees.

The results of this study also revealed that poor social support has a significant negative influence on job satisfaction among nurses in public hospitals in Benin City. The results confirm the findings of Sinha, Chatterjee and Iskanius (2011) that increase emotional and instrumental support from supervisors reduce stress among employees and its consequences inspires job satisfaction, wellbeing, and turnover intentions. The findings of this study further confirm Adegoke (2014) observation that social support from superiors and co-workers reduce the level of role conflict among employees. In agreement with Beh and Loo (2012), the absence of social support will result in job dissatisfaction. The study further revealed a

negative but insignificant relationship between role ambiguity and job satisfaction among nurses. The result deviates from several studies that found a significant negative relationship between role ambiguity and job satisfaction (Palomino & Frezatti, 2016; Yaacob & Long, 2015; Gulavani & Shinde, 2014).

Conclusions and Recommendations

This study set out to investigate the relationship between work stress and job satisfaction among nurses in public hospitals in Benin City, Edo State, Nigeria. Based on the results obtained in the study, it was concluded that role conflict, job overload, poor social support, and poor work environment are the key predictors of job satisfaction among nurses in public hospitals in Edo State and Nigeria in general.

Based on the findings of this study, the following recommendations for policy-making are made.

1. Management of public hospitals in Benin City should employ more nurses as well as appraise the capacity of existing nurses in line with available equipment to know the number of patients the nurses can attend to per minute, hours, or in a day. Besides, the employment of more nurses will help reduce the patients/workload assigned to an existing nurse at a time, increase their time to do a good job, and reduce pressure to complete work activities that are associated with the high-stress levels and job satisfaction among nurses.
2. Management of public hospitals in Benin City should reduce the level of role conflict experienced by nurses by ensuring that work activities provided for nurses are within the realm of their professions and personal convictions. Also, role conflict among nurses and subsequently high-stress levels can be minimized by ensuring the assignment of a patient and the administration of drugs (treatment) to one particular nurse at a time. Moreover, the management of public hospitals in Benin City can reduce the level of role conflict and subsequently high-stress levels by not giving nurses multiple conflicting work activities at the

same time. Besides eliminating assignment of two or more job activities that are not compatible, management of public hospitals in Benin City can also reduce role conflict and subsequent high-stress level experienced by nurses by ensuring that individual nurse reports to one supervisor at any particular point in time rather than multiple supervisors.

3. Management of public hospitals in Benin City should ensure that the physical work environment is conducive for nurses to perform their duties. This can be done by ensuring thorough cleaning of public hospitals using antibiotic deodorant detergent as well as ensuring that the architectural design of the offices is appealing, intuitive, logical, and attractive and feature air ventilation mechanisms to reduce hot temperature often experienced by nurses. It can also be achieved by using solar power to generate light in the hospital rather than relying on plants (generators) and power generating companies who oftentimes provide epileptic electricity. Besides, the management of public hospitals in Benin City should expand the wards, offices, and other areas where patients receive treatment.

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Claims on Sri Lankan Food Labels: A Comparative Legal Analysis with Selected Jurisdictions

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Abstract

Claims on labels are one of major marketing strategies in the food industry. Health of consumers may be affected by inaccurate and misleading claims and therefore, such claims need to be regulated by state legislation. The *Food (Labelling and Advertising) Regulations, 2005* made under the *Food Act of 1980* is the main law governing food labelling claims in Sri Lanka.

This study is a desk review which analyses the relevant regulations in the *Food (Labelling and Advertising) Regulations, 2005*. The study further critiques the existing regulations and compares with international standards (Codex Alimentarius) and regulations in developed countries such as Australia which have a broad local and international food market with modern technology.

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The objective of the study is to identify the scope of the 'claim' and its current legislative pitfalls under the existing Sri Lankan legal domain together with its permeability and restrictions.

This study finds that the regulations on claims are not precisely structured and less strong in Sri Lanka. The scope of the definition of 'claim' is vague. Only limited types of claims are stated within the legislation and are often wrongly classified. Certain claim types are not defined at all in the Sri Lankan regulations. Therefore, this study suggests that in order to improve public health, future amendments to the existing regulations are necessary with broader, stronger and clear regulations.

Keywords: Food Label, claim, labelling regulations

Introduction

Background of the Study

The general meaning of the word 'claim' is a statement that something is true or is a fact, although the statement alone cannot prove it and people may or may not believe it (Cambridge Dictionary, 2020). A 'claim' can also be a something which someone says which the person making the 'claim' cannot prove and which may be false (Collins Dictionary, 2020).

The Sri Lankan law on food label claims is stipulated in *Food (Labelling and Advertising) Regulations of 2005* which is made under the *Food Act of 1980*. In Sri Lankan law, food labelling regulations define a claim as any representation which states, suggests or implies that a food has a particular quality relating to its origin, nutritional properties, nature processing, composition, or any other quality (Government Publication Bureau, 2005).

Claims are common in food labels. They are a major method by which to deliver a manufacturer's message directly to the consumer. Claims are most important items in a label in terms of food marketing, and often infer a particular quality of the food product. Therefore, it is not surprising that most of items in any given food label are claims. Given their prominence, regulation of claims made on food labels is necessary to protect the health concerns of consumers.

Due to the complexity of laws, it is often not easy to understand whether any particular claim complies with the regulations. Such

complexity often confuses manufacturers, authorities, authorized officers and even lawyers. First a claim should be identified and thereafter assessment can be made on its legality.

In this study, the Sri Lankan regulations on food labelling claims were compared with International Food Standards (Codex Alimentarius) and the Australian regulations on food labelling claims. Australia is a developed country where local and international food trade prevail with modern technology. The Australian food law is based on Food Standard Code (FSANZ) which is not limited to Australia but also extends to New Zealand.

Scope of the Study

Provisions on claims in food labels are outlined in section 13 of the Sri Lankan *Food (Labelling and Advertising) Regulations, 2005*. This study analyses all the relevant sections related to claims, which are mainly focused in section 13 of the Sri Lankan *Food (Labelling and Advertising) Regulations, 2005*.

Aim of the Study

The aim of the study is to provide a comprehensive legal analysis of Sri Lankan laws related food labelling claims in order to identify legal pitfalls that need to be corrected.

Justification of the Study

A claim is the most important 'advertisement' or direct-to-consumer message of food manufacturers in a food label. Therefore, it is perhaps natural that food manufacturers will try to use unjustified or unproven claims in a food label in order to promote their products. This can potentially mislead consumers and ultimately affect human health. As such it is the responsibility of the state to regulate these claims. However, in order to ensure compliance, the labelling regulations should be clear and strong enough to enable such regulatory action. Therefore, a legal review of the existing regulations is important to understand the scope and restrictions in regulations relevant to food claims in Sri Lanka, in order to provide manufacturer, policy and public health stakeholders clarity on the issue.

Theoretical Framework

The Sri Lankan regulations on food labelling claims were compared with International Food Standards (Codex Alimentarius) and the

Australian regulations on food labelling claims to perform a comparative legal analysis.

Review of Literature

Manufacturers influence consumers to buy their products through a number of mechanisms, one such modality being their food labels. Information on food labels could help consumers to make healthy choices. For example, they may facilitate the comparison of the nutritional values of different foods (LaBarbera, 2012). However, manufacturers often use food labels to suggest their products are healthier than they really are (Gunnars, 2016). Although a potential tool for improved health, food labels can also be used to mislead the consumer. If consumers do not have sound knowledge based on which to judge labelling claims, they may not be able to choose healthy food (Jolliffe, 2013). Therefore, sound legislative control on labelling information is necessary to protect consumers' health.

In Sri Lanka, food labelling does appear to influence consumer behaviour. The impact of nutritional labelling on consumer buying behaviour in Kandy, Sri Lanka was assessed. This cross-sectional study selected 90 consumers randomly from three supermarkets, and assessed the consumer's awareness on nutritional labelling and the effect of nutrition labelling on buying. Of the surveyed consumers, 65% bought products with nutrition labelling due to perceived benefits, suggesting the importance of the implementing appropriate labelling regulations (Prathiraja and Ariyawardana, 2011). A community based cross-sectional study was carried out among grade 12 students in government schools in the Colombo district to assess the snacking behaviour, use of food labels on making choices of packed foods/drinks, and knowledge on food labels and attitude towards media strategies used on food labels. More than 70 % of the students paid attention to information on the label. Majority agreed that the information given on labels of expensive and popular brands to be trustworthy (Thalagala, 2011). These findings suggest that regulating labelling information such as claims will positively influence the purchasing behaviour of consumers.

In an Australian study, Colmar Brunton's Social Research (2007) found that nutrient content claims were present on 85% (n=159) of the food labels; however, only 20% of shoppers had read it. The trust towards nutrition content claims was significantly higher for those

who reported reading it. 17% shoppers had bought the product based on perceived healthfulness based on information on the label. The presence of trustworthy claims can lead to improved nutritional decision making and critical assessment of label claims. An experimental study was conducted by TNS Social Research Consultants in 2007 among 1,007 Australian and New Zealand consumers on consumer interpretations of the statement 'no added sugar' in food labels, revealed that consumers' awareness on the presence of sugar in 'no added sugar' labels were high. This was presumed to be because a high percentage (60%) of consumers had used the nutrition information on the label, which indicated sugar content (FSANZ, 2019). The United States data have shown that consumers rate products with health claims higher than the products without health claims (Roe et al., 1999). Therefore, consumers may inappropriately attribute health benefits to the food product, if claims are not properly regulated by the law. This shows the influence of claims on the food label and the importance of its accuracy towards consumer attitudes.

The impact of legislation does appear to have an effect on claims. Repeated cross-sectional analysis was performed on Canadian consumers to compare the influence of labelling claims between the years 2010 and 2013. It was found that nearly half (49%) of food labels displayed any type of claim and nearly half out of these (46%) were nutrition claims. The percentage of health claims were significantly lower ($p=0.020$) in 2013 (1.5%) compared to 2010 (1.7%) after introduction of new legislations on claims (Arellano et al., 2017). This proves the success of enacting stringent labelling laws on food labelling claims.

A quasi-experimental study conducted in Sri Lanka reveals that 36.4% ($n=4$) of labels with the term 'fortified' food, 50% ($n=3$) of labels with the term 'enriched or fortified with vitamin C', 63.65% ($n=70$) of labels with the term 'pure' and 80% ($n=16$) of labels with the term 'natural' are non-compliant to regulations (Hettiarachchi, 2017). Participants of a focus group discussion in the same study claimed that some labels were clearly incorrect and misled the consumers, with one of the common methods used to mislead the consumer being pictures that are displayed on the label. Participants stated that children were also misled by pictures (Hettiarachchi, 2017). These findings suggest that the implementation of labelling regulations related to food claims is

not satisfactory in Sri Lanka. Therefore, the state should take action to review these perceived lapses of existing labelling laws, especially on claims which are used as marketing strategies.

Methodology

An extensive literature search was performed to identify national and international sources using multiple strategies. Standards and regulations were searched in the official websites of organizations and departments. Further, theses of doctorate degrees, articles from international and local journals were reviewed. Use of claims by manufacturers and consumers as well as the existing compliance to regulations were studied and cited.

