

# COMPENDIUM OF HEALTH RESEARCH IN MALDIVES 2018-2021



MINISTRY OF HEALTH  
REPUBLIC OF MALDIVES

Republic of Maldives



Compendium of Health Research in  
Maldives  
2018 - 2021

Ministry of Health  
Male', Maldives

October 2022

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# FOREWORD



Health research has been an area often neglected by the Maldivian Health Sector, despite its high value to the modern society. It can provide important information about disease and risk factors trends, treatment outcomes, public health interventions, financial expenditure in health and more. Economists have noted that health research has an enormous impact on human health and longevity. Consequently, these positive impacts result in increased productivity of the population which in turn contributes to the national economy in addition to the individual benefits of improved health. Therefore, the Ministry of Health is dedicated to establishing a positive research culture in the Maldives, and further developing the field of health research by building capacity and promoting the work of health researchers in collaboration with interested parties.

On this note, we are proud to present the “Compendium of Health Research in Maldives 2018-2021”, which is a compilation of abstracts of the health-related research conducted in the Maldives from 2018 to 2021. This is the first time such a consolidated compendium has been published by the Ministry of Health.

The compendium aims to showcase the work of researchers in the country and enable easy access to health research relevant to the Maldivian context through one platform. The compendium covers a variety of themes in health research ranging from aetiology, prevention and management of diseases to health service delivery. It also includes several notable research documents related to the Maldivian COVID-19 experience, which highlights the knowledge and accomplishments gained during the process of pandemic planning and management.

I would like to acknowledge the incredible work of the health researchers who contributed to the production of this compendium. I also appreciate the efforts of our team at the Health Information Management and Research Division in compiling this compendium. It is my hope that this publication will empower researchers and act as a source of encouragement to our private sector to invest in health and medical research leading to an increase in the production and publication of high-quality research conducted in the Maldives.

Ahmed Naseem

Minister of Health

A hand holding a pen is positioned over a document featuring a bar chart. The entire scene is overlaid with a blue tint. The text 'UNDERPINNING RESEARCH' is centered on the image.

# **UNDERPINNING RESEARCH**

# PERCEPTIONS REGARDING COVID-19 PANDEMIC AND COVID-19 VACCINE ACCEPTANCE IN THE MALDIVES

Authors: Mohamed Amir, Aishath Muneer, Sinwa Abdul Latheef, Abdulla Zaeem, Fathimath Zoon, Ahmed Mauroof, Nilooma Mohamed, Mohamed Akram, Fathmath Nazla Rafeeq, Ahmed Faisal & Raheema Abdul Raheem

Published on: July 2021

## Key Findings:

- (86%) people agreed that they would get the vaccine if it became available.
- Only 1.2% said that they did not want to vaccinate due to religious reasons.

## ABSTRACT

The aim of the study was to identify the perceptions regarding the COVID-19 epidemic and acceptance of COVID-19 vaccine. A cross-sectional study design was employed to collect the data for the study using an online questionnaire. Among 700 participants, 602 (86%) people agreed that they would get the vaccine if it became available. The reasons people gave for not agreeing to get the vaccines were that the vaccine might have side effects, it might be too expensive, and it might not be safe. Only 1.2% said that they did not want to vaccinate due to religious reasons. Vaccine acceptance was associated with age, employment status, and Influenza vaccination in the past 12 months. Although the perception towards the COVID-19 vaccine was good in general, there were some negative perceptions too. Hence, creating public awareness regarding the vaccines and the importance of vaccination is crucial. Keywords: COVID-19 vaccine,

acceptance, the Maldives, side-effects, religious views

## CITATION:

Amir, M., Muneer, A., Latheef, S. A., Zaeem, A., Zoon, F., Mauroof, A., . . . Raheem, R. A. (2021). Perceptions Regarding COVID-19 Pandemic and COVID-19 Vaccine Acceptance in the Maldives. *The Maldives National Journal of Research*.

## ACCESS TO FULL ARTICLE

### FROM:

[https://www.researchgate.net/profile/Raheema-Abdul-Raheem/publication/355202094\\_Perceptions\\_regarding\\_COVID-19\\_pandemic\\_and\\_COVID-19\\_vaccine\\_acceptance\\_in\\_the\\_Maldives/links/6167cea23851f95994004ca4/Perceptions-regarding-COVID-19-pandemic-and-COVID-19-vaccine-acceptance-in-the-Maldives.pdf](https://www.researchgate.net/profile/Raheema-Abdul-Raheem/publication/355202094_Perceptions_regarding_COVID-19_pandemic_and_COVID-19_vaccine_acceptance_in_the_Maldives/links/6167cea23851f95994004ca4/Perceptions-regarding-COVID-19-pandemic-and-COVID-19-vaccine-acceptance-in-the-Maldives.pdf)



# NOWCASTING THE COVID-19 EPIDEMIC IN THE MALDIVES

Authors: Dr. Sheena Moosa & Sofoora Kawsar Usman

Published On: Aug 2020

## Key Findings

- The time of imported cases with the effect of containment measures the epidemic spread is slow ( $R_0 = 1.1$ ) over a period of 230 days.
- Nowcasting the epidemic progression phase provided useful information for decision making in the early phase of the epidemic.

## ABSTRACT

The novelty of COVID-19 prompted reliance on mathematical modelling to guide decision making and planning pandemic response. The compartment model using suspected, infected recovered and death (SIRD) as used in the Maldives to forecast the epidemic which was nowcasted (adjusted in real-time) to produce parameters on epidemic progression in the Male' area to allow for quick decision making. Deriving the model input parameters were challenging and introduced a greater level of uncertainty in model output parameters. Recognition of the

data limitation in presenting model outputs allowed for quick decision making in the COVID-19 early phase towards control of the epidemic.

## CITATION:

Moosa, S. & Usman, S. K. (2020). Nowcasting the COVID 19 epidemic in the Maldives. Maldives National Journal of Research. 8(1), 18-28.

## Access to full article from:

<http://saruna.mnu.edu.mv/jspui/handle/123456789/8534>

# INFERTILITY EXPERIENCES OF WOMEN LIVING IN BAA ATOLL, MALDIVES

Authors: Aminath Shereen

Duration: 17<sup>th</sup> August 2020 – 05<sup>th</sup> January 2021

## Key Findings:

- Infertility affects the mental health of the participants negatively. Participants who sought various types of treatments faced barriers such as treatments being time-consuming, high costs, limited options under Aasandha and the lockdown caused by COVID-19 pandemic.

## BACKGROUND

Researcher's aim is to understand the 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 experience 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 children and to fit in the societies that they live in. Meanwhile, the data on infertility in Maldives is limited and there are no known 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 is 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 are 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 AND 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 make 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, treatments being 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.

# EVALUATION OF CIVIL REGISTRATION AND VITAL STATISTICS SYSTEM IN THE MALDIVES: FOCUS ON MORTALITY STATISTICS

Authors: Sofoora Kawsar Usman & Dr. Sheena Moosa

Duration: 1<sup>st</sup> November 2019 - 1<sup>st</sup> November 2020

## Key Findings:

- CRVS system performed well on the completeness of death registration and the quality of age and sex reporting.
- Significant time lag was observed in the transmission and production of vital statistics.

## BACKGROUND

The aim of this study is to determine the completeness and quality of data on death registration and causes of death (CoD).

Research questions:

1. What is the completeness and quality of data on death registration and causes of death (CoD) in the Maldives?
2. What are the areas for improving mortality statistics in the Maldives?

Timely, quality, reliable and usable mortality data, trends and causes of death information are important to public health policies and interventions. Information on mortality in the Maldives is presented as the key mortality statistics in annual health statistics reports. As of today, there is no published assessment or study on the CRVS of Maldives, although global estimates show that the quality of VS

with regard to completeness and recording of cause(s) of death is low in the Maldives.

Due to the complexity and level of engagement by different institutions in the CRVS system, mapping of the vital registration process is useful to capture and identify the bottlenecks, time lags and areas where efficiencies are needed. This in return can improve measurement of health outcomes through targeted investments for process efficiency. However, it must be noted that most of the CRVS systems around the world lacks long-term public policy investments. Thus, evidence-based advocacy is imperative to improve the CRVS system and work towards a greater political commitment for establishing effective processes and improving systems.

## **METHODOLOGY**

For analyzing the quality of mortality and causes of death data, the Analyses of Causes of National Death for Action (ANACONDA), developed by the Bloomberg Philanthropies Data for Health innovation program is applied to the mortality data of Maldives for the period 2009-2018. ANACONDA is a software application that assesses the accuracy and completeness of mortality and cause of death data. It computes the vital statistics performance index (VSPI(Q)) which is a composite measure of the five dimensions of VS strength.

## **RESULTS/FINDINGS AND IMPLICATIONS**

Using established methods and approaches, we observed that CRVS system performed well on the completeness of death registration, and the quality of age and sex reporting. However, the quality of cause of death data was poor with 50% of the International Classification of Diseases (ICD) codes classified as “major garbage codes”. Significant time lag was observed in the transmission and production of vital statistics.

The evaluation of mortality statistics allowed appropriate improving of mortality statistics

in the country. This evidence is useful in the digital CRVS platform ‘GEMEN module’ planning and rollout by prioritizing areas for improvement in the CRVS system.

## **CONCLUSION**

The CRVS system in Maldives is complete with all deaths occurring within its territory registered and causes of death recorded. The two areas that require attention are the time taken for publication of vital statistics and quality of cause of death reporting. Appropriate re-engineering of the existing business process can build real-time mortality data, and regular quality assessment of death certificates with feedback to health facilities can bring sustained improvements in quality of vital statistics.

