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FOREWARD

The Maldives Health Research Bulletin is an annual publication by Ministry of Health that promotes health research in the Maldives. The main objectives of publishing this bulletin include: (1) providing a common platform for students, researchers and other stakeholders to gain easy access to health research materials relevant to the Maldivian context, (2) providing technical support to students and researchers by providing information related to existing and ongoing research as well as highlighting health research priority areas and (3) ensuring research is conducted in line with national health research priority areas in accordance with Maldivian legislation and international standards.

The composition of the eighth volume of the Maldives Health Research Bulletin includes 10 abstracts of completed research, a list of newly approved and ongoing research projects, an overview of the National Health Research Council and the updated research approval process followed by the National Health Research Council starting 2022. Additionally, this volume also lists the Health Research Priority Areas for 2022-2025.

I would like to acknowledge the publication team of our Health Information Management and Research division for their hard work in developing and producing this volume of the Maldives Health Research Bulletin. Furthermore, I laud the efforts of our hardworking and creative health researchers who contributed to fleshing out this bulletin. It is my sincere hope that this volume of the Maldives Health Research Bulletin is a vital source of information and encouragement for those interested in health research in the Maldives. It is also my belief that any research conducted in areas related to health will support the formulation of evidence-based policies and interventions that will contribute to strengthening the Maldivian health sector.

Ahmed Naseem
Minister of Health

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Graphic health warnings on tobacco packages: Investigating perceived effectiveness of graphic images among college students in Maldives

Author: Angeela Naseer, Dr. Aishath Aroona & Dr. Mariyam Suzana (PhD)

Research duration: 1st August 2020 – 4th January 2021

NHRC research registration number: NHRC/2020/018

Background

The implementation of a Graphic Health Warning (GHW) on tobacco packages took place on the 31st May 2019 (MOH,2020). According to GHW regulation, it is required to rotate GHW yearly. Since the implementation of GHWs, there have been no known studies to investigate the effectiveness of currently used GHWs nor on which GHWs to use in the next year.

The general objective of this research was to explore the perceived effectiveness of GHW images displayed on tobacco packages among college students in the Maldives, aged 18 years and above. The objectives of the research were:

1. What is the level of knowledge on the health risk of tobacco use among college students above the age of 18 years?
2. What is the attitude towards GHWs?
3. How effective are the GHW labels currently used on tobacco products in the Maldives?
4. Which of the globally available GHWs are most effective for future use in the Maldives?
5. What behaviors do young people, particularly smokers adopt to avoid GHW?

The results of this study can be used by policymakers to understand the effectiveness of the current GHWs and it can create evidence for future use and research in the area. Moreover, the result of this study can identify the effectiveness of some common GHWs used in other countries to identify effective graphics for future use in the Maldives. Understanding of knowledge and attitude towards GHWs among the youth and avoidance behaviors adopted by them can help design targeted interventions for such subpopulations.

Methodology

A cross-sectional quantitative study design was used to investigate the perceived effectiveness of GHWs. Stratified random sampling method was used to collect data from 371 respondents from five selected colleges (MNU, Cyryx college, Avid college, Clique college, MI college). A well-structured online questionnaire was used to collect data. Ethical approval was obtained from the NHRC (NHRC/2020/018) and MNU ethics committee. A sample size of 375 students participated in this study. Data was analyzed by using SPSS version 20.0. Descriptive statistics were used to evaluate demographic variables. Inferential statistics were used to evaluate the differences of knowledge, attitude towards GHW among smokers and non-smoker.

Results/Findings & Implications

2.7% of the female college students and 33.8% of the male students were smokers. Across age groups, 15.6% of the 18-24 year olds were smokers, 16% of the 25-34 year olds, 15.4% among 25-44 year olds and 11.5% of the 45 years and above age group smoked. Among the smokers, 25.9% were occasional smokers, 13.8% smoked more than 20 cigarettes a day and 60.3% smoked less than 20 cigarettes a day. Respondents correctly answered 91% of that assessed their knowledge of the health risk of smoking. 58.7% strongly agreed with the effectiveness of GHWs compared to text warnings. 46% strongly agreed that graphics on cigarette packages worried them about their health and 60% of all the respondents believed that the negative effects could happen to them if they smoke or continue smoking. 21% smokers attempted to quit smoking after seeing GHWs. The result also showed that 13% of respondents had received tobacco packs without GHWs from dealers or shops. The most common avoidance behavior (33.8%) among smokers was to conceal/hide the pack with a picture of liking, using paper, cover with wrapping or with tape. Out of 15 GHW images selected from the WHO FCTC Health warnings database that are currently used in Thailand, Bangladesh, Vanuatu, Mauritius, Singapore, Brazil, 3 images received a score above 73%. These three images showed conditions that depicted lung cancer, mouth cancer and throat cancer.

The fact that some respondents have received cigarette packages from dealers and shops without graphic health warnings calls for more vigilant monitoring of the implementation of the Regulation 2019/R158 on "Packaging and Labelling of Tobacco Products". This study established the prevalence of smoking among college students. A small percentage had a very high frequency of daily consumption, which advocates for targeted interventions for this specific

sub population. The incongruence between the high level of knowledge of the health risk and the smoking prevalence and avoidance behaviors demonstrates the need to further study the reasons why knowledge is not getting translated into behaviors.

Conclusion

Knowledge of health risk of smoking is high among college students. Majority strongly agreed that GHWs were disturbing and were more effective compared to textual warnings. A quarter of the sample had applied different avoidance behaviors such as concealing or hiding the images on the cigarettes packing. Images that depicted cancers of the lung, mouth or throat were found to be the most effective.

The full paper can be accessed from:
<http://saruna.mnu.edu.mv/jspui/>

The experiences of Tree Top Hospital (TTH) nurses in the COVID-19 pandemic in the Maldives

Author: Khadhiyya Simany

Duration: 20th November 2020 – 21st April 2021

NHRC registration number: NHRC/2020/021

Background

The research study aimed to explore nurses' experiences in providing nursing care for COVID-19 patients in the TTH COVID-19 facility of the Maldives. Understanding nurses' experiences will help analyze the nursing care and further develop it, as did previous pandemics experiences in other countries. The study examined the preparation of nursing care, nursing routine changes and the challenges in providing nursing care. The main objectives of the proposed study were:

1. To examine the preparations carried in the nursing care of COVID19 patients.
2. To examine the changes in nursing routines concerning caring for COVID19 patients.
3. To analyze the challenges caring for COVID19 patients.