Even though claims contribute significantly to marketing endeavours by food manufacturers, limited regulations exist. Current regulations were analysed based on main three aspects: 1. Identification of a 'claim' 2. Types of claims and 3. How claims are regulated

To provide a global context Codex Labelling Standards and Food Standards of Australia and New Zealand on labelling claims were compared with the Sri Lankan scenario.

Findings and Discussion

Identification of a 'Claim'

Section 13.3 (1) of the *Regulations* defines a *claim* as any representation which states, suggests or implies that a food has a particular quality relating to its origin, nutritional properties, nature, processing, composition, or any other quality. The term 'particular quality' is not explicitly defined or explained under the *Regulations*. This is a broad definition and can catch most statements on the label as a 'claim' though, this definition is restricted to section 13 (and thus excludes section 11 and section 12). However, this legal point is not yet argued in the Sri Lankan higher courts.

Section 11 focuses on the recommendations made by medical practitioner, association or professional on the label, which are considered recommendations of third parties rather than claims. Section 12 stipulates that no label (or advertisement) relating to any food shall contain a statement or claim of 'special characteristics' of a food unless approved by the Chief Food Authority. However, notably

the term 'special characteristics' is neither defined nor explained in the *Regulations*. However, this legal point too is not yet argued in the Sri Lankan higher courts.

The Sri Lankan laws differ slightly from international norms. International Food Standards developed by Codex Alimentarius Commission – a joint programme of Food and Agricultural Organization and World Health Organization - on labelling regulations define a 'claim' as any representation which states, suggests or implies that a food has particular characteristics relating to its origin, nutritional properties, nature, production, processing, composition or any other quality (Codex Alimentarius, 1991). Though the Sri Lankan law has attempted to adopt the same Codex definition in the *Regulations* - and has largely done so - the word 'production' is missing in the Sri Lankan definition. The words 'production' and 'processing' might be understood as synonyms by the members of the general public, but they have two different meanings. There may be production without processing (for example, the original and natural food can be packed without undergoing any change to the food). In Australia and New Zealand FSANZ defines a 'claim' as an expressed or implied statement, representation, design or information in relation to a food or a property of food. 'Property of food' means a component, ingredient, constituent or other feature of food (FSANZ, 2003). Therefore, the Sri Lankan definition of *claim* seems to be more restricted.

Section 11 of the Sri Lankan labelling regulations is relevant to the recommendations of professionals. Section 12 states that no label or advertisement relating to any food shall contain a statement or claim that such food has *special characteristics* unless approval is granted by the Chief Food Authority. The meaning or interpretation of the term 'claim' is stated only in section 13.3. Provisions of claims in the *Regulations* do not automatically extend to section 11 and 12 of the *Regulations* as the term 'claim' is restricted to section 13. Therefore, that meaning or interpretation of *claim* does not refer to the entirety of the *Regulations* (including section 11 and 12), but only to section 13.

The term 'claim' also been stated in section 12 of the Sri Lankan labelling regulations as an analogue to the term 'statement' but without an interpretation. Here the term 'claim' should be interpreted in general; therefore, it cannot have the same meaning of the *claim* as described in section 13.3. The term '*special characteristics*' is not defined or explained. The term 'special characteristics' is not included

in the definition of the term 'claim' in section 13.3 and the meaning of the term 'claim' in section 13.3 does not refer to section 12 either. It should be noted that these descriptions covered under section 11 and 12 are separate to 'claims' that are defined in section 13.3.

Approval of the *Chief Food Authority* of Sri Lanka is required only for descriptions covered by section 11 and 12. In other words, it could be interpreted as a 'claim' that does not require the approval of *Chief Food Authority* as section 11 and 12 do not come under the purview of *claims* stipulated in section 13.

Types of Claims

The *Regulations* do not expressly classify *claims* even though specific types of claims are stated and defined. For example, nutritional claims are specifically identified in the schedule V. Nutritional claim is further split in schedule V to *nutrient content claims*, *comparative claims* and *nutrient function claims*.

Schedule V defines a *nutrient content claim* as a nutrition claim that describes the level of a nutrient content in a food (such as "source of calcium", "high in fibre", "low in fat"). In addition, section 13.7.vi stipulates terms 'fortified' and 'enriched' which are also nutrition content claims. A *comparative claim* is defined as a claim that compares the nutrient levels or energy value of two or more foods (such as "reduced", "less than", "fewer", "increased", "more than" in relation to other products). *Nutrient function claims* describe the physiological role of the nutrient in growth, development and normal functions of the body (such as "Calcium aids the development of strong bones and teeth", "Protein helps build and repair body tissues", "Iron is a factory for red blood cell formation", "Vitamin E protects fat in body tissues from oxidation", "Folic acids attributes to the normal growth of the foetus").

The *Regulations* do not stipulate the term 'health claim'. However, schedule V (d) (IV) provides certain limitations on health-related claims, stating "the claim shall not imply or include any statement to the effect that the nutrient would afford a cure or a treatment for or protection from, any diseases".

Claims related to non-nutritional properties are not expressly termed or classified. However, claims related to non-nutritional properties such as 'pure', 'natural' and 'substitute' are specifically stated in section 13(4), 13(5) and 13(6) respectively.

Both Codex and FSANZ classifies 'claims related to nutritional properties' as nutrition and health claims; whereas, there is no such explicit classification in the Sri Lankan law. Codex has excluded ingredient list and nutritional information from nutrition claims probably because they are regulated by specific legal provisions or standards. Therefore, restrictions relevant to claims do not apply to the ingredient list and nutritional information according to the Codex. Sri Lankan labelling regulations neither categorize claims related to nutritional properties nor defines nutrition claims. The term 'health claim' is also not mentioned in the *Regulations*. Sub-categorization of nutrition claim in Sri Lanka is not consistent with Codex standards: nutrition function claim is a nutrition claim in the *Regulations* whereas it is a health claim in Codex as well as in FSANZ. The *Regulations* also failed to identify *non-addition claims* (for example, 'no added sugar' and 'no added salt'). In addition, the *Regulation when* compared with Codex also failed to identify and regulate claims such as "fresh", "homemade", "organically grown" and "biologically grown".

Regulation of Claims

Certain *claims* in the *Regulations* are absolutely prohibited, some are relatively prohibited while other *claims* are considered mandatory to display on labels.

Absolutely prohibited *claims* include: any false claim; claims stating "dietary fats are a protection against heart diseases or of benefit to persons suffering from heart disease"; claims of "tonic, restorative or medicinal properties"; claims of "beneficial, cure, alleviate or prevent any illnesses" (either directly or indirectly); and claims on statements of weight loss (e.g., "aid for slimming, weight control or weight reduction").

Relatively prohibited *claims* are nutrient content claims which are not in accordance with table A of schedule v. Further, and the terms 'pure', 'natural' and 'substitute' or any words implying them are prohibited unless specified conditions stated in provisions of section 13 are satisfied.

Other claims such as 'country of origin' for imported products, 'ingredients' and 'colour codes' are *claims* that should be mandatorily displayed on labels.

Sri Lankan regulations are apparently more stringent in claims relevant to health concerns. Even though Sri Lankan regulations do not generally identify health claims as a category, specific health related claims such as “dietary fats are a protection against heart diseases or of benefit to persons suffering from heart disease”; “contains tonic, restorative or medicinal properties”; “cures, alleviates or prevents any illness”; and “aids slimming, weight control or weight reduction” are absolutely prohibited (Government Publication Bureau, 2011). Certain health claims are allowed under conditions in the codex standards. However, as the *Regulations* prohibit specific health claims, it indirectly implies that other health claims are allowed in Sri Lanka without restrictions. This is a result of failing to identify health claims as a separate entity by the Sri Lankan regulations. FSANZ has simply but effectively regulated health claims by prohibiting the use of therapeutic claims and any claims in infant formula (FRL, 2020) which seems to be a broader restriction than those practiced in Sri Lanka.

No claims are explicitly permitted without any restrictions by the Sri Lankan labelling regulations, while FSANZ has specifically permitted claims on food that is intended for further processing, packaging or labelling prior to retail sale, and food that is delivered to a vulnerable person by a meal delivering organization (FRL, 2020). Further FSANZ allows any claims about the risks or dangers of alcohol consumption or about moderating alcohol intake and permitted Health Star Rating symbols (FRL, 2020). Even though there are no explicitly permitted claims stipulated in the *Regulations*, claims related to non-nutritional properties (except for words ‘*pure*’, ‘*natural*’, and ‘*substitute*’ or words implying them) and health claims (except for specifically stipulated health claims) are allowed as there are no restriction to stop them.

Apart from food labelling regulations there are other laws in Sri Lankan jurisdiction which regulate claims. Although not explicitly implied as *claims*, some consumer law provisions also exist to protect against misleading claims. The Sri Lankan *Consumer Affairs Authority Act of 2003* stipulates the term ‘representation’ instead of ‘claim’ and false representations are been prohibited by the section 31 of the Act. Specific types of false representations have been stipulated to make it clearer (Government Publication Bureau, 2003). However, clear descriptions are not present under food labelling regulations.

Conclusions

Sri Lankan labelling regulations on claims are overly complex and potentially misleading. The term ‘Special characteristics’ mentioned in section 12 of the Sri Lankan labelling regulations need to be more explicitly elaborated in order to gain a practical validity. The scope of the section 11, 12 and 13 of the labelling regulations should clearly clarify the issue with simple instructions and examples. In addition, specifying permitted claims (without restrictions) also will improve the compliance by food industry and to improve the enforcement of current laws by *Authorized Officers*.

The Sri Lankan food labelling regulations have largely failed to adopt the standard definitions and classification of Codex Alimentarius on labelling claims, or develop another reasonable classification that comprehensively identifies and addresses all standard types of claims. Scientific classification should be adopted when making future amendments.

Legal provisions on food labelling claims in Sri Lanka are not adequate when compared to Codex and legal standards in other developed countries such as Australia, which results in Sri Lankan consumers receiving lower standards of health protection than citizens of other countries.