## **CITATION:**

Usman, Sofoora Kawsar and Moosa, Sheena. ‘Evaluation of Civil Registration and Vital Statistics System in the Maldives: Focus on Mortality Statistics’. 1 Jan. 2020 : 933 – 941.

## **ACCESS TO FULL ARTICLE FROM:**

<https://content.iospress.com/articles/statistical-journal-of-the-iaos/sji200748>

A blue-tinted photograph of a laboratory setting. In the foreground, the eyepieces of a microscope are visible on the left. In the background, a rack of test tubes is visible, slightly out of focus. The word "AETIOLOGY" is written in a bold, cyan-colored font across the center of the image.

# AETIOLOGY

# PREVALENCE AND RISK FACTORS OF ANAEMIA AMONG PREGNANT WOMEN CONSULTED TO THE REPRODUCTIVE HEALTH CARE UNIT OF H.DH. REGIONAL HOSPITAL, MALDIVES

Authors: Rahuma Abbas & Mano Priya Vijayan

Duration: 10<sup>th</sup> June 2021- 10<sup>th</sup> August 2021

## Key Findings:

- 39.60% of the participants were anaemic
- 33.96% of the participants were known thalassemia carriers

## 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 to 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 were 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 AND IMPLICATIONS

Haemoglobin classification showed 60.40% as normal and 39.60% as 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. Strengthening and maintaining established ANC services in atolls by providing health education and adequate information about their 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.

## CITATION:

Abbas, Rahuma & Vijayan, Mano. (2021). Prevalence and risk factors of Anaemia among Pregnant Women Consulted to the Reproductive Health Care unit of H.Dh. Regional Hospital, Maldives. International Journal of Nursing. 8. 10.15640/ijn.v8n2a4.

## ACCESS TO FULL ARTICLE FROM:

[https://www.researchgate.net/publication/357642833\\_Prevalence\\_and\\_risk\\_factors\\_of\\_Anaemia\\_among\\_Pregnant\\_Women\\_Consulted\\_to\\_the\\_Reproductive\\_Health\\_Care\\_unit\\_of\\_HDh\\_Regional\\_Hospital\\_Maldives](https://www.researchgate.net/publication/357642833_Prevalence_and_risk_factors_of_Anaemia_among_Pregnant_Women_Consulted_to_the_Reproductive_Health_Care_unit_of_HDh_Regional_Hospital_Maldives)



# NUTRITION CHARACTERISTICS AND DELIVERY IN RELATION TO 28-DAY MORTALITY IN CRITICALLY ILL PATIENTS.

Authors: Asiya Abdul Raheem, Barakatun-Nisak Mohd Yusof, Lee Zheng Yii, Noor Airini binti Ibrahim & Ali Abdul Latheef

Duration: April 2019 – March 2020

## Key Findings:

- LOS in ICU and received intervention by a dietitian were associated with 28-day mortality.

## BACKGROUND

Data regarding nutrition characteristics and delivery of critically ill patients are limited in South Asia. This study aimed to investigate nutrition characteristics and delivery related to 28-day mortality in critically ill patients.

## METHODOLOGY

This prospective observational study was conducted in the intensive care unit of the government referral hospital of the Maldives. Data pertaining to nutrition characteristics and delivery were collected from the ICU charts, and each patient was followed for a maximum of 28 days.

## RESULTS/FINDINGS AND IMPLICATIONS

We recruited a total of 115 patients (mean age:  $61.57 \pm 17.26$ , 52% females, mean BMI:  $25.5 \pm 6.19$ ), of which 61 (53%) of them died within 28 days of ICU admission. Mean energy intake was  $681.15 \pm 395.37$  kcal per day, and mean protein intake was  $30.32 \pm 18.97$ g per day. In the univariate logistic regression analysis, LOS (Length of Stay) in ICU (OR = 0.950, 95% CI: 0.908 – 0.994,  $p = 0.027$ ), and received intervention by a dietitian (OR = 0.250, 95% CI: 0.066 – 0.940,  $p = 0.040$ ) were associated with 28-day mortality. None of the factors in the multivariate regression analysis remains significant when adjusted for sex, SOFA total score, daily energy dosage, and daily protein dosage.

## **CONCLUSION**

28-day mortality was much higher in this study than in similar studies in South Asia, Asia and around the globe. None of the variables was significantly associated with 28-day mortality in the multivariate logistic model. However, there was a trend towards higher mortality for patients with shorter LOS in ICU, larger mean GRV (Gastric Residual Volume), and not received MNT (Medical Nutrition Therapy) intervention from a dietitian.

## **CITATION:**

Dey, R.K., Mansoor, S., Hilmy, A.I. et al. Nutrition Characteristics and Delivery in Relation to 28-day Mortality in Critically Ill Patients *Mal J Med HealthSci*18(4): doi:10.47836/mjmhs18.4.15

## **ACCESS TO FULL ARTICLE FROM:**

[https://medic.upm.edu.my/upload/dokumen/2022071815280215\\_MJMHS\\_1289.pdf](https://medic.upm.edu.my/upload/dokumen/2022071815280215_MJMHS_1289.pdf)

# EFFECTS OF METEOROLOGICAL FACTORS ON THE INCIDENCE OF DENGUE IN THE MALDIVES 2004-2018

Authors: Mr. Ahmed Mazeed & Dr. Mariyam Suzana

Duration: 19<sup>th</sup> January 2019 - 19<sup>th</sup> January 2020

## Key Findings:

- All the climate factors excluding mean humidity has a statistically insignificant inverse relationship with the total number of incident cases.
- Humidity was found to have a statistically significant inverse relationship with dengue incidence over the 15 years' period

## BACKGROUND

Climate change can lead to higher temperatures, frequent cyclones and droughts and rapid growth of various life forms such as mosquitoes which acts as a vector in transporting dangerous disease-causing agents. Vector-borne diseases account for more than 17% of all infectious diseases worldwide causing more than 700,000 deaths annually. Maldives is a Dengue fever endemic country. The purpose of this study was to identify the climate related factors affecting dengue incidence in Maldives.

## METHODOLOGY

This is a quantitative secondary data analysis based on a retrospective design. This study covers the dengue indices from all the atolls of the Maldives and meteorological factors cover data collected from the stations of the Maldives Metrological services located in the

country covering the period 2013 to 2018. Mean values of annual sunshine, temperature, rainfall, wind speed, humidity and incident cases of dengue were analysed.

## RESULTS/FINDINGS AND IMPLICATIONS

The dengue incidence of Maldives over the last 15 years was very irregular with very unpredictable patterns. The mean minimum number of dengue cases that were reported positive annually from all the islands of Maldives during the last 15 years was 3.17 cases peaking up to 336.11 cases with a median of 91.92 cases for the whole duration. All the climate factors excluding mean humidity has a statistically insignificant inverse relationship with the total number of incident cases. As the mean sunshine, mean temperature, mean rainfall increases, the number of cases decreased. Dengue cases

were found to be least affected by the wind speed. Humidity was found to have a statistically significant inverse relationship ( $r = -0.61$ ) with dengue incidence over the 15 years period (p value: 0.01).