Methodology

Based on the research paradigm and supportive literature, the author employed a descriptive phenomenological approach of inquiry. The author conducted semi-structured face-to-face interviews using purposive convenience sampling of nurses with nursing experience in the TTH COVID-19 facility. The

researcher purposively selected those nurses from the ward and intensive care unit, and emergency unit to access a range of experiences from many different people who shared the phenomena. With informed consent, the interviews were audio recorded and transcribed within 24 hours. Data analysis was through principles of the Colaizzi's method. The researcher validated the data by presenting the preliminary data to the participants and obtaining verbal feedback during the analysis phase. Data was peer reviewed and bracketing performed for researcher bias.

Results/findings & Implications

The nursing experience of the TTH nurses during the pandemic developed 5 major themes. The initial interview with six participants extracted 192 codes. After formulating meanings and required analysis, the integrated clusters were developed. Further analysis determined the themes from the clusters.



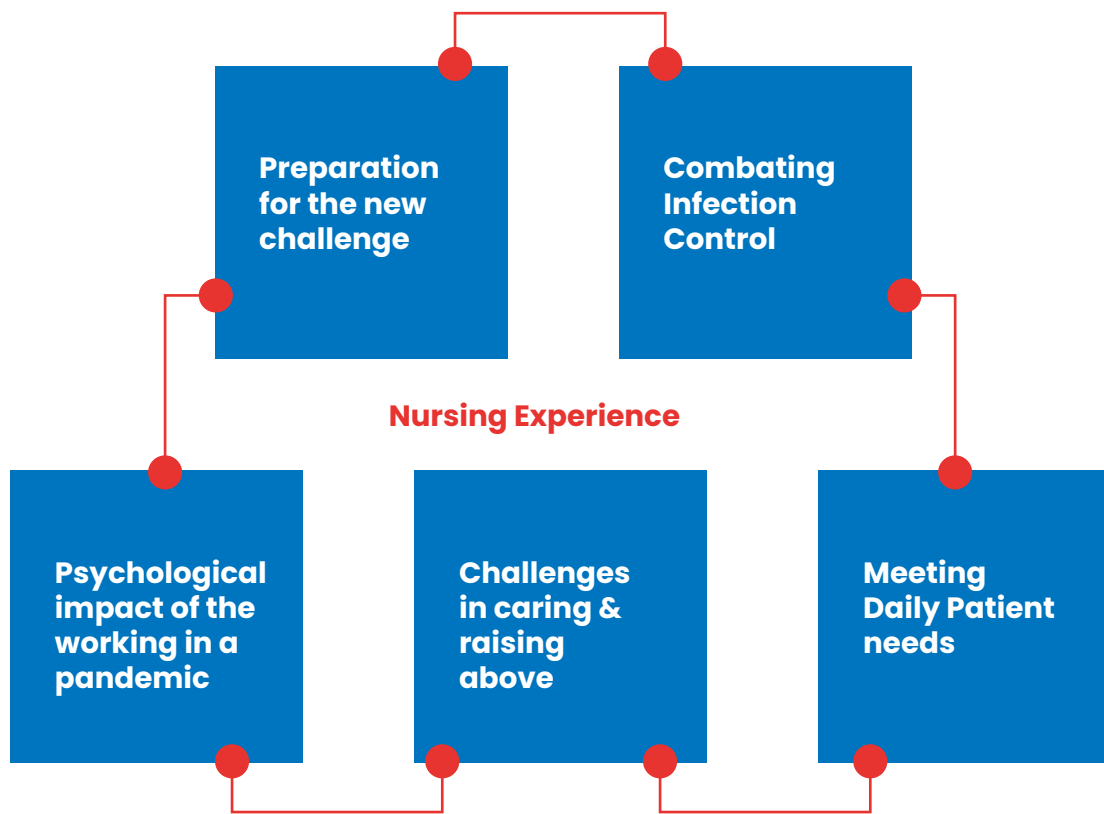


Figure 1 shows the major themes developed

Conclusion

The findings of the study suggest the need to have the improved continuous skill and knowledge development of nurses to support nurses in overcoming challenges in care. The study also found the need to address psychological issues and ensure that efficient infection control practices and policies and guidelines for effective nursing care are in place. Nurses and nurse leaders have a role in ensuring these policies are practically feasible and effective, alert health systems in need to change them accordingly. The findings gave insight into the phenomena of inquiry, bringing out how nurses worked to meet patients' daily needs, how they combat infection control, and prepared

for the daily work. Further studies could help to understand and analyze the experiences of giving nursing care; these can focus on knowledge gained in the pandemic, self-management strategies to work in a pandemic, critical thinking in pandemic, infection control strategies, nursing procedures etc.

Infertility experiences of women living in Baa Atoll, Maldives

Author: Aminath Shereen

Duration: 17th August 2020 – 5th January 2021

NHRC registration number: NHRC/2020/016

Background

The main objective of this study was to understand the experiences of infertile women in Baa Atoll, Maldives.

Research questions:

1. What are the experiences of infertile women in Baa atoll, Maldives?
2. What are the treatment and support-related experiences of infertile women in Baa atoll, Maldives?

Infertility is a growing public health problem around the world. Statistics show that approximately 10% of the world's female population experiences issues related to infertility (WHO, 2021). The issue of infertility is also present in Maldives, but only limited data is publicly available on the issue. Infertile women suffer stigmatization and discrimination due to the condition of infertility in many societies of the world (Hodin, 2017). Hence, many affected individuals and couples opt for fertility treatment to satisfy their desires to have a child and to fit in the societies that they live in. Meanwhile, the data on infertility in Maldives is limited and there are no publicly available studies that explore the issue of infertility in Maldives. For these reasons, it is important to explore this issue further starting from the community level in Maldives. Infertility is a growing public health problem around the world. Statistics show that approximately 10% of the world's female population experiences issues related to infertility (WHO, 2021). The issue of infertility is also present in

Maldives, but only limited data is publicly available on the issue. Infertile women suffer stigmatization and discrimination due to the condition of infertility in many societies of the world (Hodin, 2017). Hence, many affected individuals and couples opt for fertility treatment to satisfy their desires to have a child and to fit in the societies that they live in. Meanwhile, the data on infertility in Maldives is limited and there are no publicly available studies that explore the issue of infertility in Maldives. For these reasons, it is important to explore this issue further starting from the community level in Maldives.