Abbreviations

FSANZ – Food Standards Australia and New Zealand

FRL – Federal Register of Legislation

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Employee Perceptions of the Electronic Procurement System (EPS) and Rate of Adoption of EPS by the Federal Public Hospitals in Edo State of Nigeria Based on the Diffusion of Innovations Theory

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Abstract

This study investigated the perception of electronic procurement (e-procurement) system and rate of adoption in the federal public hospitals in Edo State of Nigeria. The rate of adoption is premised on Rogers' diffusion of innovations approach using the process of innovation characteristics: relative advantage, trialability, compatibility, observability, and complexity of e-procurement system to evaluate the rate at which organizations adopt new innovations. The degrees of difficulties faced by the hospitals in the adoption of e-procurement system and the benefits of the e-procurement system adoption were also studied. The study used convenience sampling technique to select 45 management staff of procurement departments of three federal public hospitals spread across Edo State. The Ordinary Least Squares (OLS) technique was used to estimate the

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model that was developed. The findings showed that the greatest challenge faced by the hospitals in the adoption of EPS was the lack of e-procurement system infrastructure due to inadequate funding. On the benefits of adopting EPS in the hospitals, the findings showed that reduction in wastage in the time lost in the process of procurement of materials and mistakes that emanate from retyping and exchange of documents, increased efficiency of business operations were the major advantages of e-procurement system adoption. The regression results demonstrated that all the exogenous variables were significant and positively influenced the rate of adoption in the federal public hospitals in Edo State, except complexity of e-procurement system that had a significant negative predictor on management of the hospitals' policy decision to adopt electronic procurement system. The relative advantage of e-procurement system score was the best predictor of respondents' attitudes toward rate of adoption of new innovations in the hospitals. It is therefore recommended that innovations that are simple and user-friendly in design should be adopted. Simpler the innovation, quicker the adoption by the employees of an organization. Management of the hospitals' procurement department should deploy the necessary information technology infrastructure, personnel with requisite expertise, digital skills, and knowledge for the successful adoption of the e-procurement system.

Keywords: Compatibility, Complexity, Electronic Procurement System, Rate of Adoption, Relative Advantage, Trialability, Diffusion of Technological Innovation Theory.

JEL CODES: C42, H57, L32, L86

Introduction

The role of the healthcare sector in nation building cannot be overemphasized. It is the prime aspect of a nation's institutions that ensures the wellbeing of every citizen. The provision of basic healthcare is a key element in the promotion of broad-based socio-economic growth and development of a nation. The healthcare industry in Nigeria has been evolving over the years and confronted daunting challenges in the face of profitable opportunities (Ikponmwosa & Omoregbe, 2018). Ikponmwosa and Omoregbe (2018) emphasized that these challenges typically manifest in terms of poor deployment of infrastructure/equipment, inadequate access to

sustainable financing, inflow of sub-standard and counterfeit drugs, poor remuneration of healthcare practitioners, unfavourable government policies and implementation, and lopsided health insurance facilities, among other things. To surmount these challenges, federal public hospitals in the country must be efficient in their use of resources and benchmark their performance against that of their peers across the globe. Hence, the need for the healthcare sector in the country to examine areas that can lead to operational performance in planning and executing strategies that will continuously make them relevant in the face of competition from other business enterprises cannot be overstated.

With the advent of the Internet and today's global competitive healthcare institutions, the delivering of quality and innovative services to clients by federal public hospitals in Nigeria is a must for their continuous survival. Consequently, in order to improve business efficiency, many healthcare institutions today are shifting their operational mode of performing businesses from the old-style procurement system to the adoption of electronic procurement system (Davila, Gupta, & Palmer, 2003). The consequences of the continuous use of traditional procurement system range from lack of access to swift information, lack of continuous replenishment supply model, etcetera. The increasing awareness and exposure to electronic procurement mechanisms by public officers cannot be underscored, hence, the need for a change in the procurement systems. The adoption of Electronic Procurement System (EPS) in the healthcare institutions has the potential benefits to increase service firms' competitive advantages on the basis of improved clients' satisfaction with ground-breaking ideas, reduction in the total cost of material acquisition, timely delivery of materials, improved profitability, elimination of paperwork, improved suppliers' relationships with the healthcare institutions management, enhanced operational efficiency, and improved procurement process transparency/accountability (Davila *et al.*, 2003; Trkman & McCormack, 2010; Matunga, Nyanamba, & Okibo, 2013).

However, the hesitation to adopt EPS by public hospital procurement practitioners stems from lack of availability of the facilities necessary for e-procurement system adoption (Matunga *et al.*, 2013). Most public

hospitals in Nigeria use the stand-alone computers that run few applications/packages such as the use of word processing and spread sheeting packages. There is the seeming difficulty in the use of new innovations by employees, unawareness of clear-cut anticipated benefits of the new innovations, among others (Min & Galle, 2003; Matunga *et al*, 2013).

Diffusion of Innovations Theory (DIT) is an adoption model for understanding and examining the rate of adoption of novel innovations, such as the electronic procurement system (Dibra, 2015). The theory clarifies “the process by which an innovation is communicated through certain channels over time among members of a social system” (Rogers, 2003:5). According to Rogers, the characteristics of process of innovation assist to clarify different influencing attributes that will necessitate the adoption of innovation in an organization. Against this backdrop, knowledge of the factors affecting e-procurement system and its rate of adoption in the federal public hospitals in Edo State of Nigeria becomes critical. Hence, the study examined the perception of electronic procurement system and rate of adoption in the federal public hospitals in Edo State of Nigeria premised on Rogers’ diffusion of innovations theory. Also studied were the difficulties and benefits of the e-procurement system adoption in the federal public hospitals in Edo State of Nigeria.

Statement of the Research Problem

The advent of the Internet has made e-businesses gain increased dominance and enhanced competitiveness in the global healthcare sector (Matunga *et al*, 2013). Despite the current trend towards e-procurement system practices as a cost-effective way in creating more values to customers/clients, when it comes to reaching suppliers and business allies in a way to gain market share and competitive advantage, many hospitals in Nigeria are still trailing behind in its adoption and implementation.

In recent times, there have been a number of criticisms on the mode of procurement process in the federal public hospitals in Nigeria. Complaints related to procurement practices in the federal public hospitals in Nigeria stem from poor handling of procurement information about the procurement process thus leading to excessive corruption, delay in timely supply of materials, unnecessary

exploitation of clients/contractors through unsolicited gratifications, issues of poor tendering, delay in payment of suppliers due to the deferment in granting permissions for the supply of materials (Ojo & Gbadebo, 2014; Bodunrin, 2016). To this end, the use of traditional procurement system by the hospitals leads to slow service delivery.

Furthermore, as the common experiences in Nigeria suggest most federal public hospitals do not have the facilities and capacities for carrying out trusted and secured EPS. These hospitals are hindered by poor network service, which at times, is occasioned by the incompetence of the technical team, lack of accountability and openness in the process of procurement for goods (Ojo & Gbadebo, 2014; Bodunrin, 2016). Thus, these challenges have seemingly and practically made it difficult for federal public hospitals in Nigeria to have appropriate technique in consulting, bidding, and contracting the supply of materials to contractors. The absence of an electronic procurement initiative in the federal public healthcare sector in Nigeria has led to poor efficiency in achieving the best deal of the supply contract in the healthcare service delivery and has thus caused low suppliers' satisfaction, and possibly threatened competitive advantage of federal public hospitals in Nigeria (Bodunrin, 2016). The increasing competitiveness in healthcare sector across the globe means that federal public hospitals in Nigeria need to brace up towards the maximization of productivity amongst others if they are to succeed.

A review of the outcome of studies that apply different theories on the adoption of innovations in the organizations and subsequent criticisms have turned out been inconclusive. This is due to the fact that the research results have been unpersuasive, inconsistent, and branded with insufficient explanations (Robinson, 2009; Dibra, 2015). In pursuit of a suitable model for the determination of explanatory attributes for the likelihood of the adoption of new innovations such as the use of EPS in the federal public hospitals in Nigeria, the Rogers' theory of diffusion of innovations offers the best explanation (Sahin, 2006; Dibra, 2015). Corroborating this fact, premised on the strengths and weaknesses associated with the different theoretical models analyzed in explaining the influencing factors for the implementation of new innovations, Robinson (2009:1) emphasized that "the theory of

Rogers has been tested through more than 6,000 research studies, which makes it very reliable".

However, there is a dearth of studies that have addressed the perception of e-procurement initiative and its rate of adoption in the federal public hospitals in Nigeria based on Rogers' diffusion of innovations approach. The implementation of electronic procurement initiative in the federal public hospitals in Nigeria nonetheless will be worthy and appropriate in view of its influence in other areas of the economy (Dibra, 2015). Against this background, a study on the EPS influencing factors on rate of its adoption, challenges faced in the course of acceptance of electronic procurement mechanism as well as an appraisal of the degree of benefits associated with the adoption of EPS in the federal public hospitals in Edo State of Nigeria is thus essential. The findings of the study will contribute to policy debate on e-procurement system for the Nigerian healthcare sector. Thus, this study draws motivation from the quest to add to knowledge in the space of technological adoption in the federal public healthcare sector in Nigeria.

Review of Literature

Minahan and Degan (2001) stated that electronic procurement system is the use of the Internet to perform procurement process. In the views of Wu, Zsidisin, and Ross (2007), the EPS is the use of automated system to facilitate supply of goods over the Internet. In other words, EPS entails purchasing and selling of products over the Internet between businesses. It is an electronic platform that enables organizations link directly with business allies and contractors to enable the process of procurement of materials. To this end, EPS is a business strategy by business enterprises to manage all business dealings, such as bids, inquiries and responses, and pricing for products and services. These business relations are related to the supply of materials for the organization. The purchases of products and services over the Internet involve a number of processes, which include searching, information, sourcing, selecting, settlement, negotiation, ordering, receipt, and after-sales/management of supplies, among others.

Matunga *et al* (2013) posited that electronic procurement system is quicker when it comes to sending documents as compared to the

brick-and-mortar form of transferring tender documents through post office. They emphasized that the use of EPS results in enhanced order tracking and tracing of documents because EPS ensures easier tracing of orders and making of necessary corrections in the event of errors been detected, reduction in time to source for materials, etcetera. Matunga *et al* (2013) are of the view that with these aforementioned benefits of EPS, developing countries seem to be lagging behind in embracing this innovation.

One of the well-known approaches to the explanation of the rate of adoption of innovations in the organization is the Rogers (2003) innovation-diffusion theory. Rogers (2003:221) stated that the rate of adoption of innovation is “the relative speed with which an innovation is adopted by members of a social system.” Rogers (2003:232) is of the view that the innovation-diffusion process is “an uncertainty reduction process” that affects the rate of adoption of innovations in the organizations. Thus, Rogers proposed five features of innovation diffusion that can influence rate of adoption of innovation in an organization: relative advantage, trialability, complexity, compatibility, and observability. He affirmed that “individuals’ perceptions of these characteristics are significant predictors of the rate of adoption of innovations” (Rogers, 2003:219).

Perceived Relative Advantage of E-procurement System Innovation and Rate of Adoption

Rogers (2003:229) defined relative advantage of an innovation as “the extent to which a particular group of users perceive innovation as better than the idea, or practice it replaces.” Rogers stated that the higher the seeming relative advantages of innovations by business enterprise, the quicker the degree of its adoption. Dibra (2015) posited that the extent of the comparative advantage of an innovation can be determined according to economic, social status, ease, and desire of using the innovations. In the same vein, Beatty, Shim, and Jones (2001:339) affirmed that “an organization will only adopt an innovation if it will resolve existing problems or provide new business opportunities”. They added that the relative advantage of adopting an innovation results in improvement in business performance, such as reduction in transaction costs, enhanced cash flow, improved customer services, and enhanced operational efficiency of the firm.