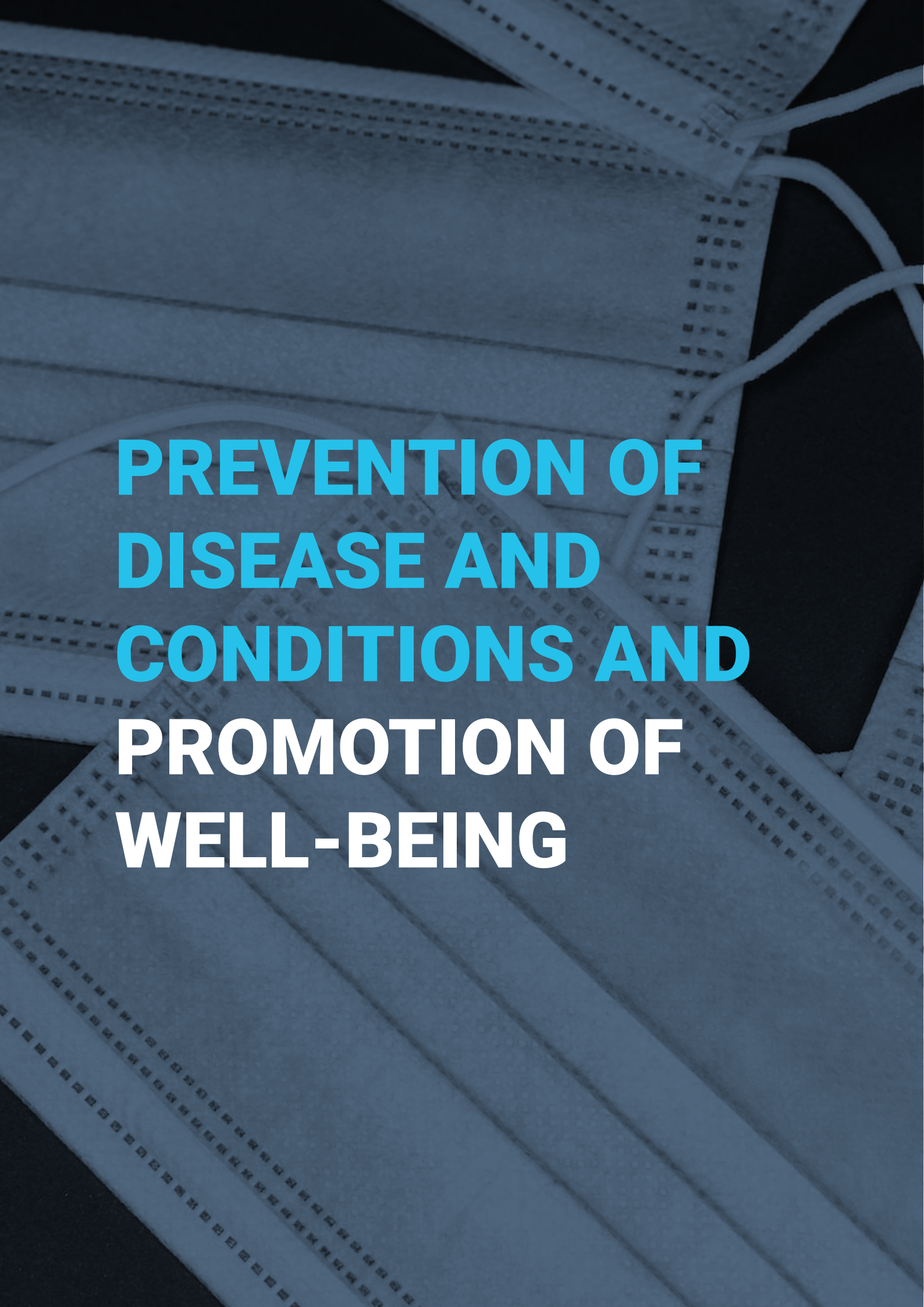
## **CONCLUSION**

This research was limited to the mean values of climate variables and the total number of dengue cases for 15 years in Maldives. Conducting a study on a raw data set including climate data taken from all 5 meteorological stations of Maldives and dengue severity and mortality will present a

more significant result. Strengthening the dengue surveillance will reduce data gaps as well as minimise outliers. Conducting entomological studies to identify specific locations of mosquitos and their habits and distributions will rule out the population density of the mosquito vector and help in predicting future outbreaks.

## **ACCESS TO FULL ARTICLE FROM:**

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**PREVENTION OF  
DISEASE AND  
CONDITIONS AND  
PROMOTION OF  
WELL-BEING**

# KNOWLEDGE, ATTITUDE AND PRACTICES OF EXCLUSIVE BREASTFEEDING AMONG THE MOTHERS VISITING DHAMANAVESHI FOR VACCINATION

Authors: Khadheeja Rasheedh

Duration: 1<sup>st</sup> August 2021- 15<sup>th</sup> September 2021

## Key Findings:

- 96.9% of the respondents had good knowledge about EBF and all the participants had a positive attitude to EBF their infants.
- Only 66.7% of the mothers EBF their children for the recommended six months.

## BACKGROUND

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

Objectives:

1. Determine the knowledge, attitude and practices of EBF among the mothers visiting Dhamanaveshi vaccine clinic.
2. Explore the factors influencing the practices of EBF among the mothers.
3. Find out the relationship between knowledge and attitude of mothers and their practices of EBF.
4. 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.

Research questions:

1. What is the level of knowledge, attitude and practices of EBF among the mothers visiting Dhamanaveshi vaccine clinic?
2. What are the factors influencing the practices of EBF among the mothers?
3. Is there a relationship between knowledge and attitude of the mother and practices of EBF?
4. 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?

## 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.

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 questionnaire was provided to all the consenting mothers to collect the required information. A convenience sampling method was used in this study. 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.

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

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

sample size = 354

## RESULTS/FINDINGS AND 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 had good knowledge about EBF and all the mothers (100%) had a positive attitude to EBF their infants.

These 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 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 for antenatal mothers and the postnatal mothers as well through counselling clinics.

With the help of the 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 in hospitals, which is a global effort implemented to protect, support and promote breastfeeding.

Furthermore, breast feeding support groups can be used to educate and increase awareness among the mothers about EBF.

Since this study was undertaken in the capital city of Maldives, similar types of studies are needed to be done in different parts of the

country to understand the level of knowledge, and 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 aim 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 on and can be used to change the behaviors of breastfeeding mothers.

## **ACCESS TO FULL ARTICLE FROM:**

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# KNOWLEDGE, ATTITUDE AND PRACTICE REGARDING EMERGENCY CONTRACEPTIVES (EC) AMONG POSTNATAL WOMEN VISITING TO INDIRA GANDHI MEMORIAL HOSPITAL REPRODUCTIVE HEALTH CENTER (RHC)

Authors: Samiha Sameer

Duration: 15<sup>th</sup> March 2021 - 15<sup>th</sup> January 2022

## Key Findings:

- 59.3% of the participants were unaware of EC Pill
- 51.4% had a positive towards EC Pill

## BACKGROUND

The main aim of the research was to determine the knowledge, attitude and practice regarding emergency contraceptives (EC) among postnatal women visiting to IGMH Reproductive Health Center (RHC) and find out the relationship between knowledge and attitude on the practice of use of EC. The objectives of the study are:

1. Determine the knowledge, attitude and practice regarding EC among postnatal women visiting IGMH RHC
2. Find out the relationship between knowledge and attitude of postnatal women visiting IGMH RHC on the practice of use of EC

3. What is the knowledge, attitude and practice regarding EC among postnatal women visiting IGMH RHC?

Research question:

Is there any relationship between the knowledge and attitude of postnatal women visiting IGMH RHC, on the practice of use of EC?

## METHODOLOGY

A quantitative descriptive correlational cross-sectional design was used in this study.

Data was collected via phone interview from participants who has signed the consent

form according to their convenient time. The study population included postnatal mothers visiting IGMH RHC during the data collection period. Sampling was done using convenience sampling method for the estimated population of 469 postnatal mothers who visited IGMH RHC in the last three months (December 2020, January 2021 and February 2021). The sample calculated using Yamane formula for this population is 216

## **RESULTS/FINDINGS AND IMPLICATIONS**

This study surveyed 216 post-natal women visiting IGMH RHC between 26th August to 30th September 2021. Majority of the participants were of the age group of 26-49 (73.1%), had educational level more than secondary (54.2%), are working mothers (51.9%), living in Male' (52.8%), has a monthly income of more than 15,000 (46.8%), has 1-2 children (76.9%).

The result shows that 59.3% of the participants have never heard about EC. The study also reveals that only 1.9% had good knowledge regarding EC. However, 51.4% participants had a positive attitude towards EC. The practice of EC is also very low in this study which is 7.9%.

A significant relationship was found between the knowledge of the participants to the practice of use of EC and attitude of the participant to the practice of use of EC. However, when a logistic regression analysis was done on these variables, there is only a significant relationship between knowledge of the participants to the practice of use of EC.

Since the study shows a relationship between knowledge of the participants and the practice of use of EC, more importance could be given to post-natal mothers to educate them regarding EC. More educational sessions could be conducted for post-natal mothers as well as antenatal mothers since most of the post-natal mothers do not get time to attend educational sessions once the baby is born. Moreover, nurses and doctors could provide leaflets and pamphlets during antenatal visits and can also carry out sessions from a religious perspective.

With the result of this study, policy makers can review the current policies regarding EC usage. They can also encourage community-based education regarding EC using different strategies.

More research can be done in different areas of Maldives with larger samples to understand the knowledge, attitude and practice regarding EC. In addition, more research can be carried out with different targeted groups such as unmarried girls, men and reproductive age women to find their knowledge, attitude and practice regarding EC. Moreover, qualitative research can also be done to identify the root cause of not using EC.

## **CONCLUSION**

This research will aid in identifying gaps related to knowledge, attitude and practice regarding EC. It will also help in providing information to act as a foundation for policy planning and community targeted educational programs as well as providing a baseline data for policy makers to make their policies. It will also facilitate to identify areas to conduct further research regarding ECs in Maldives. In addition, this research can help

the reproductive health centers to provide more information regarding EC. Moreover, this research will also help nurses and practitioners to identify areas where they can improve more to make people adhere to EC and given them authentic information. The

Ministry of Health and other organizations can also make use of this research to improve and develop interventions to enhance the practice of EC.

# DIFFERENTIAL FORECASTING OF THE SPREAD OF COVID-19 IN SMALL ISLANDS WITH CONTAINMENT INTERVENTIONS

Authors: Sofoora Kawsar Usman, Dr. Mariyam Suzana & Dr. Sheena Moosa

Published on: October 2020

## Key Findings:

- The effects of interventions are particularly effective in smaller islands and even with minimal interventions.
- The capital city, Male' will require double the time and double the combinations of NPI that is required by other smaller islands to reach  $R_0$  below 1

## BACKGROUND

The aim of this study is to determine the epidemic dynamics of COVID-19, quantify the impact of the non-pharmaceutical interventions (NPIs) and forecast infection parameters in two types of island settings

Research questions:

1. How many cases can we forecast in different non-pharmaceutical containment measures?
2. How many deaths can we forecast in different non-pharmaceutical containment measures?
3. What are the most effective NPIs for small island stated?

Geo-spatial aspects affect the susceptibility and containment of infectious disease transmission. Small island geographies may make containment easy, but effective quarantine and isolation may be challenging

due to different population density and living conditions. Unlike studies of pandemics that spread in huge population and landlocked countries, only a few limited studies have looked into its spread in island settings which can have natural containment dynamics.

The small islands in the Maldives, surrounded by sea make containment easy, yet it becomes a challenge to effectively isolate those on the island. However, due to the different population density in the capital island of Maldives and other islands, we modelled the effects of the NPIs on the capital and other islands separately. This is the first time the data is publicly available opening a unique opportunity to research the COVID-19 pandemic spreading through the geographically contained island communities.