Methodology

The main purpose of this study was to explore the experiences of infertile women living in Baa Atoll, Maldives. Hence, a descriptive case study approach was used for this study to explore the issue in Baa Atoll. The sampling techniques used in this study were purposive sampling and exponential non-discriminative snowball sampling. The above two methods were used because there is no infertility register available and the infertility is an extremely sensitive issue that is not loudly spoken within the Maldivian community. Face to face in-depth interviews were used to collect data for the study. A total of 13 participants from different islands of Baa Atoll were interviewed to get a deep understanding of the issue and to reach the data saturation.

Results/Findings & Implications

The findings of this study offered a deep insight of the experiences of infertile women in Baa Atoll, Maldives. Infertility affects the mental and emotional experiences of these women very deeply. The sorrow, pain, and anguish of these women cannot be imagined by many people. Failed attempts in getting pregnant, as well as repetitive negative results, makes infertile women lose hope about life. Difficulty to control anger, mood changes, guilt, and negative body image towards fertility were identified among these participants. The study also revealed that to deal with stress many of them use their own stress management strategies. Infertility at some point affects the sexual and intimate relationship with the partner as well, resulting in conflicts between the couple. Meanwhile, stigmatization, humiliation, and labeling were identified in some societies.

This study revealed that participants sought various types of treatments for infertility. The results also show that they faced a number of barriers that made it difficult for them to access those treatments. For instance, time-consuming, high cost, limited options under Aasandha (National Health Insurance Scheme), and last but not least, the lockdown caused by the pandemic of COVID-19 were the barriers identified. Moreover, participants have highlighted that the attitude of some of the doctors, limited fertility information, and financial barriers made them feel disappointed. Along with this, it was observed that infertility affected the mental health of the participants negatively, even though, there were only limited counseling services available in Baa Atoll to address the issue.

This study shows that there are unmet needs of infertile women in Baa Atoll. Hence, it is recommended to incorporate more infertility care in reproductive

services as well as future policy and planning to make the service more comprehensive. Since there is no available infertility registry in Maldives, it is also recommended to conduct a quantitative study to identify the prevalence of infertility in Maldives.

Almost all the participants experienced treatment barriers because of limited fertility care services at the Atoll level. Therefore, it is suggested to introduce some amount of fertility services at the Atoll level. It is also recommended to provide related training to all the health staff in Baa Atoll to initiate patient-centered care for infertile couples and to provide regular fertility-related information. Meanwhile, most infertility care is not covered under Aasandha insurance scheme and it was one of the biggest barriers to treatment faced by the participants in this study. Therefore, it is recommended that the government of Maldives provide full coverage for fertility treatment including psychosocial care. Furthermore, available psychological services in the islands or in the Atoll are limited. Therefore, it is suggested that the introduction of counseling services is essential to mitigate the mental health issues faced by infertile women in Baa Atoll.

Conclusion

Overall, most of the participants of this study experienced mental, social and emotional health issues, partner and family related issues, treatment related barriers, stigmatization and negative support experiences from community. Therefore, it is vital to address those areas of these infertile women in Baa Atoll.

Prevalence and risk factors of anaemia among pregnant women consulted to the reproductive health care unit of H.Dh. Regional Hospital, Maldives

Author: Rahuma Abbas & Mano Priya Vijayan

Duration: 10th June 2021 – 10th August 2021

NHRC registration number: NHRC/2021/030

Background

Anaemia is one of the common nutritional disorders during pregnancy and a major cause of maternal death. The World Health Organization (WHO) estimates that over 30% of the world's population are anaemic. The prevalence in developed countries is 14% and in developing countries is 51%. It is considered as a major cause of maternal death globally, contributing 20 to 40% of maternal death. In the Maldives, the prevalence of anaemia among pregnant women is 48.5% in 2016. This study aims to determine the prevalence and risk factors of anaemia in pregnant women of a community in northern islands of the Maldives. There is an ongoing change in the lifestyle due to the development in the country. However, each one of these communities has some differences in their socioeconomic level, food habits and lifestyle. Thus, factors associated with anaemia during pregnancy may be different from the general population and may vary from the identified statistics for the country. By determining the prevalence rate and associated factors for the community studied would enable health care services to redesign the prevention programs focusing on this community.

Methodology

This is a quantitative, cross-sectional survey conducted among 53 pregnant women selected by a simple random sampling method. Data was collected through structured questionnaire forms. Data analysis was conducted using SPSS version 25.0. The P-value <0.05 was considered statistically significant.

Results/Findings & Implications

Haemoglobin classification showed 60.40% normal and 39.60% anaemic. 33.96% of participants were known thalassaemia carriers. Amongst them, 61.11% were found to be anaemic with P Value < 0.026. Other factors studied showed no statistically significant association with anaemia.

According to the above results from the community studied, the authors recommended the following:

1. Strengthen and maintain established ANC services in atolls by providing health education and adequate information about pregnancy.
2. Ensure sustainability of iron supplementation during pregnancy.

3. Establish preconception care (PCC) in island communities.
4. Strengthen thalassaemia screening programs and provide information on pregnancy care in thalassaemia carriers.
5. Provide training opportunities to health care professionals to deliver effective ANC.
6. Explore limitations that may affect the capacity of health care in rural communities to achieve high-quality ANC and establish better transport services in between islands.
7. Conduct further researches to determine the association of nutrition and prevalence of maternal anaemia in the Maldives.

Conclusion

The prevalence of anaemia in pregnant women is 39.60% in this community. Thalassaemia carrier encountered in the population was found to be the main factor associated with the prevalence of maternal anaemia.