Nevertheless, Robinson (2009:2) pointed out that "there is no absolute rule as to who is included in the relative advantage of the use of an innovation. It depends on individual perceptions and the needs of the user group." The value of the operational efficiency of innovations should be clearly defined and stated in order for management and staff of the business enterprise to use the technology.

Hypothesis one: the relative advantage of electronic procurement system has a positive significant relationship with the rate of adoption in the federal public hospitals in Edo State of Nigeria.

Perceived Compatibility of E-procurement System Innovation and Rate of Adoption

In the views of Rogers (2003:15), "compatibility of an innovation is the degree to which innovation is perceived as consistent with existing values, past experiences, and needs of potential adopters." Rogers further stated that innovations that are not in harmony with the social configuration, ideals, personal life, and standards of the practices of the employees will not be adopted as fast as expected. In the same vein, Beatty *et al* (2001:340) emphasized that "business enterprises are more likely to adopt a new innovation if it is compatible or consistent with their value system, existing infrastructure, business processes, and culture". It is worthy to note that each innovation adopted in the organization has the likelihood to influence employees' views about its operational efficiency. Thus, if an innovation is compatible with employees' desires, doubt about the workability of the innovation will decline and the rate of its adoption will increase. For Rogers (2003), compatibility of innovation with employee needs will positively affect the individual's rate of adoption.

Hypothesis two: compatibility of electronic procurement system has a positive significant relationship with the rate of adoption in the federal public hospitals in Edo State of Nigeria.

Perceived Complexity of E-procurement System Innovation and Rate of Adoption

Rogers (2003:15) defined complexity of an innovation as "the degree to which innovation is perceived as relatively difficult to understand and use." In other words, if employees of business enterprises feel that innovation is simpler to understand and they do not have to undergo

new skills in order to use the innovation, it is likely to be adopted faster. Hence, if an employee of the business enterprise possesses a reasonable skills, knowledge, and expertise the lesser the complexity of the innovation. Rogers (2003) is of the view that when innovations are complex to understand and use, the employees of the organizations will have to develop new skills.

Hypothesis three: complexity of electronic procurement system has a positive significant relationship with the rate of adoption in the federal public hospitals in Edo State of Nigeria.

Perceived Trialability of E-procurement System Innovation and Rate of Adoption

In the views of Rogers (2003:16), “trialability of an innovation is the extent to which innovation can be proved on limited evidence before it can really convince most potential adopters”. To this end, it refers to the rate in which innovation can be tried or verified on a partial basis. Dibra (2015) argued that if innovation cannot be verified, it has less likelihood of acceptance by the adopters. Innovations that can be verified signify less doubt to employees of the organization who will consider it for adoption. Rogers (2003:177) maintained that “if an innovation has a partial trial basis, it is usually adopted more quickly, since most individuals first want to try the innovation in their own situation and then come to an adoption decision.”

Hypothesis four: trialability of electronic procurement system has a positive significant relationship with the rate of adoption in the federal public hospitals in Edo State of Nigeria.

Perceived Observability of E-procurement System Innovation and Rate of Adoption

Rogers (2003:16) affirmed that observability of innovation is “the degree to which the results of an innovation are more visible than others.” Innovation observability is the distinctiveness of the results of innovation been more noticeable than other related innovations. Thus, if the outcomes of an innovation are easier to be observed by the employees of the organization, the more likely will the innovation be adopted. According to Rogers (2003:15), “this helps potential

adopters to know how valuable the innovation is beforehand due to observable results by early adopters of such innovation.” Dibra (2015) posited that such an innovative distinction can encourage discussions with other employees who often depend on assessment information about the innovation. Rogers argued that innovations that offer more visibility will be adopted sooner than other innovations.

Hypothesis five: observability of electronic procurement system has a positive significant relationship with the rate of adoption in the federal public hospitals in Edo State of Nigeria.

Empirical Review

Vaidya, Sajeev, and Callender (2006) examined factors that can affect the success of e-procurement system implementation in the public sector. Significant variables of critical success factors were identified in the study. Management factors were revealed in the study as the most significant factors for successful e-procurement system. It recommended that if managements of the public sector organizations are to assist in the advancement of e-procurement in organizations, a wider discussion and agreement on what defines the pertinent e-procurement system critical success factors in the organizations should be made as a policy.

Matunga *et al* (2013) assessed the extent to which electronic procurement system influences efficient procurement in public hospitals in Kisii, Kenya. The study used a sample of five hospitals. The study made use of e-quotations, e-tendering, and e-sourcing as the major EPS variables. It was established that the utmost difficulties confronted when using EPS was lack of capital, inability to manage change programs, and inadequate training of staff on the use of new innovations. It established that public hospitals have implemented some of the e-procurement practices irrespective of the barriers that follow the implementation.

Dibra (2015) studied different theoretical models that can influence organizations to implement sustainable tourism practices, giving their strengths and weaknesses. The study revealed that workable tourism development is a requirement of time. It established that Rogers’ approach on diffusion of innovation is the suitable model in the examination of attributes that influence the implementation of sustainable tourism practices. It recommended that stakeholders

associated with tourism should be concerted in ensuring sustainable tourism development.

Methodology

The study examined the perception of electronic procurement system and rate of adoption in the federal public hospitals in Edo State of Nigeria based on Rogers' diffusion of innovations approach. The survey research design was adopted for the study. Primary data was used and data collected through field survey with the help of questionnaire. The data were obtained between May, 2020 and August, 2020.

The study population of interest was all the management staff of the procurement department of the respective federal public hospitals in Edo State of Nigeria. The sample of the study comprised all the three (3) procurement management staff of University of Benin Teaching Hospital, Benin City, Federal Neuro-Psychiatric Hospital, Uselu, and Irrua Specialist Teaching Hospital, Irrua, all in Edo State of Nigeria. The management staff was involved because they make policy decisions pertaining to procurement and demands for supplies for the hospitals. Due to their knowledge and experiences, they are assumed to be conversant with the management of the hospitals' operations and procurement procedures, and therefore, can easily provide the needed information for the study. The estimated number of the management staff of the procurement departments of the respective federal public hospitals that form the target population for the study was forty-five (45) as at August, 2020. Due to the smallness in size of the population, the study made use of the forty-five (45) respondents as the sample size.

The questionnaire used for the study comprised of two main segments. The first section is the general profile of the respondents and the other section consists of specific statements patterned to measure the management staff's knowledge, expertise, and involvement in line with the management of the hospitals' procurement operations. The questionnaire's data items were measured using five points Likert scales: 5=strongly agree, 4=agree, 3=undecided, 2=disagree, and 1=strongly disagree. Descriptive and

inferential statistics were used to analyze the collected data. The data were tested at five (5) per cent level of significance using the Ordinary Least Squares estimation technique.

Validity and Reliability of Research Instrument

To ensure validity of the questionnaire designed, copies of the questionnaire were given to senior colleagues in the research area to critically examine the applicability of the questions. A pilot study was performed by testing and pre-testing the research instrument with a copy given to twenty (20) selected respondents among management staff of the different federal public hospitals in Edo State of Nigeria. Feedbacks were revised and questions were then harmonized. The final form of the research instrument comprised of twenty-four (24) closed ended questions for the inferential statistics.

To test the questionnaire for reliability, the researchers used Cronbach's alpha coefficient test as an analytical measure to ascertain the internal consistency of the items. The outcome of the reliability test is presented in Table 1. The Cronbach's alpha value for each construct as shown in the Table 1 is above 0.6. This implies that the research instrument is reliable and can be depended upon to elicit the needed information from the respondents (Nunnally & Bernstein, 1994).

Table 1: Cronbach Alpha Values

Variables	Number of Items	Cronbach Alpha
Relative advantage of electronic procurement system	4	0.7017
Compatibility of electronic procurement system	4	0.7812
Complexity of electronic procurement system	4	0.7565
Obsevability of electronic procurement system	4	0.7934
Trialability of electronic procurement system	4	0.7817
Rate of Adoption	4	0.7196

Source: Field survey analysis, 2020

Theoretical Framework and Model Specification

The study’s theoretical framework is premised on the Rogers’ Diffusion of Innovations Theory (DIT). DIT is an explanation to the process of business enterprise members’ adoption of a new technology. Rogers (2003:5) described innovation “as an idea, practice, or object that is perceived as new by potential adopters and which is considered as desirable to adopt.” For Rogers, “an innovation is an instrumental action that is designed to reduce the uncertainty in the cause-effect relationships involved in achieving a desired outcome” (Rogers, 2003:13). The theory is very appropriate in investigating the adoption of innovation as it postulates and describes the stages, process, and rate new innovations spread through cultures that operate at the personal and organizational level. In the views of Rogers (2003), innovation, communication channels, time factor, and adoption among members within a social system are the primary mechanisms of the diffusion of innovations. These components assist in understanding the process of idea, practice, or object dissemination pertaining to innovations. Thus, the model for this study was developed based on the Rogers’ diffusion of innovations theoretical framework, which is expressed as rate of adoption is a function of relative advantage, trialability, observability, complexity, and compatibility of electronic procurement system. It was therefore stated functionally as:

$$RAD = f (RAE, COE, CME, OBE, TRE) \dots\dots\dots (1)$$

Therefore,

$$RAD = \alpha_0 + \alpha_1RAE + \alpha_2COE + \alpha_3CME + \alpha_4OBE + \alpha_5TRE + \varepsilon \dots\dots\dots (2)$$

Where: RAD = rate of adoption; RAE = relative advantage; COE = compatibility; CME = complexity; OBE = observability; and TRE = trialability of electronic procurement system. $\alpha_1, \alpha_2, \alpha_3, \alpha_4,$ and α_5 = coefficients of the independent variables; α_0 = constant term; and ε = error term.

Our apriori expectations were stated as:

$$\alpha_1 > 0, \alpha_2 > 0, \alpha_3 > 0, \alpha_4 > 0, \text{ and } \alpha_5 > 0 \dots\dots\dots(3)$$

Findings and Discussion

There are varying degrees of modalities to be put in place before the federal public hospitals in Edo State of Nigeria can adopt the EPS. Some of these modalities pose threats to the EPS adoption. In Table 2, the greatest challenge faced by the federal public hospitals and management staff according to the respondents in the EPS adoption was lack of EPS infrastructure due to inadequate funding. This factor was rated at mean value of 3.25. Most of the federal public hospitals are without the appropriate equipment and expertise to carry out EPS practices. This finding was supported by the research work of Matunga *et al* (2013) that the absence of innovative integration, technical issues with information technology, among others are the major difficulties confronted by many organizations in the course of e-procurement system implementation.