## **METHODOLOGY**

The Susceptible, Infectious, Recovered, Deceased (SIRD) model is used to forecast the spread of COVID-19 in the dense and congested urban capital island compared with the less populated small island of the Maldives. The model parameter values were informed by published materials and fitted to the Maldives.

## **RESULTS/FINDINGS AND IMPLICATIONS**

The model shows that the reproduction number  $R_0$ , ranged between 1 and 2 in all the NPI states, and  $R_0$  could be decreased to less than 1 with combined interventions (NPI3-NPI5). The effects of interventions are particularly effective in smaller islands and even with minimal interventions. The densely populated capital city, Male' will require double the time and double the combinations of NPIs to that required by other smaller islands to reach  $R_0$  below 1.

The forecasts for Maldives allowed for appropriate and more realistic risk estimation for the islands in the Atolls and Male' city. This evidence is useful in pandemic response planning by prioritizing geographic locations

for capacity building and selection of the appropriate NPIs for containment of the spread of the pandemic across the country.

## **CONCLUSION**

Epidemic modelling has greater utility for policy and planning when modelled for different populations separately rather than for the whole population especially when there are many geographically dispersed islands in the country, such as those in a number of Small Island Developing States. Findings from this model suggest that each community needs a unique mix of the NPIs based on the density and living conditions of the community.

## **CITATION:**

Usman SK, Suzana M, Moosa S (2020) Differential Forecasting of the Spread of COVID-19 in Small Islands with Containment Interventions. *J Epidemiol Public Health Rev* 5(4): dx.doi.org/10.16966/2471-8211.201

## **ACCESS TO FULL ARTICLE FROM:**

<https://www.sciforschenonline.org/journals/epidemiology-public-health/JEPHR201.php>

# GRAPHIC HEALTH WARNINGS ON TOBACCO PACKAGES: INVESTIGATING PERCEIVED EFFECTIVENESS OF GRAPHIC IMAGES AMONG COLLEGE STUDENTS IN MALDIVES

Authors: Angeela Naseer & Dr. Mariyam Suzana

Duration: 1<sup>st</sup> January 2020 – 30<sup>th</sup> December 2020

## Key Findings:

- 58.7% strongly agreed about the effectiveness of GHW compared to text warnings.
- 21% smokers attempted to quit smoking after seeing GHW.

## BACKGROUND

The mandatory Graphic Health Warning (GHW) regulation in the Maldives was effective from 31<sup>st</sup> May 2019. The introduction of GHWs can prevent smoking from being initiated by adolescents and motivate smoking cessation among smokers.

The purpose of this study was to assess the perceived effectiveness of Graphic Health Warnings among college students over the age of 18 years in the Maldives.

## 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 selected five colleges. A well-structured online questionnaire was used to collect data. Ethical approval was obtained from the NHRC and MNU ethics committee. Data were 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-smokers.

## **RESULTS/FINDINGS AND IMPLICATIONS**

The result showed that respondents had good knowledge and had given the correct answers to 91% of total knowledge on the health risk of smoking questions. 58.7% strongly agreed about the effectiveness of GHW compared to text warnings. 46% strongly agreed that graphics in cigarette packages worries 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 GHW. The results also showed that 13% of respondents had received tobacco packs without GHWs from dealers or shops. Most common avoidance behavior shows 33.8% of smokers conceal/hide the pack with a picture of liking, using paper, cover with wrapping or with tape.

## **CONCLUSION**

Knowledge and attitude towards smoking show that the perceived effectiveness of GHW is higher among non-smokers than smokers. Therefore, it is recommended to strengthen the existing smoking cessation program throughout the Maldives. Findings also highlighted the importance of rotating new graphics on the packs. It was alarming that, even when a Graphic Health Warning is mandatory and selling a tobacco package without GHWs is prohibited, 13.3% of respondents have received cigarette package from a dealer or shop without graphic health warnings. Regular inspection of tobacco dealers and shops to identify the breaches and to implement necessary actions against those who do not abide the mandatory GHW regulation is needed.

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# EARLY MEASURES FOR THE PREVENTION AND CONTAINMENT OF COVID-19 IN THE MALDIVES: A DESCRIPTIVE ANALYSIS

Authors: Dr. Mariyam Suzana, Dr. Sheena Moosa, Dr. Fathmath Nazla Rafeeg, & Sofoora Kawsar Usman

Duration: 1<sup>st</sup> December 2019 – 30<sup>th</sup> March 2020

## Key Findings:

- Maldives applied a strategy of gradual intensification of measures, imposed localized restrictive measures compared to a national lockdown and used multiple communication mechanisms to educate and engage the community.
- Despite the novelty of the virus and the limited research and literature on the virus, the local medical teams achieved low Case Fatality Rates (CFR), a high testing rate and managed a flat spread of the epidemic in the Maldives.

## BACKGROUND

This study is a descriptive analysis of the early measures for prevention and containment of COVID-19 that contributed to delaying the pandemic entry into the country and helped contain the first wave of the outbreak in the Maldives.

The Maldives attracts more than one million travelers annually placing it at a high risk of imported epidemic-prone diseases; and it has one of the most congested capital cities in the world making it a conducive environment for infectious diseases.

## METHODOLOGY

This is a descriptive study of publicly available secondary data. Social media channels, websites of stakeholder agencies, developmental and technical agencies both

nationally and internationally during 1st December 2019 to 30th March 2020 were analyzed.

## RESULTS/FINDINGS AND IMPLICATIONS

The government of Maldives initiated its first public health measures as early as January and as of March 2020, levied more than two hundred interventions to combat the outbreak of COVID-19. Unlike many countries, which imposed restrictions for weeks at a stretch, Maldives applied a strategy of gradual intensification of measures, imposed localized restrictive measures compared to a national lockdown and used multiple communication mechanisms to educate and engage the community. The public-private partnerships explored were strategic in mitigating the loss of income to the tourist



industry as well as in breaking the chain of transmission. Maldives delayed the entry of the pandemic into the country by about 90 days, and maintained its testing rate at fourth highest among United Nations Small Island Developing States and highest among the South East Asian countries.

Findings of this study offers best practices in the management of an epidemic from a very congested small city context. The engagement and collaboration of multiple stakeholders, specifically the exemplary public-private partnerships that the Maldives government explored for this outbreak, were creative and proved effective in minimizing a community spread. Constant risk communication strategy used in the operation bombarded the Maldivian population with daily updates of the disease eliminating any room for misinformation. Despite the novelty of the virus and the limited research and literature on the virus, the local medical teams achieved low Case Fatality Rates (CFR), a high testing rate and managed a flat spread of the epidemic in the Maldives.

## **CONCLUSION**

The management of a global pandemic in a resource constrained, tourism reliant, and import-oriented vulnerable economy requires decisive leadership, collective effort of multiple stakeholders, strategic partnerships and a precedence for public health measures over economic considerations. Further stringent measures and stricter compliancy are needed to combat community transmission of the disease.

## **CITATION:**

Suzana M, Moosa S, Rafeeg FN, Usman SK. Early measures for prevention and containment of COVID-19 in the Maldives: A descriptive analysis. *J Health Soc Sci.* 2020;5(2):251-264

## **ACCESS TO FULL ARTICLE FROM:**

[https://journalhss.com/wp-content/uploads/jhss\\_52\\_251-264.pdf](https://journalhss.com/wp-content/uploads/jhss_52_251-264.pdf)

# A CROSS-SECTIONAL STUDY ON FOOD SAFETY KNOWLEDGE, ATTITUDE, AND PRACTICES (KAP) OF FOOD HANDLERS IN RESTAURANTS OF MALE'-MALDIVES.

Authors: Khalisa Mohamed, Sarina Abdul Halim Lim, Wahyudi David & Ungku Fatimah Ungku Zainal Abidun

Duration: 1<sup>st</sup> October 2019 – 3<sup>rd</sup> January 2022

## Key Findings:

- All participants had acceptable level of knowledge except for “time and temperature - control” and “foodborne pathogen”.
- A significant difference was observed between trained and untrained staff in their knowledge level, attitude and practice.

## BACKGROUND

Food establishments such as restaurants are a source of foodborne diseases and food handlers are a well-known cause in contaminating the food. Although there is no current data of foodborne illnesses in Maldives, poor hygiene of the food services including the restaurants is a significant public health concern. As reflected by current data of the Health Protection Agency, there is an average of 35 public complaints per month regarding poor hygienic conditions of the restaurants in Male', the capital of Maldives. Therefore, the aim of this study is to identify the Knowledge, Attitude, and Practices (KAP) of food handlers in the restaurants of Male', Maldives.

## METHODOLOGY

The survey questionnaire was used to collect data through face-to-face interviews from 290 respondents and observation was done in 61 restaurants. Statistical analysis was conducted using SPSS software version 20.0. Descriptive statistics were used to determine the level of KAP and the Kruskal-Wallis H test and Mann-Whitney U test to evaluate the difference across sociodemographic characteristics of the food handlers. Spearman's rho correlation was used to test the relationship between KAP.