The full journal article can be accessed from:
<https://doi.org/DOI:10.15640/ijn.v8n2a4>

Prevalence of cigarette smoking and attitude towards anti-Smoking policies among high school students, Maldives

Author: Dr. Saifudheen Farooq

Duration: 1 year

NHRC registration number: NHRC/2020/022

Background

Tobacco smoking is a public health challenge that has tremendous health and economic burden on a country (Lim et al., 2012; World Health Organization, 2019). This addictive behaviour is primarily acquired during adolescence age (Gladwin et al., 2011; United States Department of Health and Human Services, 2014) and despite the implementation of various anti-tobacco policies, cigarette smoking remains high in the Republic of Maldives, with 4 in 10 men being daily cigarette smokers (Ministry of Health-Maldives & ICF, 2018; Tobaccocontrol.org, 2020; WHO-SEARO, 2018). Addu city is the second-largest city in the Maldives, yet no study has investigated cigarette smoking prevalence and attitude towards anti-smoking policies among high school students in Addu city. The aim of this research is to determine the prevalence of ever smokers, current smokers, smoking-susceptibility, and assess students' attitudes towards anti-smoking policies to facilitate evidence-based policy making.

Methodology

The study was conducted in Addu city using a self-administered questionnaire and included 335 high school students from Addu City, Maldives. Appropriate statistical analysis were performed, and any statistically significant result was reported using a p-value of < 0.05 .

Results/Findings & Implications

The study showed the prevalence of ever-smokers was at 22.8% and current smokers at 4.74% with male predominance. Also, 32.2% of the students had tried E-cigarette/vapes. Additionally, the prevalence of smoking susceptibility was high at 44.2%. Out of the smokers, 20% of the smokers had the desire to stop smoking and 70.0% of the smokers stated the price of the cigarette as a reason to stop smoking. Support for anti-smoking policies was high among the non-smokers, 73.0% compared to current smokers, 12.5%.

Conclusion

This study shows the prevalence of cigarette smoking among the Addu high school students is lower than the national average, despite having a higher proportion of ever smokers. However, an alarmingly high prevalence of smoking susceptibility and e-cigarette use could potentially increase cigarette smoking in the coming years to which policymakers should stay vigilant.

Quality of healthcare services and its relationship with the leadership styles: A study of hospitals in the Maldives

Author: Dr. Sidra Jamil

Duration: 9th September 2020 – 16th February 2021

NHRC registration number: NHRC/2020/012

Background

The evaluation of service quality in healthcare is a rather new field in the developing countries. The author's experience of living and working in the Maldives as a healthcare professional inspired the research topic. Business leadership can play a critical role in employee motivation and quality of services but there seems to be an assumed generalization that quality of healthcare is dependent on sole expertise of a care provider. Nonetheless, patients around the globe are getting more concerned about the quality of services they receive, apart from the treatment outcome. The aim of the study was to examine the effect of leadership on the quality of healthcare services in Maldivian healthcare context. The following research objectives were made to facilitate this research aim:

1. The first objective was to assess the predominant leadership style at research sites by conducting a leadership-style survey among care providers of the hospitals using care providers questionnaire.
2. The second objective of this research was to assess the current level of patient-satisfaction from the quality of available healthcare services by conducting a quality-related survey among Maldivian patients.
3. The third objective was to assess the strength of relationships in studied variables.
4. The final objective was to formulate recommendations for improving the quality of healthcare services by explaining the role of the leadership in the process.

Major research to date on the topic has been focused on the western context and it is hoped that gaps can be filled by including data from developing countries such as Maldives.

Methodology

Research data was gathered using two questionnaires made on Google Form. Healthcare professionals (HCP) questionnaire was developed to evaluate the perception of care providers and distributed among nurses and doctors at the research sites. Patient (PT) questionnaire was developed using modified SERVQUAL instrument and distributed among randomly selected patients to assess perception of patients about the quality of health services. English questionnaire for patients was translated to the local language of Maldives called Dhivehi and patients were given a choice to choose from two language options (English and Dhivehi). Total 262 respondents were randomly selected from the following three hospitals that showed willingness to participate in this research:

1. Indira Gandhi Memorial Hospital (Public Hospital)
2. ADK Hospital (Private Hospital)
3. Addu Equatorial Hospital (Public Hospital)

Written permissions were taken from each participating hospital for data collection. Approvals were also obtained from the National Health Research Council (NHRC) and the Research Ethics Committee of the University of Liverpool. Compliance with the University's ethics guidelines as well as the ethics guidelines of research in Maldives were ensured at each stage of the research process.

The quantitative approach adopted for this research allowed generation of data in quantitative form which was subjected to rigorous statistical analysis using descriptive as well as inferential statistics for finding correlations using SPSS. Primary as well as secondary data from relevant literature were used to draw conclusions.

Results/Findings & Implications

The first objective of this study was to assess the predominant leadership style used in the Maldivian healthcare. It was observed that Distributive Leadership (DL) style was more prominent but other leadership styles such as Servant Leadership (SL) and Transformational Leadership (TFL) were also used by the healthcare managers. Transactional Leadership (TAL) was found to be the least common among all.

The second objective of this study was to assess patients' level of satisfaction from Maldivian healthcare services at the research sites. It has been found that the outdoor patients are predominantly satisfied with the overall service quality. Patients have indicated highest satisfaction from the cleanliness and equipment available at the hospitals whilst lowest rating was seen for the responsiveness of the healthcare services. Low responsiveness rating indicates that patients had to spend a substantial amount of time in the hospitals waiting before seen by physicians and other healthcare worker. According to the Maldives Health Profile (2016), the population for every practicing doctor was 447, the population per practicing nurse was 147 in 2014 and for every 10,000 of the population there were 9 specialists available. Therefore, it can be assumed that the shortage of healthcare personnel could be one of the reasons causing prolonged waiting time. Nonetheless, additional investigation is needed to identify factors contributing to the long waiting time within Maldivian healthcare context.