Table 2. *Degrees of Difficulties Faced by the Federal Public Hospitals in the Adoption of EPS.*

Statements	Mean
Management lacks vision of how to integrate e-procurement system in the hospital	1.59
There is lack of e-procurement system infrastructure due to inadequate funding.	3.25
The hospital lacks the ability to handle change management.	1.52
There is slow pace to the training of employees on how to use new innovations.	2.42
There is lack of suppliers' readiness to implement joint e-procurement system solutions with the hospital.	3.01
The hospital is uncertain as to the legality of electronically sent documents.	3.07
Management lacks adequate knowledge/technical expertise to operate the electronic procurement system.	3.15
There is lack of security of e-procurement transactions.	3.11
There is slow pace to uploading and downloading of data due to network problem.	2.27
There is lack of confidentiality of information sent through the e-procurement system	1.41

Source: Field survey analysis, 2020

Other noticeable difficulties faced by the federal public hospitals in EPS adoption were lack of adequate knowledge and technical expertise to operate the e-procurement system, lack of security of e-procurement transactions, uncertainty as to the legality of electronically sent documents, and lack of suppliers' readiness to implement joint e-procurement system solutions with the federal public hospitals. Possibly, the engagement of suppliers in the e-procurement system process may not be easily given the degree of their investment in different technological platforms, and complicity as a result of the use of digital languages. Based on the five-point Likert scale, these factors were rated at mean values of 3.15, 3.11, 3.07, and 3.01 respectively. This implies that staffs believe that these factors are of great concern to be surmounted before the EPS adoption in the hospitals can see the light of the day. Other less important challenges to the e-procurement system adoption identified by the respondents are the slow pace by the hospitals' management to the training of employees on how to use new innovations and slow pace to uploading and downloading of data due to network problem, as seen from the rating factors at 2.42 and 2.27 respectively based on five points Likert scale. The findings in this study are in line with the work of Matunga *et al* (2013) that the utmost difficulties confronted by public hospitals in Kenya in the course of e-procurement system adoption were inadequate funding and absence of training and development of staff on the use of innovative technology. They are of the view that some business enterprises consider the implementation of electronic procurement system as too expensive as well as the cost of training employees.

However, in the respondents' view, confidentiality of information sent through the e-procurement electronic platform, ability to take care of change management programs, and vision of how to integrate e-procurement practices in the hospitals, were of less possibility of posing challenges in the adoption of e-procurement system since these factors were rated at 1.41, 1.52, and 1.59 respectively on five points Likert scale. The finding in this study is inconsistent with the work of Davila *et al* (2003). Davila *et al* (2003) posited that resistance to change, absence of a generally accepted applications and leadership, are some of the utmost challenges to EPS adoption in the

organizations. It was revealed in this study that the ability to handle change management programs was not a barrier to electronic procurement system adoption by federal public hospitals in Edo State of Nigeria. The hospitals have instituted cultural change prior to the acceptance of new innovations. The staffs were guaranteed of top management backing in order to effect any change. Senior management has ensured sufficient sensitization on the introduction of e-procurement system, which they believe will significantly lessen the resistance to the change. Also, confidentiality of the information sent through e-procurement system did not pose challenge to the federal public hospitals in Edo State of Nigeria in terms of e-procurement system adoption. This is opposing to the findings of Matunga *et al* (2013) that there was lack of confidentiality of the information sent by the hospitals.

Table 3: Degrees to Benefits of EPS Adoption.

Statements	Mean
E-procurement system reduces wastage of time used in sourcing information.	4.22
E-procurement system reduces mistakes that emanate from retyping and exchange of documents.	4.37
E-procurement system results in lower administration costs.	3.64
E-procurement system increases security of procurement transactions	4.19
E-procurement system increases accountability of business transactions.	4.12
E-procurement system increases efficiency of business operations.	4.08
E-procurement system speeds the process of selection of the right suppliers.	3.81
E-procurement system increases transparency of availability of information for goods and services.	4.26

Source: Field survey analysis, 2020

Table 3 shows that respondents indicated that e-procurement system results in reduction in mistakes that emanate from retyping and exchanging of documents, increased transparency of availability of

information for goods and services, reduction in wastage of time used in sourcing information, increase in security of procurement transactions, increased accountability of business transactions, and increased efficiency of business operations. These are the major advantages of the adoption of EPS by respondents. These advantages were rated on a mean score of 4.37, 4.26, 4.22, 4.19, 4.12, and 4.08 on five points Likert scale respectively. Also, on high scales in terms of advantages of e-procurement system over the traditional system were the speedy process of selection of the right suppliers and lower administration costs resulting from the use of electronic procurement system, which were rated on a mean score of 3.81 and 3.64, on five points Likert scale respectively.

This study is supported by works of Egbu, Vines and Tookey (2003), and Matunga *et al* (2013). Egbu *et al* (2003) asserted that the use of EPS reduces wastage of time in procurement process and mistakes that emanate from retyping and exchange of documents. Matunga *et al* (2013) stated that absence of accountability, transparency, improved operational efficiency, reduction in time spent in sourcing for information, and reduced costs of administration are the main traditional procurement issues, which can be taken care of by electronic procurement system adoption.

Table 4: Pearson’s Correlation Coefficient for all Variables

Variables	Mean	Standard Deviation	RAD	RAE	COE	CME	OBE	TRE
RAD	4.4117	0.7294	1.0000					
RAE	4.4323	0.5945	0.5157	1.0000				
COE	4.1548	0.4301	0.3336	0.1339	1.0000			
CME	2.2969	0.1935	-0.6284	-0.3445	-0.5152	1.0000		
OBE	3.4884	0.2285	0.2532	0.6941	0.3823	0.5317	1.0000	
TRE	3.7775	0.3167	0.1928	0.5018	0.4415	0.6452	0.3371	1.0000

Source: Field survey analysis, 2020

In Table 4, the values of correlation statistics were all positive except the value of complexity. This indicates that the exogenous variables with the exception of complexity variable move in the same way as

rate of adoption of EPS in the healthcare sector of Nigeria. It shows that the electronic procurement system rate of adoption is significantly and positively correlated with the independent variables at five per cent degree of significance with the exception of complexity variable. It was also observed that the exogenous variables in relation to rate of adoption of e-procurement system did not display multicollinearity since the variables do not have correlation values in excess of 0.90 (Dwivedi, 2008).

The means of the five characteristics of e-procurement system adoption based on Rogers' diffusion of innovations approach: relative advantage, observability, complexity, compatibility, and trialability of the innovation are shown in Table 4. The Table reveals that management staff of Federal public hospitals in Edo State of Nigeria emphasized more on relative advantage of the use of the technology as it affects rate of its adoption (mean = 4.4323). The least emphasis was on complexity of the use of the technology as it affects rate of its adoption (mean = 2.2969). This indicates that respondents are of the view that innovations that are difficult and non-user-friendly in design should be disregarded. Thus, simpler innovations in terms of its understanding will be quicker to adopt by the employees of these organizations. The mean score value for the five characteristics of e-procurement system adoption was equal to 3.6299. Based on the fact that the measure used a five-points Likert scale, it can be inferred that Federal public hospitals in Nigeria is highly committed to the adoption of e-procurement system attributes premised on Rogers' diffusion of innovations theory approach above the average value of the mean. The mean of the rate of adoption in federal public healthcare industry is also shown in Table 4. The Table reveals that federal public healthcare industry has a high rate of adoption of e-procurement system with a mean of 4.4117. Been that the measure used a five-points Likert scale, it can be decided that federal public healthcare industry in Edo State of Nigeria has a high rate of adoption of e-procurement system above the mean value of 3.

Table 5: Regression Analysis based on OLS Estimation Technique

Variable	Coefficien t	Standard Error	t- Statistics	P-value	Hypotheses
RAD	14.2398	6.1309	2.3225	0.0000	Significant
RAE	9.0941	3.4692	2.6214	0.0000	Significant

Employee Perceptions of the Electronic Procurement System (EPS) and Rate of Adoption of EPS by the Federal Public Hospitals in Edo State of Nigeria Based on the Diffusion of Innovations Theory

COE	8.9372	3.5968	2.4846	0.0000	Significant
CME	-2.3427	0.9801	-2.3903	0.0005	Significant
OBE	4.6372	1.9321	2.4001	0.0002	Significant
TRE	7.6389	3.1811	2.4012	0.0001	Significant
R ² = 0.8817, Adjusted R ² = 0.8452, F- Stat (Prob.) = 34.0051[0.0000], Durbin Watson = 1.9186					

Source: Field survey analysis, 2020

The estimated multiple regression model results are depicted in Table 5. The R-squared value of 0.8817 shows that relative advantage, compatibility, complexity, observability, and trialability of the innovation, jointly explain 88.17 per cent of the systematic variations in the rate of adoption of electronic procurement system in the federal public hospitals sector of Edo State of Nigeria. This indicates that only 11.83 per cent is accounted for by other exogenous variables, which were not captured in the study. The R-Bar squared value of 84.52 per cent, which is reasonably high, further supported the result of the R-squared value. This implies a goodness of fit for the model.

The F-Statistics of 34.0051 with probability score of 0.0000 shows that there was a simultaneous linear association between the dependent variable and the exogenous variables joined together. This indicates that the combined effects of the identified exogenous variables in the model were substantial in explaining the rate of adoption of e-procurement system in the Federal public hospitals sector of Edo State of Nigeria. The Durbin Watson statistic value of 1.9186 is sufficiently close to 2. This implies that the outcomes of this study are very sound for policy adoption of e-procurement in the federal public hospitals in Edo State.

From Table 5, the result of the research also showed that all the factors significantly and positively influenced Federal public hospital management and staff members' likelihood of adopting e-procurement system into their mode of operations except the complexity of technological innovation which has a significant but negative impact on the rate of adoption of electronic procurement system in the federal public hospitals. When we equate the independent variables calculated t-values of 2.6214, 2.4846, 2.4001, and 2.4012,

respectively with the t-table value of 2.39 at five (5) percent level, indicate that a unit increase in RAE, COE, OBE, and TRE will result in an increase in RAD of Federal public hospitals, Edo State of Nigeria by 9.0941, 8.9372, 4.6372, and 7.6389 units respectively. In the same vein, comparing the independent variable of the calculated t-value of -2.3903 with the t-table value of 2.39 at five percent level, shows that a unit increase in CME will result in a decrease in RAD of Federal public hospitals, Edo State of Nigeria by 2.3427. This is in line with Rogers (2003) that complexity has a negative correlation with the rate of adoption of innovation. Thus, unnecessary difficulty in the use of an innovation is a vital challenge to the adoption of such technology. This is as a result of several technicalities that are usually involved in designing the technology. Hence, management and staff members with the challenge of integrating the electronic procurement system innovation into their mode of operations are encouraged to be trained in the art of Information and Communication (ICT) and related tools.

Furthermore, considering the strength to which the exogenous variables affect the dependent variable in Table 5, the coefficient results showed that relative advantage in the use of e-procurement system has the most significant effect on management staff of the hospitals' rate of adoption of e-procurement system ($\alpha_1=9.0941$, $p<0.05$), and complexity of the e-procurement system has the least significant effect on management staff of the hospitals' rate of adoption of electronic procurement system ($\beta_3=2.3427$, $p<0.05$). Hence, relative advantage of the use of EPS is the most significant predictor of the rate of adoption of e-procurement system by management staff of Federal public hospitals in Edo State of Nigeria. Indeed, the perception of relative advantage of the use of EPS adoption by management staff of federal public hospitals in Edo State of Nigeria as having greater value in improving the operational efficiency than the traditional procurement system has a greater chance in the rate of adoption of the electronic procurement system.