## **RESULTS/FINDINGS AND IMPLICATIONS**

Overall, the respondents showed acceptable knowledge ( $55.47 \pm 14.10$ ) and attitude ( $72.34 \pm 9.52$ ), and good practice ( $83.52 \pm 8.83$ ). The knowledge level was critically low in “time and temperature control” and “foodborne pathogen”, where only 32.05% and 14.6%, respondents answered correctly respectively. A significant relationship was shown between knowledge and attitude ( $r_s=0.414$ ,  $p<0.01$ ), knowledge and practice ( $r_s=0.304$ ,  $p<0.01$ ) as well as attitude and practice ( $r_s=-0.172$ ,  $p<0.01$ ). A significant difference was observed in knowledge across work experience ( $p=0.007$ ), attitude across education level ( $p=0.009$ ) and practice across age ( $p=0.016$ ), and education level ( $p<0.000$ ), and work experience ( $p=0.016$ ). Additionally, the level of knowledge ( $p=0.014$ ), attitude

( $p<0.000$ ), practice ( $p<0.000$ ) were significantly different between trained and untrained food handlers.

## **CONCLUSION**

In the Maldives, it is essential to have continuous and compulsory training programs for the food handlers to address the knowledge gaps. The practical training programs should be more focused to achieve a meaningful result. The government needs to play an active role in enforcing food safety through legislation and regulations. This study serves as an eye-opener for policymakers to review and improve law enforcement to address the current food safety situation in the Maldives.

## **ACCESS TO FULL ARTICLE FROM:**

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# KNOWLEDGE OF STROKE AMONG MALDIVIAN ADULTS

Authors: Hamdhoona Abdulla

Duration: 25<sup>th</sup> January 2018 – 21<sup>st</sup> March 2019

## Key Findings:

- The overall stroke knowledge score is below average
- There is a significant relationship between the level of stroke knowledge and the level of

## BACKGROUND

The purpose of the study is to identify (a) the knowledge of stroke; risk factors, warning signs and importance of timely presentation to hospital (b) compare the level of stroke knowledge with age and gender (c) the relationship between knowledge of stroke and level of education among the adults in Male' city. The research questions are:

1. What is the level of stroke knowledge (risk factors sign and symptoms and timely presentation to the hospital) among adults in Male' city?
2. Is there any difference between the level of stroke knowledge with age and gender of adults in Male' city?
3. Is there any significant relationship between knowledge of stroke and level of education among adults in Male' city?
4. Is there any association between signs and symptoms and timely presentation to the hospital among adults in Male' city?

According to the statistics of the Health Protection Agency, in the year 2012, stroke is included among 20 leading causes of death in the Maldives. It is also ranked as the third

leading cause of death in Maldives (Health Protection Agency, 2014). Due to the high burden of non- communicable diseases (NCDs) on national economies and health systems, global actions to control NCDs were declared in September 2011 (Multi-sectoral Action Plan, 2014). These facts indicate the need for health awareness and early detection and prevention of stroke in the Maldives. Scientific evidence confirms that many lives can be saved through prevention and early detection. Through lifestyle modification and screening programs, 80% of stroke is preventable (WHO, 2014).

Although cerebrovascular accident (CVA) is a leading cause of death in the Maldives, limited studies are available to identify the baseline knowledge of stroke warning symptoms, risk factors and treatment options for the adults in the community of Male'. Lack of awareness of stroke could delay the prompt arrival to hospital emergency department for immediate effective treatment (Brown et al., 2012). The longer time to reach the hospital, the greater number of brain cell death will occur (Brown et al., 2012). Therefore, it is essential to increase awareness among the general

population for preventive measures and medical treatment. It is a public health priority to increase the knowledge of stroke. Moreover, the study can focus to assist in developing educational programs for the public to improve the prevention and early treatment of stroke.

## **METHODOLOGY**

This study is a quantitative descriptive, cross-sectional research. The study sample is 270 adults between 20 to 39 years of age. A structured questionnaire was used to measure stroke knowledge and collect stroke awareness data from two areas of Male' city.

## **RESULTS/FINDINGS AND IMPLICATIONS**

The total of 161 (59.6%) female participants and 109 (40.4%) males, age 20 to 39 (M= 28) participated in the study. The overall stroke knowledge score is below average with 65.6% (N=177) participants indicating that adults in Male' city are not aware of stroke knowledge (sign and symptoms, risk factors and timely presentation to a health care facility). However, there was a significant relationship between stroke knowledge and level of education among adults. The one-way ANOVA test shows that there is significant relationship between the level of stroke knowledge with the level of education at  $p < 0.05$  level for the conditions ( $F(2, 267) = 3.191, p = 0.043$ ). Thus, the result suggested

that there is an association between the level of stroke knowledge and level of education.

The findings of the study can be used for developing future stroke awareness programs. Study confirms that existing educational programs need to be evaluated and refined to address the identified areas in the study. This study also identified baseline knowledge about stroke among the adults in Male' city, Maldives.

## **CONCLUSION**

The study identified level of stroke knowledge among the adults in Male', Maldives. The findings of the study will assist in developing future stroke awareness programs for the public to improve the prevention and early treatment of stroke. An education model needs to be developed to educate the public to increase awareness of stroke risk factors, signs and symptoms of stroke. However, further studies based on population are needed to identify the level of stroke knowledge among adults and other groups of people. Future research can also focus on identifying the need to estimate own risk of stroke among Maldivian adults.

## **ACCESS TO FULL ARTICLE FROM:**

<https://www.dropbox.com/s/d1zeejzvcwqv1t/Revised%20Thesis%20Submission-Hamdhoona%20-%20Final.pdf?dl=0>

# **KNOWLEDGE, ATTITUDE AND PRACTICES AMONG LOCAL NURSES TOWARDS PRIMARY PREVENTION AND EARLY DETECTION OF BREAST CANCER IN SELECTED HOSPITALS OF GREATER MALE' OF THE MALDIVES; A QUANTITATIVE DESCRIPTIVE STUDY**

Authors: Afsana Fahumee

Duration: January 2018 – 29<sup>th</sup> November 2018

## **Key Findings:**

- The study population has adequate level of knowledge about breast cancer.
- Participants have positive attitude towards primary preventive and early detection measures of breast cancer and they are habituated with primary preventive practices.

## **BACKGROUND**

The objective of the study is to assess the knowledge, attitude and practice on primary prevention and early detection of breast cancer among local nurses working at the hospitals in Greater Male' of the Maldives and to compare the knowledge, attitude, practice (KAP) on primary prevention and early detection of breast cancer between different designations among local nurses working at the hospitals in Greater Male' of the Maldives.

## **METHODOLOGY**

This is a non-experimental study and a quantitative descriptive design was used. Data was collected by using a structured questioner which is designed to achieve the study objectives. Population used in the study was local nurses working at hospitals in Greater Male, of the Maldives. The total target population was 512 subjects. Sample size was calculated using Raosoft sample calculator (2004) with 5% of margin of error and 90% of confidence interval. The data was analysed by using the software SPSS version 23.

## **RESULTS/FINDINGS AND IMPLICATIONS**

The results of this study showed that 24.8% of the population has low level of knowledge, 48.6% have medium level of knowledge and 26.7% have high level of knowledge. Therefore, the study population has adequate level of knowledge about breast cancer. The study also revealed that they have positive attitude towards primary preventive and early detection measures of breast cancer and that they are habituated with primary preventive practices. However, there are crucial points to be highlighted in the finding. Half of the nurses (105) marked use of contraceptives as not a risk factor of breast cancer even though their overall knowledge level is adequate.

This study helped to find the most needed area of education for prevention and early detection of breast cancer among local nurses in Greater Male'. With regard to the responsibilities of the nurses, it is important

to have ongoing education and support for nurses which are organizational responsibilities. Nurses should be equipped to develop ongoing educational practices for health promotion as a priority to maintain contextualized professional policies for practices. Recommendation for future is to conduct studies on KAP among nurses in different areas of the Maldives to bring a report that could be generalized to the local nurses working in the whole Maldives. Another recommendation is to conduct similar type of studies for the general public to get a generalized result of the whole Maldivian population on primary prevention and early detection of breast cancer.

## **CONCLUSION**

This study helped to find the most needed area of education for prevention and early detection of breast cancer among the study population.

A close-up photograph of a person wearing a white lab coat, focused on drawing a vaccine from a small glass vial into a syringe. The person's hands are the central focus, with the left hand holding the vial and the right hand holding the syringe. The background is blurred, showing what appears to be a clinical or laboratory setting. The entire image has a blue color overlay. The text 'MANAGEMENT OF DISEASES AND CONDITIONS' is overlaid in the center in a bold, sans-serif font. 'MANAGEMENT OF DISEASES AND' is in cyan, and 'CONDITIONS' is in white.

**MANAGEMENT OF  
DISEASES AND  
CONDITIONS**



# CONTACT TRACING FOR CONTAINMENT OF NOVEL CORONAVIRUS DISEASE (COVID-19) IN THE EARLY PHASE OF THE EPIDEMIC IN THE MALDIVES

Authors: Ibrahim Afzal, MBBS, MSc, Raheema Abdul Raheem, MPH, PhD, Nazla Rafeeq, MBBS, MPH, Sheena Moosa, MBBS, PhD

Published on: August 30, 2020

## Key Findings

- The actual number of cases are lower than that of the predicted number of cases
- Results indicate that the contact tracing efforts and the containment measures were effective.

## INTRODUCTION

Contact tracing is one of the fundamental interventions in epidemic investigation and control of an epidemic with the goal of reducing the number of onward infections from the traced contact.

## METHODOLOGY

In the first phase, a mathematical model was developed to estimate the number of cases and contacts per imported case by considering the possible encounters of a traveler to the Maldives. The data from the actual confirmed cases and contacts were extracted from the Outbreak database. The data from the model are then compared with the actual contact tracing of COVID-19 in the country. Inferences were drawn on the efficiency and effectiveness of contract tracing in containing disease transmission

with reference to the mathematical model. Since the data are not normally distributed, a Mann-Whitney  $U$  test was carried out to find whether there is a significant difference in actual and predicted data.