The data revealed strongest correlation of Maldivian patient satisfaction with tangibility and assurance dimensions of the service quality. These results indicate that hospitals in the Maldives should give special attention to the physical aspects of the healthcare services, such as cleanliness, modern

equipment and orderly environment for patient satisfaction. In addition, assurance conveyed to the patient through commitment, efficiency and professionalism of the staff need to be emphasized to gain satisfaction from the patients in the Maldives. The following recommendations have been made to help improve healthcare quality in Maldivian healthcare context:

1. It is recommended to replicate the same study with larger sample size. A large sample size will yield reliable results with greater power and precision, therefore, will provide a better reflection of the population under study (Littler, 2020)
2. From author's own experience of working in Maldives, it was found that leadership style evaluation is uncommon in Maldivian healthcare. It is recommended to incorporate leadership style assessment of institutional leaders (CEO, Directors), service leaders (Clinical HOD, Nursing head, Research director) and frontline leaders, working at the interface of patient care (Doctors, Nurses) at Maldivian hospitals as recommended by Mountford and Webb (2009). A continual evaluation of leadership at individual as well as group level should be part of the formal assessment of healthcare workers (Stoller, 2009).
3. In Maldives, medical resources are unevenly distributed and are mainly concentrated in the regional hospitals of the country (Maldives Health Profile, 2016). This research only included high-level hospitals of the main islands; therefore, the findings of high patient satisfaction cannot be generalized. It is recommended to study the patient satisfaction level at community hospitals of different atolls and compare the satisfaction level with the patient's getting treatment from the regional high-level hospitals to see the clear picture.
4. This research found low level of job satisfaction among HCPs. High staff turnover is one of the major issues in the Maldivian hospitals which impacts quality of healthcare services (Maldives Health Profile, 2016). It is recommended to conduct a separate study on job satisfaction of healthcare employees in Maldives. Job satisfactions need to be measured in detail, especially relevant to the specific areas such as satisfaction from the manager, task, working conditions and professional career building support by utilizing a validated job satisfaction scale (Neuberger and Allerbeck, 1978). In addition, an investigation into the factors that can improve job satisfaction of the Maldivian healthcare staff is also important.
5. It is recommended to construct healthcare satisfaction index and periodically compare the outcomes of different hospitals. For patients to benefit from such standards, public dissemination of quality index is important to enable patients in making informed choice about selection of hospital.
6. Orthodox managerial practices attribute partially to the fact that in most hospitals, management roles remain in the hands of physicians who are trained only to heal the afflicted and not to practice modern management practices due to lack of their own management training (Andaleeb, 2001). A strong managerial orientation needs to be introduced to the hospitals. HCPs (physicians and nurses) should be encouraged to get formal leadership training (additional management training, such as MBA/MPH) to deliver quality services and keep pace with the changing business climate.

7. This study could only incorporate outpatient perspective. Differences and similarities in the experience of service quality needs to be explored from the perspective of outpatients as well as inpatients. It is recommended to replicate the study by including inpatient perspective.
8. It has been recommended to conduct a separate study on the total waiting time (TWT) in the Maldivian hospitals and its variance with the international standards. The average waiting time should be determined and factors leading to long waiting times need further investigation. The determination of long waiting time within the findings of this study suggests that the improvement within the practice is necessary. An enquiry into the waiting time will have dual benefits. On one hand TWT will be determined for hospitals in the Maldives and on the other hand, patients could be informed about an average TWT which will reduce the gap between patients' expectation and perception, which in turn will increase patient satisfaction.

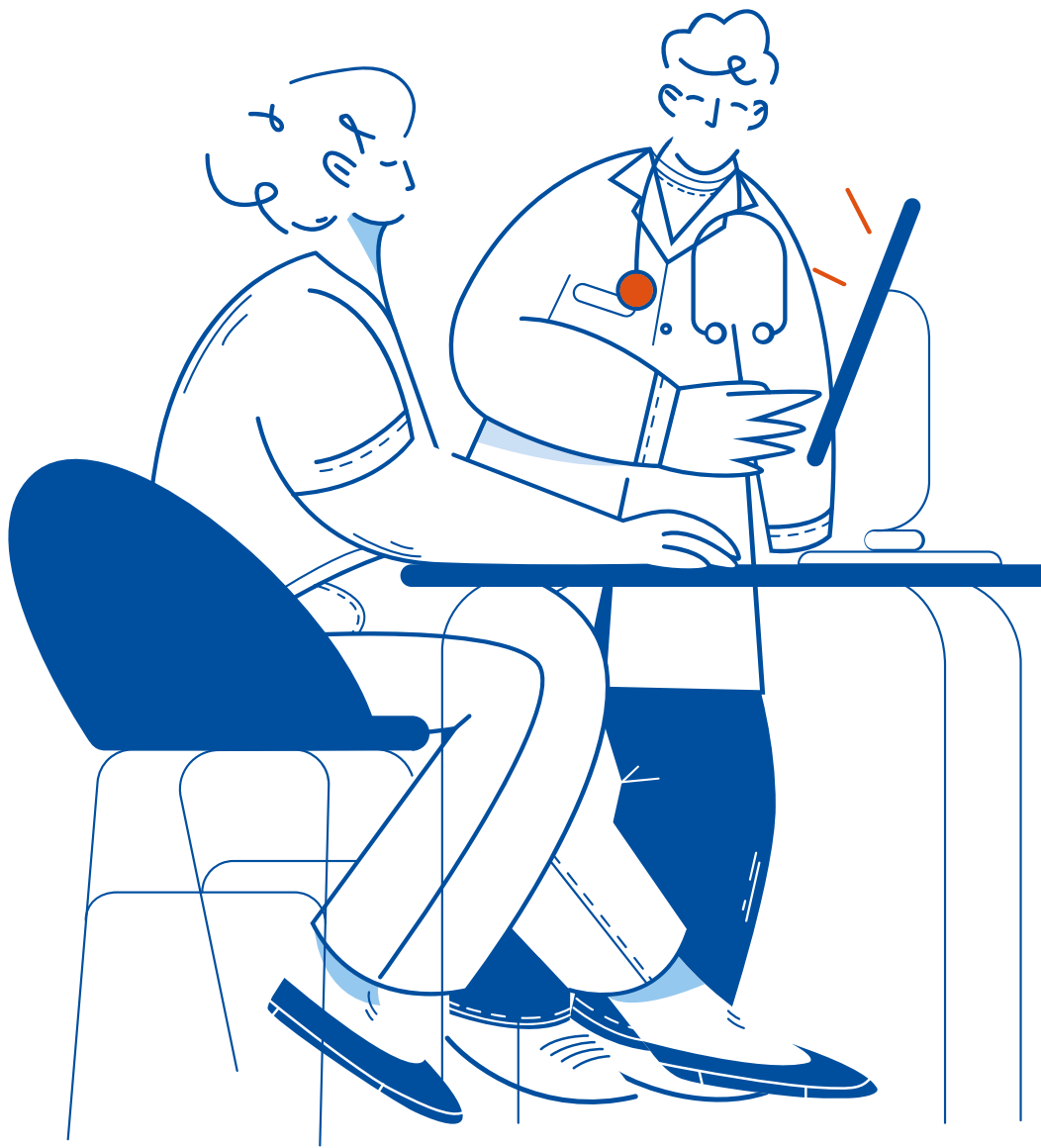
Keeping in view of the significance of leadership in organizational performance, healthcare-specific leadership competencies need to be emphasized at all levels to improve quality of health delivery.