Conclusions

The study assessed the perception of EPS and rate of adoption in the federal public hospitals in Edo State of Nigeria based on Rogers' diffusion of innovations approach consisting of: relative advantage, complexity, compatibility, observability, and trialability. After a deep analyses and evaluation of the challenges and advantages of the

adoption of the EPS, lack of the EPS infrastructure due to inadequate funding and inadequate knowledge and technical expertise to operate the EPS were the greatest challenges faced by the hospitals and management staff of the federal public hospitals in Edo State of Nigeria. The advantages of the adoption of the EPS, according to this study are: reduction in errors emanating from retyping and exchange of documents, increased transparency of availability of information for goods and services, and increased efficiency of business operations. Rogers' diffusion of innovations approach on the viewpoints of organizations to accept innovations, the study concluded that relative advantage of e-procurement system was the more appropriate factor of the features of innovations that influenced the rate of federal public hospitals in Edo State of Nigeria's adoption of innovations.

Thus, the study contributed to the EPS adoption literature as a way to examine the effect of each dimension of characteristics of process innovations on rate of adoption in the federal public hospitals in Edo State of Nigeria. Second, it used Rogers' diffusion of innovations approach to analyze the relationship between the EPS and rate of adoption. It pointed out the importance of determining the characteristics of process innovations that should be highly embraced in enhancing the rate of adoption of the EPS in organizations. The study showed that a number of successes have been adduced to the adoption of the e-procurement system. With the swift changes to the adoption of the EPS by organizations, it is critical for federal public hospitals in Edo State of Nigeria to "move along with time" by changing their business strategy in order to remain relevant and competitive in this modern time.

In order to reap the full benefits of EPS by the federal public hospitals in Edo State of Nigeria, the following recommendations are proposed based on the findings of the study:

i). federal public hospitals in Edo State of Nigeria should brace up effort in the adoption and use of e-procurement innovation. The swift policy strategy in the adoption of EPS is critical for them to move with the trend of time not only to remain successful but also to sustain competition.

- ii). there should be simplicity in the design of new innovations. Simpler the innovation, quicker the adoption by the employees of the organizations.
- iii) innovations should be demonstrable. Innovations that are easily verifiable represent more of certainty by the employees who will accept it for adoption. The more an innovation is experimented in the course of proving the workability, the sooner its adoption since employees could learn during the process of trialability.
- iv). government should promulgate necessary policies/laws that will boost stakeholders (suppliers, clients, among others) confidence towards certainty that electronically sent documents and business transactions of EPS is recognized as valid and legal by a third party.
- v). management of the hospitals' procurement departments should deploy the necessary ICT infrastructure, trained personnel with requisite expertise, digital skills, and knowledge. These are very pertinent to the successful and smooth adoption of an electronic procurement system.
- vi). the necessary change management should be deployed to change the psyche of the old staffs that have not braced up with the advancement in innovative technology and e-procurement initiative. They form the majority of those against change management programs with the belief that there is difficulty in keeping pace with something new from the training they already have.
- vii). due to the several technicalities involved in managing new innovations, e-procurement system innovations that are user-friendly should be adopted.
- viii). on the issue of suppliers not being ready to use new innovation, management should build good business synergy with suppliers on the need to key into the trend of e-procurement system.
- ix). to enable smooth business transactions with suppliers, management should ensure that the right consultants be made to design the e-procurement system with the appropriate security aperture put in place to avoid hacking into the organizational database.

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Open University Research Sessions 2020 - Keynote Speech

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Academia and Medical Education in A Post-COVID-19 World

Abstract

The COVID-19 pandemic will become an important event of our lives, due to the change and disruption it will bring through both direct and indirect ways and the resultant responses and adaptations we make. These will also invariably impact education, including higher education in general and medical education in particular. In this keynote address, I will make an attempt to explore the uncertainties, venture to make predictions and propose actions in relation to higher education in Sri Lanka, in order to find ways to face the situation successfully.

Keywords

COVID-19, higher education, medical education

Introduction

I have been entrusted with the task of ‘imagining’ how the COVID-19 pandemic would affect our universities, especially medical education. I could try to bear on this task two different perspectives in which I am trained, namely Medicine and Sociology, and a third perspective that I have acquired through work experience, namely the academia. I will focus on the changed world that we will inhabit after the pandemic is over, hence the term ‘post-covid’. My imaginings will consist of exploring uncertainties, making predictions, and suggesting responses. But first, to show how daunting a task such an imagining can be, let me start by relating to you a story.

We have all heard of Karl Marx, one of the founding-fathers of Sociology and one of the greatest social scientists of all time. But he is far more widely known for his role in socialism, or his own brand of it that we call Marxism. In the 1850s, Marx studied the enormous wealth of information on British economic history that was archived in the British Museum in London. He was attempting to do for the social sciences what Physics and Chemistry were doing at that time for the natural sciences, viz., predict social phenomena. He predicted important and interesting phenomena such as the pauperisation of the proletariat, alienation of the working class, class struggle, and communist revolution.

But all these elegant and well-reasoned speculations of a genius came to nothing – because of one scientific discovery and its resulting invention. The discovery was Michael Faraday’s demonstration in the 1820s that electrical energy can be converted to motive energy by using a magnet, and the resulting invention was the electric motor.

Quite unknown to Marx, all his predictions were predicated on the unconscious assumption that the steam engine will always drive factories – an assumption that was fair enough at that time, because steam power was still fairly new and completely changing manufacturing technology and factory organisation. The electric motor was still only a physicist’s work-in-progress and was yet to show its full utility to the world. In other words, Marxism in retrospect can be called a product of the age of the steam engine, and the electric motor quickly and completely displaced both. As a result, today, Marx’s *Communist Manifesto*, which he co-wrote with his benefactor Friedrich Engels, is only a self-fulfilling prophecy – not a scientific theory (Marek, 1983; Marek, 1986).

So, I might ask: if the predictions of a great social scientist like Karl Marx could be brought to nothing by one scientific discovery and invention – albeit, of course, one by a great physicist – then what of my puny conjectures?

But the Indian spiritual leader Jiddu Krishnamurti has said that “One is never afraid of the unknown; one is afraid of the known coming to an end”. So, I will try to imagine our future, knowing that it too would be proven wrong, but unafraid nevertheless. I shall do this in the spirit that venturing into the unknown is one of the most important societal roles of an academic.

The Biological Realm

Let me start from the biological realm, because this is part of what anthropologists call ‘objective reality’. It is useless to try to deny this part of reality. If we are wise, all we should try to do is understand it and use it well. Whether or not we do that will determine whether our response will become an ‘adaptation’ or a ‘maladaptation’. Of course, that might sound like a banality. But we should be really surprised – indeed, worried – how much we have been overlooking this objective reality and embracing instead what is called ‘conceptual reality’.

A human being’s progression from being completely out of danger to being dead from the virus has a step-wise sequence. Thus, people don’t drop dead from COVID-19 in the middle of the road or inside phone booths, like what was shown in some social media video clips that were circulating at the very beginning of the outbreak. First, they must undergo exposure, which *may* result in infection, which then *may* produce symptomatic disease, which then *may* lead to severe disease, which then *may* result in death.¹ We don’t all invariably progress along this line. For instance, the proportion of infected people who die (infection fatality rate) is probably around 0.6% if we take the world average (Verity et al, 2020).²

But there is one thing that can make matters much worse. Let us say that we took no precautions at all and allowed the virus to spread freely in a community. Then, it will spread very rapidly. Case numbers will increase *exponentially*, and the whole community will be affected within a short period of time. That will lead to ‘saturation’

¹ *Exposure* can be described as an event which puts a human being at risk of acquiring the virus, which depends on *the natural reservoir* of the virus and its *modes of transmission*. *Infection* can be described as the entry and establishment of the virus in the new human host, which leads to an interaction between the virus and the host’s immune system. *Disease* is the occurrence of symptoms in the host. Some persons are minimally symptomatic or ‘oligosymptomatic’ (and might never have come in contact with the healthcare system if not for the intense contact-tracing that is currently happening with this pandemic). Others do, and some of these can have *severe disease*, requiring various treatments such as respiratory support. Both infected (asymptomatic) and diseased (symptomatic) persons can transmit the virus to others.

² The *case fatality rate* is the proportion of patients with symptoms or who are admitted to hospital who die. This rate has been used widely in studying infectious disease epidemics in the past. But with the COVID-19 pandemic, it has become somewhat less useful than infection fatality rate, because of the zealous detection of minimally-symptomatic patients (see Footnote 1) and the hospitalisation of asymptomatic and minimally-symptomatic patients as a measure to control spread of infection.

of its healthcare services, overwhelming them, leading to a rise in the infection fatality rate.

This is what happened in some parts of Italy, UK and USA – in Jared Diamond’s language, we could call that ‘a natural experiment’ (Diamond and Robinson, 2010). The consequences were, of course, disastrous. Intensive care facilities became woefully inadequate, and many patients who might have been saved with intensive treatment could not be saved, and the infection fatality rate rose much higher. Frontline healthcare workers were infected and many died, leading to weakening, even collapse, of the healthcare system.³

So, from the biological point of view, we have three options. *Option One*: we can let the virus spread freely and have mass graves, crematoria working 24/7, and a sizeable proportion of the population dying within a few months. In such circumstances of high transmission, the virus can also mutate to become either more virulent or less virulent. And of course, if it becomes more virulent, death can be even more commonplace. Such predictions are part of what is known as Theoretical Biology (Day et al, 2020), and I won’t venture into that, because my understanding of it is far too rudimentary.

Option Two: we can learn to live with the virus. This requires social distancing, personal health practices and etiquettes, occasional regional lockdowns and restarts, and so on – efforts to ‘flatten the curve’ (Kenyon, 2020). This modified way of life has been called ‘the new normal’, and it will have to last until ‘herd immunity’⁴ is achieved, which in the natural course of events will take several years according to current estimates, or could be achieved faster if we had an effective vaccine.

There is a less-appreciated and less-attempted *Option Three*, called ‘crushing the curve’. Vietnam is an example of a country that has attempted that, and that includes very drastic measures to trace infected persons and confine them. The argument against that is not medical, but social.

³ Frontline healthcare workers include not only doctors, nurses and semi-skilled workers in hospital wards and clinics, but also field-workers like public health inspectors, public health midwives, medical officers of health and regional epidemiologists, all of whom clearly did a marvellous job during our first wave in Sri Lanka.

⁴ Herd immunity is defined as “a level of population immunity at which disease spreading will decline or stop even after all preventive measures have been relaxed” (Britton et al, 2020). This ‘level’ is thought to be around 60% for COVID-19, although Britton et al (2020) consider it to be lower and around 40%.

We might be able to revert to ‘the old normal’ thereafter. This is probably what happened after the 1918-19 influenza pandemic or the so-called Spanish Flu. They had had to adopt virtually all the measures that we have been advised to adopt, but after a few years it has been possible to discontinue them. That is why a century later, we ourselves find these measures very strange and difficult to get used to. Then again, it is also possible that the virus may mutate into a new strain that our immune system cannot recognise, so that we all become non-immune once again – and the cycle would then have to be repeated, and the story may never end. Time alone can answer these questions.