## RESULTS

Mann-Whitney  $U$  test result showed that there is a statistically significant difference between the predicted number of cases and the actual number of cases. The actual number of cases are lower than that of the predicted number of cases each week, which indicates that the containment measures implemented in Maldives were successful in reducing the peak of the outbreak. Mann-Whitney  $U$  test result showed that there is a statistically significant difference between the predicted number of contacts and the actual number of contacts.

## **CONCLUSION**

The approach to contact tracing in the Maldives following imported cases of COVID-19 was vigorous and was effective in identifying close to all contacts. The effectiveness in containment is associated with the prompt quarantine, isolation of contacts and suspected cases, which delayed the community spread.

## **CITATION:**

Afzal I, Abdul Raheem R, Rafeeq N, Moosa S. Contact Tracing for Containment of Novel Coronavirus Disease (COVID-19) in the Early Phase of the Epidemic in the Maldives. *Asia Pacific Journal of Public Health*. 2021;33(1):131-133.  
doi:10.1177/1010539520956447

## **ACCESS TO FULL ARTICLE**

### **FROM:**

<https://journals.sagepub.com/doi/full/10.1177/1010539520956447>

# 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: 15<sup>st</sup> August 2020 – 15<sup>th</sup> December 2020

## Key Findings:

- 9% of patients with COVID-19 had depression while 23% of patients had anxiety and 12% of the patients had stress.
- Symptomatic cases had a significantly higher level of stress than asymptomatic patients.

## 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 AND 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.

**CITATION:**

Dey, R.K., Mansoor, S., Hilmy, A.I. et al. Emotional distress in COVID-19 patients in Maldives. BMC Psychiatry 22, 184 (2022).

**ACCESS TO FULL ARTICLE**

**FROM:**

<https://bmcp psychiatry.biomedcentral.com/articles/10.1186/s12888-022-03826-1>

# CLINICAL MANIFESTATIONS AND PROGRESSION OF COVID-19: A CASE REPORT FROM THE MALDIVES

Authors: Rajib Kumar Dey, Abdullah Isneen Hilmy, Ali Zaadhee, Zaidhoon Jaleel, Ahmed Zooshan, Afa Ibrahim, Azna Waheed, Saifullah Waseel, Mariyam Hishma, Mariyam Naseem, Mariyam Shahana Mufeed, Mihunath Mustafa, Dhunya Thaufeeq, Rania Nabil, Hisham Ahmed Imad, Abdul Azeez Yoosuf, Ali Nazeem1 & Ali Abdulla Latheef

Published on: August 2020

## Key Findings:

- Utilization of the awake prone positioning resulted in better oxygenation and aided in the improvement of hypoxemia.

## ABSTRACT

A cluster of pneumonia was reported from Wuhan, Hubei province, China in December 2019. The causative agent was named as novel coronavirus "SARS-CoV-2" and the disease as COVID-19. The disease rapidly spread to several countries and WHO declared the outbreak as a Public Health Emergency of International Concern and as a pandemic on 11th March 2020. In the Maldives, the first case of COVID-19 was detected on the 7th of March. At the time of writing, there are 3103 cases of confirmed COVID-19 including 15 fatalities. The SARS-CoV-2 causes mild to severe pneumonia complicated by ARDS, sepsis, and multi-organ dysfunction syndrome. Other manifestations include anosmia, ageusia, fatigue, and rash. In many requiring hospitalization, hypoxemia is a key clinical finding. The clinical manifestations including

the clinical progression of COVID-19 is being described in this report. The case was conservatively managed in a makes-shift hospital, with the utilization of the awake prone positioning which had resulted in better oxygenation and aided in the improvement of hypoxemia.

## CITATION:

Dey, R. K., Hilmy A. I., Zaadhee, A., Jaleel, Z., Zooshan, A., Ibrahim, A. ... Latheef, A. A. (2020). Clinical manifestations and progression of COVID-19 : a case report from the Maldives. *Maldives National Journal of Research*. 8(1), 96-105.

## ACCESS TO FULL ARTICLE FROM:

<http://202.1.196.72/jspui/handle/123456789/8547>

# MANAGEMENT OF THE FIRST SEVERE CASE OF COVID-19 IN THE SMALL ISLANDS OF MALDIVES

Authors: Moosa Hussain , Mohamed Ali, Mohamed Ismail, Mohamed Soliman, Milza Muhsin, Aminath Nazeer, Maeesha Solih, Aminath Arifa, Ali Latheef, Ahmed Ziyah, Ahmed Shaheed, Nazla Luthfee, Nazla Rafeeq, Aishath Shifaly and Sheena Moosa

Publication Date: 7 June 2020

## Key Findings:

- Epidemiological investigation showed travel history from a country with COVID -19 community spread and it is likely that the patient was exposed to infection from their last travel destination.
- Prompt oxygenation and supportive management proved effective in producing positive

## ABSTRACT

The first cases of COVID19 in the Maldives was reported on 7th March 2020 with a total of 13 cases by 27th March from number of resort islands and were confined to the islands in which the cases were detected. This report describes the clinical course and management of the first severe case that required intensive care. Treatment strategy adopted was supportive and patient improved with timely symptomatic management. This case highlights the importance of epidemiological surveillance and active case finding to detect and diagnose the case at an early stage for appropriate clinical management for positive outcomes in high risk groups.

## CITATION:

Hussain, Ali, Ismail, Soliman, Muhsin, Nazeer, Solih, Arifa, Latheef, Ziyah, Shaheed, Luthfee, Rafeeq, Shifaly, & Moosa. (2020, June 7). Management of the first severe case of COVID-19 in the small islands of Maldives - ScienceDirect. Management of the First Severe Case of COVID-19 in the Small Islands of Maldives - ScienceDirect. <https://www.sciencedirect.com/science/article/pii/S2213007120302082>

## ACCESS TO FULL ARTICLE FROM:

<https://www.sciencedirect.com/science/article/pii/S2213007120302082>

# IMPACT OF COVID-19 ON PERSONS WITH DISABILITIES IN THE MALDIVES

Authors: Dr. Sheena Moosa, Fathimath Riyaza & Sofoora Kawsar Usman

Duration: 14<sup>th</sup> May 2020- 15<sup>th</sup> June 2020

## Key Findings:

- The disability prevalence from the study was 13.4% for males and 14.9% for females.
- PWDs were observed to be more vulnerable, with 62% indicating stress from confinement compared 44% of those without a disability.

## 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.

## 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 has been measured based on the Washington Group Short Set on Disability. The cut-off to define the population of PWD is those with at least one domain that is coded as a lot of difficulty or cannot do it at all.

## RESULTS/FINDINGS AND 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 observed to be more vulnerable, with 62% indicating stress from confinement compared to 44% of those without a disability.

## CONCLUSION

The findings indicate that the higher needs for 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.

**CITATION:**

Moosa, Riyaza, & Usman. (2020, October 31). Impact of COVID-19 on Persons with Disability in Maldives | United Nations in Maldives. United Nations Maldives. Retrieved September 29, 2022, from

<https://maldives.un.org/index.php/en/102379-impact-covid-19-persons-disability-maldives>

**ACCESS TO FULL ARTICLE**

**FROM:**

<https://maldives.un.org/index.php/en/102379-impact-covid-19-persons-disability-maldives>



# EFFECTIVENESS OF ‘TINY HEARTS’ PROGRAMMES IN ADDRESSING CONGENITAL HEART DISEASES IN MALDIVES

Authors: Dr. Sheena Moosa

Duration: 1<sup>st</sup> June 2019 - 30<sup>th</sup> November 2019

## Key Findings:

- The average age at diagnosis of CHD for those born prior to 2009 was 6.5 years and decreased to 4 months for those born from 2009 to 2018.
- The beneficiaries had ‘very good’ experience with the services of THM.

## BACKGROUND

The purpose of this study is to assess the effectiveness of programmes conducted by Tiny Heart Maldives (THM) targeting congenital heart diseases (CHD) in Maldives. Research questions:

1. What are the medical outcomes of the Care for Tiny Hearts Programme conducted by THM?
2. What are the perceptions of the beneficiaries and stakeholders on the programmes of THM?

Research problem:

Congenital heart disease (CHD) accounts for about 30 per cent of birth defects across the globe (Christianson, Howson, & Modell, 2005) and affects similar proportion of newborns in the Maldives (Ministry of Health 2018). This research is inspired by the work of Tiny Hearts Maldives (THM), a non-governmental non-profit organisation that endeavors to fill

the gap in providing information and support access to treatment for Maldivian parents on children’s heart health issues, with particular emphasis on CHD.

## METHODOLOGY

A quantitative analysis of the cohort of 550 patients registered at Tiny Heart Maldives over the period 2008-2018 was used for a retrospective analysis of selected parameters that affect the management and care of children with CHD. International Classification of Diseases version 10 (ICD-10) was used to categorize the CHDs for the purpose of the analysis of descriptive statistics. In addition, qualitative analysis of beneficiary and stakeholder interviews were conducted to understand their experiences and perspectives of the THM programmes.