Conclusion

Leadership styles of the care providers (clinical/non-clinical) need to be identified and how leadership as a process affects patients, employees and organizational outcome need to be assessed. Recognized leadership competencies are to be emphasized at organizational level and resources should be provided to train clinical and administrative leaders of the hospitals to improve effective communication, critical thinking, and teamwork. The gaps identified in this study provides opportunities for the future researchers/health care policy makers of Maldives to contribute by:

- Exploring leadership styles of the healthcare administrators
- Studying healthcare employee's performance after additional management training
- To explore clinician's journey towards management position in hospitals, identifying drivers and barriers
- Further research on the quality of care after leadership interventions in a healthcare setting

It is challenging to establish a clear relationship between leadership and service quality because a direct causal analysis cannot be met under certain complex conditions. However, a distinct approach for healthcare leadership needs to be furnished which can clearly define roles and responsibilities of the healthcare employee, priority-setting of the complex tasks and efficient resource utilization for the provision of high-quality services. It is high time to cultivate the concept of leadership in healthcare to support the changing connections between medicine and management and contribution of educational preparedness (additional management training, such as MBA/MPH) to leader's effectiveness.



Knowledge, attitude and practices of exclusive breastfeeding among the mothers visiting Dhamanaveshi for vaccination

Author: Khadheeja Rasheed

Duration: 1st August 2021 – 15th September 2021

NHRC registration number: NHRC/2021/033

Background

The main aim of this research was to explore the knowledge, attitude and practices of exclusive breast feeding (EBF) among the mothers visiting Dhamanaveshi vaccine clinic and explore the factors influencing the practices of mothers towards EBF. The objectives of the research were:

- Determine the knowledge, attitude and practices of EBF among the mothers visiting Dhamanaveshi vaccine clinic.
- Explore the factors influencing the practices of EBF among the mothers.
- Find out the relationship between knowledge and attitude of mothers and their practices of EBF.
- Find out the relationship between the factors (age, educational level, employment status, place of employment, number of children, monthly income, marital status, type of delivery, place of delivery) towards practices of EBF.

The research questions were:

- What is the level of knowledge, attitude and practices of EBF among the mothers visiting Dhamanaveshi vaccine clinic?

- What are the factors influencing the practices of EBF among the mothers?
- Is there a relationship between knowledge and attitude of the mother and practices of EBF?
- Is there a relationship between the factors (age, educational level, employment status, place of employment, number of children, monthly income, marital status, type of delivery, place of delivery) and practices of EBF?

There are limited studies done in Maldives focusing on the knowledge, attitude and practices of EBF among the mothers. Hence, this research will act as a foundation for further researches regarding the EBF in Maldives. In addition to this, the study will help policy makers to establish a baseline data for making their policies. This may also help in development of institutional guidelines for EBF. The results of this study can be helpful for Ministry of Health and other organizations which aims to develop appropriate interventions to improve the practices of EBF in Maldives. Moreover, the findings of this study will help to identify the areas where information and education has to be focused and can be used to change the behaviors of breastfeeding mothers.

Methodology

A descriptive correlational cross-sectional design was used to explore the independent variables (knowledge, attitude and factors) of EBF practices (dependent variable) of mothers who visited Dhamanaveshi for vaccination.

All the mothers who came to Dhamanaveshi for vaccination and who fit into the inclusion criteria were selected for the study. Participants were explained about the purpose of the study and a written informed consent was taken from all of them. An information sheet was provided to the mothers in Dhivehi language. Additionally, the consent form included that the participants can withdraw from the study anytime they wish without any penalty. Once the participants sign in the consent form, a questionnaire was provided to all the mothers to collect the required information. Questionnaire was filled while the participants were in the waiting area for vaccination. All the participants were anonymous as their personal details that will reveal the identity were used in this study.

The population for this study was considered as all the mothers visiting Dhamanaveshi for vaccination with a child who is between 6 to 12 months.

A convenience sampling method was used in this study. Convenience sampling allows to reach the sample size in limited time period (Etikan, 2016). The sample size for this study was determined by using Fisher's formula. "P" is the proportion of population who is EBF which is 64% (Maldives Health Demographic Survey (2017) and e is the level of significance which is considered as 0.05 and "Z" is the standard normal deviate at a confidence level of 1.96.

$$n = Z^2 P(1-P) / e^2$$

$$n = 1.96 \times 1.96 \times 0.64 \times (1-0.64) / 0.05 \times 0.05$$

$$\text{sample size} = 354$$

Results/Findings & Implications

This study surveyed 354 mothers who visited Dhamanaveshi for vaccination between August to September 2021. Most of them were in the range of 17 to 43 years of age, were married (97.5%), had a secondary level of education (40.4%), were unemployed/housewife (57.69%), was delivered at IGMH (58.8%), had a monthly income of 10-15 thousand, had 2-3 children (50.6%), and had a normal vaginal delivery (48.9%).