Today we all know that ‘going for herd immunity’ – as the UK did – is a bad idea, indeed an unethical policy. But when it first came out there, it wasn’t just fanciful thinking. It was based on elegant mathematical modelling done by the world’s best and most experienced experts in the subject, with a proven track record, using real-life, reliable data from countries such as China (Anderson et al, 2020). But what these data didn’t reveal was how fast the virus can spread in the community if it is allowed to spread freely or even with some amount of mitigation, and how an exponential rise in numbers can quickly saturate healthcare services even in a developed country. The reason why the early data didn’t reveal this was probably because the Chinese healthcare authorities handled the epidemic at the start so well that this aspect never materialised.

There is a lesson here for all of us. It shows what over-reliance on conceptual reality can lead to – mathematical modelling is in fact an elegant example of conceptual reality, and it should be used only with close and continuous reference to empirical findings, or objective reality.

The Sociological Realm

The social challenge

The ‘flattening the curve’ option may be based on biological knowhow, but it has to be carried out entirely based on sociological and anthropological knowhow. This is one aspect that has not received nearly as enough attention as it requires, both locally and globally.

We must not make social changes so severely as to harm our economy, because if we did that, we will next have to face another

calamity: namely, economic collapse. That might include loss of employment, contraction of the market, collapse of businesses, decrease in state revenue and welfare expenditure, collapse of healthcare and education, mass starvation, crime waves and so on. It could happen dramatically, or it could even happen insidiously. As an example, a few weeks ago, medical statisticians in the USA calculated that in the five months from March to July this year, there had been around 225,000 *excess* deaths in the USA (an increase of 20% over previous years), of which *only two-thirds* could be attributed to COVID-19 itself, “as an underlying or contributory cause” (Woolf et al, 2020). While we might think that the USA did badly as a society, one can hardly say that its economy collapsed! So, insidious effects can happen anywhere, right under everybody’s noses.

We also need input from social anthropology. For instance, we have seen how its lack in the planning can lead to stigmatisation – and even criminalisation – of ‘having COVID-19’. We should remember that the people who go into quarantine, especially when they do so on their own accord, are actually sacrificing their individual freedom for the benefit of the wider society. We must understand that the virus is well-adapted to spread in crowded conditions, and the most careful of us can become infected in a moment so trivial that it doesn’t even deserve to be called a mistake. The Japanese have simplified these conditions into the three C’s: crowded places, confined spaces, and close contact. We are all in this together: the non-infected and the infected, the lucky ones and the unlucky ones.

The medical profession in Sri Lanka still remembers the successful social marketing campaign that was carried out to de-stigmatise leprosy in the 1990s. I am sure you all remember the Sinhala teledrama *Ella Langa Walawwa*, which was the innovative curtain-raiser of the campaign. That was planned by a combined team of medical anthropologists, dermatologists, physicians, epidemiologists, and medical administrators, with the help of experts in communication.

What this means is that we need a multi-disciplinary effort among top-level think-tanks, including not only the natural sciences but also the social sciences. We need a completely open mind, lots of empirical data, careful planning, fine-tuned strategising, resolute implementating, close monitoring, constant reflecting, and periodic reviewing. There can be no place for professional oneupmanship, political manoeuvring, or corporate sector deal-games. The governors and the governed must have complete trust in each other. It is the ultimate test of collectivism.

Let me state our social challenge in a nutshell:

- a) We must do our best to keep the numbers below the saturation point of the healthcare services, and avoid an *epidemic catastrophe*.
- b) But we must also do our best to keep the economy running as normally as possible, and avoid an *economic catastrophe*.
- c) To avoid both catastrophes, we must carry out an unprecedented programme of *social re-design* with constant review and readjustment, and continue it for several years or until an effective vaccine becomes available.
- d) And, whatever we do, *global change* too is important. We will not be able to make our decisions entirely independently of what is going on out there.

Today's global society

So, let's start with the global society. Today, this new virus is wreaking havoc across human societies throughout the world. But this is not all directly through its disease-producing effect, or 'pathogenicity'. The lives of many more millions who are not even infected are affected than those who are actually ill. This is in sharp contrast to previous, devastating pandemics such as plague, smallpox, cholera, or the so-called Spanish Flu. This time around, the greater part of the havoc is socially-engineered rather than biologically-caused.

Global interactions and interrelations seem to be disentangling. National economies are disengaging from each other. The private sector has been exposed as a spoilt child, and the public service proven to be reliable and duty-conscious.

Political structures are changing, following the rediscovery of a role for government in our lives. But this rediscovery is associated with *more* dissatisfaction with democracy than before, and a yearning for strong-arm government with isolationism and nationalism. It appears as if anti-democracy cynicism is becoming institutionalised. But even with strong-arm government, there is widespread realisation that 'the top does not know best'.

Lifestyles are changing, and consumption patterns are changing so much that our atmosphere itself is clearing up and the rise in global temperatures has recorded decelerations. The Anthropocene itself is slowing down. Technology is modifying to adjust to the new virtue called remoteness, and the new necessity called social distancing.

In short, the virus may be as invisible as the magnetism that Faraday worked with – but the two are proving to be equally powerful in their effects at the societal level.

Tomorrow's global society

Does this mean that this is the end of globalization? Or capitalism? Not really. The important point is that the virus spreads with human travel, not with goods transportation. There are of course some well-known and well-publicised findings about how the virus was found in meat, fish and packings and so on. But I think these are very unusual and can easily be rectified by disinfection. It is much more important to control the human traveller, and therefore human travel will be what is curtailed in the future. The concept of travel bubbles is, no doubt, interesting. But even within these, the degree of travel cannot reach previous levels, because frequent resurgences of the disease and recurrent isolations and lockdowns will be the norm.

So globalization as far as goods, services and finances are concerned will not be affected; these can only be affected by the social changes themselves. The globalised mode of production will not go away, although there will be some challenges to keep production at the same level as before, because of both organisational challenges and reduced demand. In contrast, international human travel will have to be reduced drastically, at least for several years. And technology will step in to solve the problems created by these travel restrictions.

What *will* go away are perhaps market fundamentalism, global free trade, McDonaldization of society, and some of the hegemonic ideas and consumerist fashions that have come to dominate our way of life. That is not because of any primary change to globalization, but because *we* have been forced to change. The *push* will be there, but the *pull* will be less. We have been forced to rediscover our neighbourhoods, our citizenship, and mundane things like our local vegetable supply – epitomised by the humble turmeric powder.

As a result, the concept of 'glocalization' – which is the concurrent existence of both global and local perspectives in our social lives – may become more important now (Robertson, 1995). In fact, the concept of glocalization is almost as old as globalization itself, and was probably first enunciated by the same expert, viz., Roland Robertson. But it is only in the last decade or so that it has been gaining ascendancy, in response to the general indigenising backlash

against globalization. Now, with COVID-19, its time may have finally arrived.

As a result, the idea of the global citizen will recede somewhat. We might still have a *virtual* global citizen, like someone who lives in Sri Lanka and works online in Canada or USA. But overall, the discourse on the national social contract will re-emerge now.

The Post-Covid Academia

The place of education in society

Why is all this important to us? If COVID-19 affects our world in general so profoundly, it will naturally affect education and higher education too. As an example, if many of the jobs for the university-educated had depended on the efficient functioning of mammoth macroeconomic structures such as the global financial systems, stock markets, service industries, and industrial R&D, then they might decrease now. The place of education in society – not merely its volume but also its values – is set to be renegotiated.

Internationalization of higher education

This, as well as the restrictions to travel, will pose a huge challenge also to the idea of the internationalization of higher education – a US\$ 300 billion per year industry. Many prominent higher education destinations will try to keep this idea alive nevertheless, because it is their lifeblood. But they will have major problems. International higher education will now have to be much more Internet-based. For instance, recruitment drives, application-processing, selection and admission of students, classrooms, and assessments will all go more online. Students will be given a lot more freedom to pick, choose and change course units. Curricula will have to incorporate glocalization, which requires a lot of diversity. Perhaps even the concept of the academic year may go away, and students allowed to join a course not only from *wherever* they want, but even *whenever* they want in the calendar year.

It would be interesting to see how all this will affect the criteria for world university rankings. I wonder if the universities in those higher education destinations will now start saying that having international students or international faculty exchange programmes are less important for a good university!

The flip side is that local universities, such as our own state universities, will probably regain some of their respect and prominence in the new scheme of things. Indigenous knowledge may get a chance to re-emerge.

Worsening inequity in distribution and quality of technology

One thing that we in the state universities need to really start worrying about is a worsening of inequity. To the old inequity of money has been added a new one: the inequity of technology, which is now the new arbiter of access to education.

As we struggle to access, distribute and learn how to use technology, the inequity in its distribution will have a significant effect on education. Here, I can give you a local past experience to draw from: namely, the Kannangara reforms of 1945. What Dr. Kannangara really wanted to do was introduce English literacy to intellectually-gifted children irrespective of their socio-economic status – *swabhasha* itself was a strategy to provide fairness. So English literacy was the new ‘technology’ back then. And of course, it didn’t work, because that ‘technology’ remained inequitably distributed in favour of the urban, middle- and upper-class students. English literacy became known among rural poor students as the ‘*kaduwa*’ – the sword that was used to ‘decapitate’ the children of the masses. This was at least partly responsible for the 1971 JVP insurrection. Today, the educated Sri Lankan is no longer bilingual.

Today, most of our students log-in using smart phones rather than laptops, so our presentation slides appear to them matchbox-sized and our text ant-sized. At home they lack the privacy and quiet surroundings needed for a lesson. My guess is that, if online technology becomes the ‘new *kaduwa*’ in education, we may be sowing the seeds of the next youth insurrection.

The real challenge is, however, not merely ensuring fair *distribution* of online access, but ensuring fair distribution of the *quality* of the online educational experience. As Philip Altbach and Hans de Wit (2020) warn:

“Of course, effective online learning and teaching are possible, but it takes time and support. Making these changes quickly is a guarantee of low quality. And quality drops further when many students are lacking sufficient equipment at home, such as a poor internet connection or a lack of privacy, for example. So, let us not idealise the current shift to online!”

In short, this is a reminder that quality depends on what the student *perceives*, not how we *deliver* our lesson. But I am reminded that the Open University of Sri Lanka is the nation's premier university for distance learning, so I am afraid that my call for quality here must sound like taking coal to Newcastle.

Changes to the nature of education

Right now we are focused on how to use technology to overcome the requirements for social distancing and travel restrictions. But in doing so, we may be missing the woods for the trees.

What about the *nature* of this new type of interaction? If education is thought of merely as the acquisition of facts, then it may be fine. But if we think of it as a transformative experience, then the quality of the interaction and what effect it produces on the student's personality should be considered more important than our current concerns.