## **RESULTS/FINDINGS AND IMPLICATIONS**

More than half of the patients (53%) are diagnosed with Q21 followed by Q25 (21%) and Q20 (10%) of the ICD-10 categories. Age at diagnosis of CHD showed a marked difference for those born before 2009 and thereafter. The average age at diagnosis of CHD for those born prior to 2009 was 6.5 years and decreased to 4 months for those born from 2009 to 2018. Overall, 33% of the patients received surgical treatments with most of the patients with a Q20 (55%) and Q25 (56%) diagnosis of CHD and average age at surgery decreased from 3 years before 2009 to less than 1 year in the two time periods. There was a steep increase in new cases registered since 2009, peaked at 2010, but has plateaued since 2014.

The beneficiaries had 'very good' experience with the services of THM. They were able to share the situation for their children with family and friends without stigma and majority reported that their children have opportunities to participate in school activities. Areas of further support identified by the beneficiaries include caring and nutrition advice and accessing information that is condition specific to the particular CHD, information about danger signs and home-based care and facilitating cardiologist appointments. Stakeholders noted the need for outreach camps to the atolls, joint planning, and improving coordination. Furthermore, the need for maintaining THMs

strategic focus on children was stressed while THM expands its new initiatives such as 'Healthy Heart'.

The 'Care for Tiny Hears' programme with its focus on community-based camps for screening of children for CHD, in collaboration with local and international specialists and hospitals, is successful by providing opportunities for early detection and access to treatment. In order to maintain success, THM needs to strengthen their partnership with local health care providers and financing schemes and expand reach to the atolls.

## **CONCLUSION**

The characteristics of this programme has the potential to be replicated in other resource-limited settings to improve child survival. Early detection and timely intervention of CHDs will be an important contribution towards the goal 3.2 of the sustainable development goals.

## **ACCESS TO FULL ARTICLE FROM:**

Tiny Heart Maldives.

# PARENTAL STRESS AND ASSOCIATED FACTORS IN AUTISM SPECTRUM DISORDER: A COMPARATIVE STUDY AMONG MOTHERS IN INDIA AND THE MALDIVES.

Authors: Fathimath Ashan & Dr. Mareena Susan Wesley

Duration: January 2019 – October 2019

## Key Findings:

- There was an increase in means for stress with diagnosis severity. Significantly greater stress was found for longer duration of diagnosis (more than 2 years) compared to relatively recent diagnosis duration (less than 2 years).

## BACKGROUND

The objectives of the research are:

1. To identify stress among parents of children diagnosed with Autism Spectrum Disorder (ASD) in Maldives in comparison with parents of children diagnosed with ASD in India,
2. To explore factors such diagnosis severity, parenting styles and duration of diagnosis as contributing factors for this stress in these two cultures.

Parents of children diagnosed with ASD experience higher levels of stress compared to parents of typically developing children. This stress affects the caretaking routine of the child, affecting the overall well being of the child. With the high prevalence of this disorder among south Asian countries (1 in 93 children), it is important to identify this stress level among parents and to identify

factors associated with this stress. This will aid in developing strategies or interventions for parents with regard to managing their stress at an early stage. The findings will also provide indications for medical professionals and clinical psychologists to provide professional support and psychoeducation for parents when giving a diagnosis for ASD.

## METHODOLOGY

The participants were 49 mothers, 23 from India and 26 from Maldives, with children diagnosed with autism spectrum disorder. These parents were selected based on purposive sampling method. The design of study was a quantitative factorial design (3 X 3 X 2).

## **RESULTS/FINDINGS AND IMPLICATIONS**

The results indicated increased levels of stress among mothers and this stress level was higher for mothers in India. There was also an increase in means for stress with diagnosis severity. However, no significant difference was found for parenting styles. Significantly greater stress was found for longer duration of diagnosis (more than 2 years) compared to relatively recent diagnosis duration (less than 2 years). Moreover, there was a significant difference between the types of parenting styles opted by each country. There are important implications of these results. First, it is important for the parents to become aware of increased levels of stress and factors associated with stress and start personal therapy to curb and reduce the stress. Second, the findings will aid the clinicians in conveying prognosis of future outcome, based on the factors identified as

contributing to stress. This study also encourages researchers to continue investigating other strong factors such as social support, family living condition and type of intervention which might affect this stress.

## **CONCLUSION**

The findings of this study will help parents of children diagnosed with this stress to be more aware of this stress and identify factors associated with this stress. Hence, it will help them to manage it well and adapt to the situations successfully. This adaptation in parents will result in effective involvement of the parent in the child's treatment process, hence leading to better enhancement of the treatment process and a better prognosis. Additionally, as the findings aid professionals (psychiatrists and clinical psychologists) in conveying a prognosis of future outcome, it results in a more collaborative effort and develops more trust towards the clinicians.

# DIFFERENCES IN QUALITY OF LIFE AMONG EMPLOYED AND UNEMPLOYED PERSONS WITH DISABILITIES IN MALE' CITY

Authors: Aishath Siyaana

Duration: 26<sup>th</sup> May 2018 - 26<sup>th</sup> May 2019

## Key Findings:

- Employed persons with disabilities had higher quality of life than the unemployed participants
- Quality of life of women with disabilities and men with disabilities did not have any

## BACKGROUND

The literature shows that there are numerous persons with disabilities belonging to the working age group. However, employment of persons with disabilities is comparatively lower than the general population, although employment is among the many factors that were shown to influence the quality of life of persons with disabilities. To date, there is no known nationwide survey done to evaluate the prevalence of persons with disabilities in the Maldives. Data regarding the employment situation of persons with disabilities is also lacking. Moreover, studies aimed at this marginalized group are limited.

The present study aims to compare the differences in quality of life among employed and unemployed men and women with disabilities in Male' City of the Maldives. It also aims to identify the factors that influence their quality of life.

## METHODOLOGY

A comparative mixed method of study design was employed to collect data from 125 persons with disabilities. 75 were employed and 50 were unemployed in the Male' City. Face to face interviews with a semi structured questionnaire was used to collect data. Semi structured questionnaire was used to collect data on socio demographic characteristics and quality of life was assessed by the quality-of-life scales. In addition, opinions regarding the factors that may have contributed to their quality of life were identified through two open ended questions.

## RESULTS/FINDINGS AND IMPLICATIONS

It was observed that employed persons with disabilities had higher quality of life than the unemployed participants ( $U = 050$ ,  $z = -9.64$ ,  $p = 0.00$ ,  $r = 0.85$ ). However, findings from this research showed that quality of life of women

with disabilities and men with disabilities did not have any significant difference ( $U = 0.50$ ,  $z = -.82$ ,  $p = 0.05$ ,  $r = 0.07$ ). As for the factors affecting the quality of life of persons with disabilities, 11 factors were recognized as helpful in improving their quality of life and 13 were identified as having negative impact on their quality of life.

## **CONCLUSION**

It was observed that employed persons with disabilities had higher quality of life than the unemployed. However, findings from this research showed that quality of life of women

with disabilities and men with disabilities did not have any significant difference

As for the factors affecting the quality of life of persons with disabilities, 11 factors were recognized as helpful in improving their quality of life and 13 were identified as having negative impact on their quality of life.

## **ACCESS TO FULL ARTICLE FROM:**

[siyaana9762@gmail.com](mailto:siyaana9762@gmail.com)

A hand is pointing at a laptop screen, which is partially visible. The background is a blurred office setting with other people. The entire image has a blue overlay. The text is overlaid on the hand and laptop area.

**HEALTH AND  
SOCIAL CARE  
SERVICES  
RESEARCH**

# NAVIGATING THE HEALTH SYSTEM IN RESPONDING TO HEALTH WORKFORCE CHALLENGES OF THE COVID-19 PANDEMIC: THE CASE OF MALDIVES (SHORT CASE)

Authors: Sofoora Kawsar Usman, Dr. Sheena Moosa, Aminath Shaina Abdullah

: 11 March 2021

## Key Findings:

- While the policy of lockdown bought time to increase hospital beds and devices, the country was unable to increase the healthcare workforce.
- As the lockdown eased, the exponential increase of cases took Maldives to the global one per capita incidence.

## BACKGROUND

Being a small island and low-middle income country (LMIC) heavily dependent on global markets for sustaining its basic needs and health system, Maldives faced specific challenges during the COVID-19 pandemic. This was reinforced through tensions between the heavily centralized healthcare delivery and a partially decentralized public health system. Using the pillars of pandemic response proposed by the World Health Organisation.

## METHODOLOGY

This article explores the planning assumptions, resource estimations and strategies adopted to equip the health system with resources for the pandemic response. Categorized into three phases. The planning for the pandemic response can be described

as an agile process, Mathematical modelling was used to forecast the spread of COVID-19 in Maldives, and nowcasted as the pandemic spread particularly in the extremely densely populated Malé area. The WHO surge planning support tool made available for the country at its development stage was used to estimate the number of hospital beds required and the detailed human resources for medical care.

## RESULTS/FINDINGS

The resource need estimates based on projections for COVID-19 identified a shortfall of medical professionals to care for patients while maintaining 55% of the workforce for regular healthcare across the atolls.



The findings show that while the policy of lockdown bought time to increase hospital beds and devices, the country was unable to increase the healthcare workforce. Furthermore, as the lockdown eased, the exponential increase of cases took Maldives to the global one per capita incidence. Despite this, with cautious planning and use of resources, the country has so far managed to maintain low mortality from COVID-19. The lessons from this experience are paramount in future pandemic response planning, not only for Maldives, but other small island LMICs.

## **CONCLUSION**

The preparedness and response of the health system in Maldives focused on contextual enablers and constrainers proposed by Top and colleagues<sup>3</sup> by drawing on the organizational characteristics of health services, increasing health care worker preparedness with short term training and supervision, peer support mechanism, facilitation of logistics, and community preparedness and policy support to implement localised operational procedures. The case of Maldives shows that lockdown is not always an option for LMICs to contain the pandemic, and highlights that countries need

to invest in early detection and timely analysis of the information for evidence-based decisions for balancing societal functioning and health system capacity.