The results of this study show that, 96.9% of the respondents were having good knowledge about EBF and all the mothers (100%) had a positive attitude to EBF their infants.

This study findings concluded that only 66.7% of the mothers EBF their children for the recommended six months.

There was a relationship between number of children and knowledge of the mothers on EBF practice. However, when a logistic regression analysis was done on these variables there was a significant relationship only between knowledge and practice of EBF.

As in this study there is a relationship between level of knowledge and practice of EBF, more importance should be given to educate the mothers about EBF. Educational sessions can be conducted to antenatal mothers and the postnatal mothers as well. Counselling clinics can be run for a more effective way of educating the mothers.

With the help of current study findings, policy makers can review present policies on EBF. Moreover, it is important to review specific policies for educating mothers about EBF during antenatal and postnatal visits.

Baby friendly hospital initiative can be implemented to the hospitals which is a global effort implemented to protect, support and promote breastfeeding. Furthermore, breast feeding support groups can be used to educate and aware the mothers about EBF. In these groups, mothers can discuss their experiences of breastfeeding and EBF.

The study was undertaken in the capital city of Maldives, similar types of studies are needed to be done in different parts of the countries to understand the level of knowledge, their attitude and practices of EBF on infants.

Conclusion

This research will act as a foundation for further researches regarding the EBF in Maldives. In addition to this, this study will help policy makers to establish a baseline data for making their policies. This may also help in development of institutional guidelines for EBF. The results of this study can be helpful for Ministry of Health and other organizations which aims to develop appropriate interventions to improve the practices of EBF in Maldives. Moreover, the findings of this study will help to identify the areas where information and education has to be focused and can be used to change the behaviors of breastfeeding mothers.

Emotional distress in COVID-19 patients in Maldives

Authors: Rajib Kumar Dey, Shanooha Mansoor, Abdulla Isneen Hilmy, Sheena Moosa, Shiraany Abdul Rahman, Raishan Latheef, Nihla Rasheed, Fathimath Guraishaa Hassan, Ali Zaadhee, Afa Ibrahim & Sofoora Kausar Usman
Duration: 15th August 2020 – 15th December 2020
NHRC registration number: NHRC/2020/015

Background

Researchers are exploring the epidemiology, clinical characteristics, treatment, vaccination and the challenges faced by healthcare authorities. However less focus is being paid towards the impact of COVID-19 on mental health of the patients. This study was a cross-sectional study, measuring the prevalence of emotional distress among patients with COVID-19 in the Maldivian population.

Methodology

This study was conducted in Maldivian nationals above 18 of age with COVID-19 who were admitted in isolation facilities. Patients who were on treatment for any other chronic medical conditions, severe and critical COVID-19 disease were excluded. This study was conducted over a period of 2 months by administering a local translated version of DASS21 questionnaire.

Results/Findings & Implications

A total of 195 patients were included in this study. The mean age of the patients was 40 (CI at 95% 38–42) years. The respondents were 48.7% men and 51.3% women. Overall, 9% of patients with COVID-19 had depression while 23% of patients had anxiety and 12% of the patients had stress. There was a statistically significant relationship between gender and depression, anxiety and stress ($p < 0.01$). Symptomatic cases had a significantly higher level of stress than asymptomatic patients ($p < 0.05$), but no significant association was observed with symptomatic status and anxiety or depression.

Conclusion

The management of patients with COVID-19 should be multi-disciplinary with special focus on the mental wellbeing of our patients. We should aim to establish proper communication with the patients in order to identify emotional distress and provide appropriate mental health care.

The full journal article can be accessed from: Dey, R.K., Mansoor, S., Hilmy, A.I. et al. Emotional distress in COVID-19 patients in Maldives. *BMC Psychiatry* 22, 184 (2022). <https://doi.org/10.1186/s12888-022-03826-1>

Impact of COVID-19 on persons with disabilities in the Maldives

Authors: Sheena Moosa, Fathimath Riyaza & Sofoora Kawsar Usman

Duration: 14th May 2020 – 15th June 2020

NHRC registration number: NHRC/2020/006

Background

The Maldives declared a public health emergency coinciding with the World Health Organization's declaration of the outbreak of COVID-19 as a pandemic. Persons with disability (PWD) may also be disproportionately impacted by the pandemic due to limited access to basic services which they rely on.

observed to be more vulnerable, with 62% indicating stress from confinement compared to 44% of those without a disability. Furthermore, 24% of PWDs compared to 19% of those without a disability used online health services but 8% of PWDs did not access health services when needed compared to 5% of those without a disability.

Methodology

A cross sectional survey was conducted using voluntary sampling implemented with a digital tool for survey enumeration during the lockdown in May 2020. Disability was measured based on the Washington Group Short Set on Disability. The cut-off to define the population of PWD was those with at least one domain that is coded as a lot of difficulty or cannot do it at all.

Results/Findings & Implications

The disability prevalence from the study was 13.4% for males and 14.9% for females. The study did not observe marked difference in concern for health of household members or vulnerable population between PWDs and those without a disability. However, PWDs were

The full journal article can be accessed from: Dey, R.K., Mansoor, S., Hilmy, A.I. et al. Emotional distress in COVID-19 patients in Maldives. *BMC Psychiatry* 22, 184 (2022). <https://doi.org/10.1186/s12888-022-03826-1>

Conclusion

The findings indicating the higher needs to this group that were not adequately addressed during the lockdown associated with the COVID-19 pandemic. In future pandemic preparedness and response planning need to pay attention to establish protocols to involve families of the PWDs particularly children with disability (CWDs) and reduce dependence on health care providers and therapists. Empowering families and PWDs needs to be sustained to ensure they are not left behind during such emergencies in the future.



NATIONAL HEALTH RESEARCH COUNCIL (NHRC)

The National Health Research Council (NHRC) was formed on 20th May 2019 under the Health Services Act (29/2015) and Health Research Regulation (R-1006/2019). The responsibilities of the council include undertaking the scientific and ethical review of all types of health research proposals, including clinical trials, as well as monitoring of all approved health research.