By distancing the student from the teacher, the novice from the expert, or the apprentice from the mentor, what will happen to education? If the teacher – living, breathing, responding and innovating in front of the student – is replaced by a digital interface, recorded session or video clip, is it still education? Is the purpose of education certification, or is it illumination?

That is not all. These technologies put a distance between not only student and teacher, but also between fellow-students. What effect will that have? How important is interacting with others, for one's personal growth? How important are inter-personal skills, for one's future work? What effect will that have on the future professional, who must not only give a technical solution to a client's problem, but also understand the client as a whole person with a unique psychological make-up and social background? What will it teach about inter-personal communication, when we know that only one-third of communication is verbal and the rest non-verbal?

What effect will such learning in isolation have on a professional's understanding of the diversity, inequity and the very misfortunes in society, and on developing a social conscience? And without such a social conscience, what use is education, or even certification?

In short, is remoteness really a virtue? Should we try to *adopt* remoteness or should we try to *avoid* it?

Understanding the real challenge

As you very well know as seasoned academics, these aspects of education have always been under-rated and undermined, partly because the New Managerialism that has entered the academia has eliminated ‘all things unmeasurable’, and partly because education has been detached from societal goals and realigned with a productivity that was narrowly defined along World Bank Economics officialese – and of course, these two developments were not entirely independent. Are these trends set to worsen, when our future intellectuals become socially-immature data-crunchers rather than emotionally-intelligent, socially-competent adults?

My plea to you is this. Let us not assume that our real challenge is distributing technology and using it well – as important as these are. We don’t need to feel ashamed or frightened to raise these issues. Let me quote at some length our Indian counterparts, in the hope of infusing some courage to our convictions (O.P. Jindal Global University and Association of Indian Universities, 2020: 17):

“Not having students face-to-face within the confinement of a physical classroom may hinder the interaction between students and teachers. Even within the online format, students are usually required to keep the cameras off due to bandwidth constraints, making it challenging for the faculty to understand the receptiveness of students.

Also, in the absence of the peer-to-peer interactions that are common on physical campus, and lack of extracurricular activities, students will not have the required social and emotional development opportunities. These are essential for developing students with well-rounded personalities, helping them build an effective social network, and supporting them in understanding the values of collaboration, team-work, diversity, practical implementation of skills learned, and interpersonal skills.”

But let us instead see as our real challenge, the necessity to understand the new situation from a societal and human angle: as an alteration to social interactions and human perceptions rather than a need to adopt new technological tools and digital skills.

Post-Covid Medical Education

Changes to medicine in general

With regard to medical education, let me first examine the changes we may see in medicine itself.

People often say that we will now rediscover public health and the state's role in it, now that even affluent countries with advanced healthcare systems had had to learn a bitter lesson. I am not quite so sure. Of course, I do accept and have always accepted that public health is important. But the reason why some countries had championed it in the past is not exactly because of enlightened policy.

Some countries, including colonial and post-colonial Ceylon, did so because of democratisation. But the democratisation of the 1930s and 1940s was one that saw *rational* policies being applied *throughout the island*. From the 1950s onwards, it has been gradually replaced by majoritarianism, regionalism, identity politics, and kleptocracy. If democracy takes a back seat even more in the post-covid world, then public health has more to fear than rejoice.

Other countries, such as the former colonial empires, invested in public health in the nineteenth and twentieth centuries because they needed a large healthy workforce for their industrial factories, armies, and merchant navies – and today, industrialised countries are replacing humanpower by machinery, factory workers by robotics, and armies by missiles and drones.

So I will not hold my breath or assume that public health is going to be back with a vengeance. It might instead give rise to – indeed, accelerate – a new, techno-savvy ‘public health industry’.

In fact, in industrialised countries, even knowledge workers may begin to be replaced by artificial intelligence, so I am not sure if even universities will be needed to the same extent that encouraged their massification in the middle of the twentieth century.

Another important change that I foresee in medicine is in its dominant biomedical ethics paradigm. Since the 1970s, biomedical ethics had been based on the so-called four Beauchamp-Childress principles of individual autonomy, beneficence, non-maleficence, and justice, with individual autonomy holding primacy over the others. But the healthcare catastrophes in places like Italy and UK, where facilities became saturated and death became the all-too-prevalent

reality, individual autonomy became sidelined in favour of the greater good of the community. The medical profession there was forced to ask some very difficult questions, and it is possible that this might have important repercussions on the dominant, autonomy-based bioethics paradigm (Jobges et al, 2020).

Changes to medical education

Now let me move from medicine to medical education. One manner in which medical education will have to change is in preparing for future pandemics, or at least infectious disease outbreaks. Hereafter, medical and healthcare curricula will certainly have to give pride of place to infectious diseases, outbreak management, skills in using personal protective equipment and so on.

The experience with the pandemic has given rise to a resurgence of concepts such as beneficence, altruism and indeed sacrifice. Up until now, we have valorised healthcare workers like Dr Carlo Urbani, who brilliantly identified the 2003 SARS outbreak at a very early stage and saved the world, but himself contracted the virus and died of it; and the many volunteering doctors and nurses who had silently gone to Africa to look after the doomed villagers caught up in Ebola outbreaks. But in the future, these may be more integral parts of our job description and will be prevalent in all neighbourhoods – rather than being examples of exceptional valour seen in exotic, far-away locations. Now, would-be healthcare professionals know that they must be prepared to work in pandemic situations with a significant amount of risk to themselves and their families.

But when exceptional circumstances become normal circumstances in the near future, can we expect exemplary behaviour also to become the norm? Or, will people find an easy way out? Will a new stratification of healthcare workers come into existence, where power differentials determine who has a greater exposure to risks? Will tomorrow's frontline healthcare workers who take the brunt of the risk be like *firefighters* (who go in with valour, superior training, and advanced technology) or like *miners* (who are only looking for an escape from poverty)?

But as medical teachers, our real worry is what the absence or paucity of in-person teaching would do to medical training, especially clinical training. Already this had been compromised by rising

student-numbers. Social distancing requirements could make matters even worse.

The New Face of an Old Challenge

An old challenge

The way that I see it, to the academia, all this is not so much a calamity as it is a challenge. In fact, it is more a *reappearance* of an *old* challenge that we had been comfortably and wrongly ignoring until now. Let me explain what this ignored, old challenge is.

In the last several decades, globalization has subdued concepts such as subsistence existence, self-sufficiency, local knowhow, and the technological solutions that were called intermediate or appropriate technology. Political economic pluralism was steamrolled by the Washington Consensus, technological pluralisms by multi-national corporations, and cultural pluralisms by the McDonalidization of society. In the post-Soviet world, political organisation became unipolar, and capitalism became the only valid economic framework; indeed, capitalism was replaced by crony capitalism and public engagement replaced by the triple helix. Our duties towards each other were replaced by individual rights, and individual human rights became so much championed that even lawyers forgot about community rights. Society championed credit cards and narcissism. We replaced public transport by the private vehicle, public schools by private tuition, public health by health consumerism, health promotion by biological enhancement, rain forests by ecotourist destinations, and community life by egoism. To paraphrase Jean Baudrillard, the only beauty in our lives had become the beauty of cosmetic surgery, designer fashion, post-modern architecture, and urban planning; and the only truth was what opinion polls manufactured.

Marcia Angell (2008) has written and spoken widely about the USA healthcare system, and how it has taken a wrong turn. I often think: how can top medical academics in the USA become the most frequent winners of Nobel Prizes and reach the highest number of publications, citations and patents; and their healthcare system come to possess the world's most advanced healthcare technology; and their country become the highest per capita spenders on healthcare in the world – *while* one-third of their compatriots had no health insurance and therefore could not access any healthcare; and another one-third was under-insured and therefore were

undertreated? Whose benefit, apart from their own, were they working so hard for?

Indeed, both as a country and as a world, we could even have been better prepared to face this pandemic itself, but we hadn't. The World Health Organization (1999) first warned us about a pandemic like COVID-19 and advised all member-states to have a pandemic preparedness plan, way back in 1999. But we had other priorities, like privatising healthcare, including even public health infrastructure. Not only that, we might even have been able to prevent the pandemic itself. Over 75% of new human pathogens come from our interactions with animals and our environment, and studying these interactions helps to prevent such disease emergence. The world's top scientists asked humanity to collaborate across the human, animal, plant, and environmental divides to approach our healthcare problems, including emerging infectious diseases, in unison, through One Health (Zinsstag et al, 2011). But we had other priorities, like cracking the human genome open, to promote new biotechnology industries. The scientists moved even further on, from One Health to even more integrated approaches, such as planetary health (Ruegg et al, 2019). But we went on instead to focus on even more particularist approaches, like personalised medicine, health consumerism and biological enhancement, because that was where the stock market beckoned us.

While all this change was taking place in society through these several decades, universities were conspicuous by their silence, if not acquiescence. One of the most telling statements about this was recently made by Australian academic Angus Kennedy (2017) (emphases in the original):

“Rather than being *relevant* to society, instead the role of the university is a model of how society *should be*. Its foundation showed that society believed there were higher things, things more important than the material and mundane, and that they were the rightful objects of study by those who had a higher calling, a more noble profession than soldiery, or buying and selling in the marketplace.”

Kennedy's sentiment is, of course, not new. Fifty years previously, Theodore Roszak in his book *The Dissenting Academy* asked his fellow-US academics in the Humanities to “...cease functioning as the handmaidens of whatever political, military, paramilitary or economic elites happens to be financing” and “...to become an independent source of knowledge, value and criticism”.

And before all of them was Socrates:

“To which sort of treatment of our city do you urge me? Is it to combat the Athenians until they become as virtuous as possible, prescribing for them like a physician; or is it to be their servant and cater to their pleasure?”

As Socrates, Roszak and others had tried to point out, for intellectuals it is not enough to be expert critics: they must also be radical dissenters when the occasion demands. But the academia had ignored that challenge. George Orwell put it pithily, in his dystopian novel *Nineteen Eighty-Four*: “Orthodoxy is unconsciousness.”

A Pause to Think

This was the path we were taking. What the pandemic did was slow us down to let us catch our breath, to give us some thinking space. We were momentarily stopped in our tracks and made to go back to the drawing boards, as it were. I was reminded of the heroes of my youth, like the environmentalist Rachel Carson, the economist E.F. Schumacher, the iconoclastic social reformer Ivan Illich, and our own educationist E.W. Adikaram. I felt the need to dig out their books and start re-reading them. I think that with COVID-19, the universities were given another chance. Indeed, Paddy Cosgrave, an influential European technology entrepreneur, even gently pointed out the place for some considerable optimism in this opportunity. He said:

“In 1665, Cambridge University closed because of the plague. Isaac Newton decided to work from home. He discovered calculus and the laws of motion. Just saying.”

So, ladies and gentlemen, rather than worrying about the unknown, I think we can take a page out of Krishnamurti and utilise what we already know to face the current uncertainty. We can make use of the accidental activation of the Pause button in our lives, and take stock of the direction we were taking. There is no need to be afraid. It is a good time to remind ourselves that human beings are social animals.

As Barack Obama said, “The only thing that is the end of the world is the end of the world”.

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