Previously, the National Health Research Committee was established in 1999, as a strategy outlined in the Health Master Plan 1996-2005 to strengthen the development and implementation of research relating to the health sector. With the establishment of the National Health Research Committee, all health related research had to be submitted to the committee and approval sought before implementation. In this regard, the Ministry of Health issued a circular (23-C3/99/C-24) on 15th August 1999 to implement this strategy effective from 01st September 1999.

The NHRC has received several research proposals for approval. A guideline was developed to assist researchers such as medical and nursing practitioners, program managers and students in developing research proposals for submission to the NHRC.

From the research proposals submitted to NHRC for review, 19 research proposals were approved in 2019, followed by 22 proposals in 2020 and 20 proposals in 2021.

REPRESENTATIVES IN THE NATIONAL HEALTH RESEARCH COUNCIL

01 - Ministry of Health / Director General of Health Services

02 - Ministry of Health / Health Information Management & Research

03 - Ministry of Health / Maldives Food and Drug Authority

04 - Ministry of Health / Health Protection Agency

05 - Ministry of Health / Quality Assurance and Regulation

06 - Ministry of Health / Dhamanaveshi

07 - Ministry of Education

08 - Ministry of Islamic Affairs

09 - Attorney General's Office

10 - Maldives Bureau of Statistics

11 - Faculty of Health Sciences

12 - Islamic University of Maldives

13 - Indira Gandhi Memorial Hospital

14 - Tree Top Hospital

15 - Maldives Nurses Association (NGO)

16 - Individual researcher

RESEARCH REGISTRATION AND APPROVAL

1. Application

Email research proposal with completed application form, supervisor's endorsement letter (for students), CVs and no objection letter from institute of data collection to Ministry of Health (Email: nhrc@health.gov.mv)

Application form and guideline available at:
<https://health.gov.mv/Downloads>

2. Initial Screening

The secretariat will check if the proposal fits the guideline. Researcher will be informed whether the proposal is accepted or not via email.

3. Review of the proposal

NHRC members will review the proposal in meeting and comments will be shared with researcher.

NHRC meetings are held weekly every Tuesday.

The normal duration for the review process is 1-2 months.

4. Re-submission of proposal

Members will review the amended proposal. Researcher will be contacted if further amendments are required.

5. Approval

Researcher will receive the approval letter once amended proposal is reviewed and approval is granted by NHRC.

NATIONAL HEALTH RESEARCH COUNCIL APPROVED RESEARCH LIST 2021

- 01 - Impact of a nutrition educational intervention on mothers' breast feeding and complementary feeding practices in Noonu and Kaafu Atoll of the Maldives.
- 02 - Providing quality end of life care to patients: critical care nurses' perceived obstacles and supportive behaviors at IGM Hospital
- 03 - The prevalence and patterns of child sexual abuse among the students of a tertiary institution
- 04 - Nurses' knowledge, attitude and practice towards prevention of catheter-associated urinary tract infections (CAUTIs) in the gynecological ward (GW), Indira Gandhi Memorial Hospital (IGMH)
- 05 - Exploring changes in healthcare waste management practices in Senahiya Military Hospital (SMH) in the COVID-19 pandemic
- 06 - Knowledge, attitude and the practice of antibiotic use among the public in Maldives
- 07 - Exploring knowledge, attitude and practices among mothers regarding pregnancy-related nutritional status who attend to HaaAlif Atoll Hospital (HAAH)
- 08 - Prevalence and risk factors of anemia in pregnant women consulting reproductive health care services of H.Dh. Regional Hospital, Maldives
- 09 - Lived experience of relapse among substance abuse clients in drug detoxification and community rehabilitation centre in G. DH. Thinadhoo
- 10 - A rapid Assistive Technology Assessment (rATA)
- 11 - The relationship between cultures, cognitive styles, Covid-19 stigma, health behaviors and quality of life
- 12 - A Prospective, Multicentric, Non-Interventional Data Collection Registry to report the safety & feasibility of 3D OCT-Guided Distal Left Main Bifurcation Percutaneous Coronary Intervention with Everolimus-Eluting Stents in South Asian setting

- 13 - Equitable health care and social justice in the Maldives: a mixed methods exploration of the development of social justice related attributes in undergraduate health professional students
- 14 - Knowledge, attitude and practices of exclusive breastfeeding (EBF) among mothers visiting Dhamanaveshi for vaccination
- 15 - Critical care nurse's perception and practices towards clinical alarm management for patient safety at Intensive Care Unit of Indira Gandhi Memorial Hospital
- 16 - Knowledge, attitude and practice regarding emergency contraceptives (ECs) among postnatal women visiting to Indira Gandhi Memorial Hospital (IGMH) reproductive health center (RHC)
- 17 - One year with the COVID-19 pandemic – psychological stressors and behavioural implications
- 18 - Barriers to fruits and vegetables consumption among 18 to 35 years youth in AA. Himandhoo
- 19 - Study of the immunological response following COVID-19 vaccination among healthcare delivery staff in Male' Maldives
- 20 - Study on the real-world effectiveness of one dose or two doses of Covishield vaccine in reducing severity of Covid-19 in Maldives

Health research priority areas (April 2022–2025)

Rank Top 10 health research priorities areas

01 - Disease Epidemiology, Risk Factors, Prevention And Control

02 - Food And Nutrition

03 - Healthcare Quality And Safety

04 - Health Promotion

05 - Health Resource Allocation

06 - Advancement Of Health Technology, E-Health, Telemedicine

07 - Clinical Studies

08 - Access To Health Care

09 - Health Governance, Including Clinical And Public Health Governance

10 - Healthy Lifestyle

Rank Top 11 clinical research priorities areas

01 - Cancer

02 - Cardiovascular Diseases

03 - Mental Health, Behavioral Disorder, And Substance Abuse

04 - Kidney Diseases

05 - Endocrine And Metabolic Disorder, Including Diabetes

06 - Respiratory Diseases

07 - Reproductive And Maternal Health

08 - Covid-19 And Emerging Diseases

09 - Sexual Health

10 - Blood Disorders

11 - Skin Diseases







MINISTRY OF HEALTH
REPUBLIC OF MALDIVES

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