Two major policy recommendations can be drawn from this case study. Firstly, small LMICs should pay greater attention to health workforce capabilities in planning a pandemic response. Secondly, the health workforce debate needs a global approach to understand the diverse contexts and the specific needs of small LMICs for health workforce policy and management.

## **CITATION:**

Usman, S. K., Moosa, S., & Abdullah, A. S. (2021, March 11). Navigating the health system in responding to health workforce challenges of the COVID-19 pandemic: the case of Maldives (short case). *The International Journal of Health Planning and Management*, 36(S1), 182–189. <https://doi.org/10.1002/hpm.3136>

## **ACCESS TO FULL ARTICLE FROM:**

<https://onlinelibrary.wiley.com/doi/abs/10.1002/hpm.3136>

# RISK COMMUNICATIONS IN THE EARLY PHASE OF THE COVID-19 PANDEMIC: THE MALDIVES' EXPERIENCE

Authors: Thasleema Usman, Dr. Sheena Moosa

Published on: December 2020

## Key Findings:

- The interviews with the team members indicated that the strategy of risk communication for COVID-19 in the country was scoped beyond the health risks.
- Risk communication implemented a wide range of communication strategies and medium including traditional and digital media that has enabled access to a large segment of the population.

## BACKGROUND

Risk communication strategies and modalities are at the heart of the pandemic response containment and mitigation. As the pandemic unfolded across the world, a small island country like the Maldives in democratic transition and highly dependent on other economies perceived risks beyond that of health effects to the economic and political spheres. In this context, the multi-media approach adopted in communicating risks and response interventions were effective in building confidence in the national response towards transmission of COVID-19 specific knowledge and prevention behaviour. Despite best efforts, shortcomings were experienced in reaching vulnerable segments such as migrants and persons with disabilities. The prolonged pandemic demands re-focusing risk communication towards empowering institutions for providing low risk modalities

for individuals returning to work and daily life with preventive behaviours.

## METHODOLOGY

Based on the evolving nature of the pandemic and its risk communication response, the study adopted a participatory action research method (Kochy et al., 2010). Action research involves the “systematic collection and analysis of data for the purpose of taking action and making change” by generating practical knowledge (Gillis & Jackson, 2002, p. 264).

As noted by other researchers, action research relies on multiple data sources, in part to enhance legitimacy of the research, and to improve quality of the findings by triangulation of data from different sources (MacDonald, 2012). As such, data for this study was gathered for the period March to May 2020 through in-depth interviews with the team members of risk communications

cluster at the Maldives National Emergency Operations Centre for COVID-19. The interviews focused on understanding the decision-making process regarding scoping, the audience segmentation, choice of mediums, content and prioritisation. Additionally, analysis was carried out on the records and data kept by the communications team. Records and materials reviewed included process flow, concept notes, risk communication strategy, monitoring sheets, and cluster meeting notes. Further, records of data from medial monitoring, social listening were used to triangulate the findings.

## RESULTS

The interviews with the team members indicated that the strategy of risk communication for COVID-19 in the country was scoped beyond the health risks. The results also showed that the audience segmentation and messaging is consistent with the principles of the communication strategy.

Risk communication implemented a wide range of communication strategies and medium including traditional and digital media that has enabled access to a large segment of the population. Results showed that HPA official website and social media platforms are most popular with 99,352 subscribers to the HPA Viber community.

The results of bot quiz show that knowledge on COVID-19 transmission and preventive measures is high, but not adequate with regard to symptoms of COVID-19.

## CONCLUSION

Risk communication scoped beyond health with the focus on building public's confidence in the response through multi-media approach has been effective. The prolongation of the pandemic poses challenges to sustain the high level of focused risk communication. More attention is required to ensure risk communication addresses those that are currently left behind due to their vulnerabilities. Further, there should be mechanisms put in place to monitor the impact of the communication. A longer-term approach is needed to empower the community to return to normative societal functions by providing supportive environments and adopting modalities to live and work that lowers the risk of transmission of COVID-19, while awaiting preventive or treatment discoveries.

## CITATION:

Usman, T. & Moosa, S. (2020). Risk communications in the early phase of the COVID-19 pandemic : the Maldives' experience. Maldives National Journal of Research. 8(2), 41-49.

## ACCESS TO FULL ARTICLE FROM:

<http://202.1.196.72/jspui/handle/123456789/8632>

# EVALUATION OF AN ONLINE LEARNING PACKAGE DEVELOPED TO SUPPORT THE COVID-19 RESPONSE OF NURSES WORKING IN REGIONAL AND ATOLL HOSPITALS IN THE MALDIVES

Authors: Asiya Ibrahim, Aminath Shafia, Sizna Mohamed

: August 2020

## Key Findings:

- Majority of nurses found the learning package more than satisfactory in each aspect evaluated.
- The findings of this study can be considered as a useful baseline for developing short term

## BACKGROUND

In the global crisis of COVID-19 pandemic and the unparalleled health emergency, nurses are the largest healthcare professional group providing frontline care in hospitals as well as other areas such as quarantine and isolation facilities. Additionally, due to the nurses' vital role in the care and management of the COVID-19 patients it is important that lifesaving information is delivered to them as well as other health professionals. Hence, School of Nursing (SN), Maldives National University (MNU) developed a short online learning course on nursing care of COVID-19 patients as per the request of the Ministry of Health (MoH), Maldives. The aim of the research was to evaluate the online learning package developed in the Maldivian context

for nurses with little or no previous knowledge and skills in the care of COVID-19 patients.

## METHODOLOGY

A cross sectional online questionnaire survey was used to collect data and an exploratory analysis was conducted.

## RESULTS/FINDINGS

The quantitative findings showed that majority of nurses found the learning package more than satisfactory in each aspect evaluated.

## **CONCLUSION**

The overall consensus of the qualitative findings were the participants found learning online very helpful and informative. Therefore, the findings of this study can be considered as a useful baseline for developing short term online courses to address learning needs in emergency situations such as pandemics.

## **CITATION:**

Ibrahim, A., Shafia, A. & Mohamed, S. (2020). Evaluation of an online learning package developed to support the COVID-19 response of nurses working in regional and atoll hospitals in the Maldives. *Maldives National Journal of Research*. 8(1), 123-135.

## **ACCESS TO FULL ARTICLE FROM:**

<http://202.1.196.72/jspui/handle/123456789/8563>

# SATISFACTION OF CARETAKERS TOWARDS GOVERNMENT’S HOME VISIT PROGRAM FOR BED RIDDEN PATIENTS IN GREATER MALE’ REGION

Authors: Dr. Amir Taj, Dr. Mariyam Suzana & Mohamed Zaid

Duration: 30<sup>th</sup> June 2021 - 20<sup>th</sup> June 2022

## Key Findings:

- Two thirds of the caretakers were females, between the age group of 31 to 50 years of age, majority were married, and had an educational level below diploma.
- 87% of the Caretakers were satisfied with the government’s home visit program

## BACKGROUND

Dhamanaveshi has been conducting the home visit program for fully bedridden, 65 years and above aged patients since 2015. It is a program initiated as per government policy to address quality home-based care for elderly in Greater Male area and Hulhumale Hospital’s Public Health unit also provide this service in Hulhumale respectively. Although it has continuously been conducted for the past 6 years, there has been no formal assessment done for program evaluation, neither the challenges faced by the home visit team has been expressed, nor even the caregivers’ satisfaction has been identified through proper research or analysis. This study explored satisfaction of caretakers of the bedridden patients in the government’s home visit program in Greater Male’ area.

## METHODOLOGY

A quantitative study using a Dhivehi language Google questionnaire was conducted in all the registered bedridden patients’ homes of Greater Male’ area (Male’ & Hulhumale). A sample of 145 caregivers of bedridden patients who were selected from the registers of Dhamanaveshi and Hulhumale Hospital using the census sampling technique were interviewed.

## RESULTS/FINDINGS AND IMPLICATIONS

Almost two thirds of the caretakers were females, majority fall in the age group of 31 to 50 years of age, majority were married, and majority had an educational level below diploma and 60% of the caretakers were employed. A third of the caretakers had a monthly income below minimum wage, while a quarter enjoyed earnings of 15000 MVR or above per month. Almost two thirds of the

bedridden patients had stroke as cause of their illness and remaining were having other diseases like heart or respiratory diseases. 87% of the caretakers were overall satisfied with the government's home visit program. 69.9% of the caretakers were satisfied with services provided by the team, 67.5% were not satisfied with the procedures and 58.5% were satisfied with the training given during home visits. 51% wanted physiotherapy to be added as preferred service to the home visit program, 30% wanted specialist consultations, 9% wanted prescription medicines delivery and 16% caretakers opted for the blood and urine samples of routine investigations to be delivered to the health center or laboratory.

## **CONCLUSION**

Overall, the majority of the caretakers were satisfied with the government's home visit program, with a substantial number of caretakers showing dissatisfaction towards procedures and trainings provided by the home visit teams. Physiotherapy and specialist consultation services were the most preferred services to be added to the current home visit program.

## **ACCESS TO FULL ARTICLE FROM:**

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# THE EXPERIENCES OF TREE TOP HOSPITAL (TTH) NURSES IN THE COVID-19 PANDEMIC IN THE MALDIVES

Authors: Khadhiyya Simany & Asiya Ibrahim

Duration: 20<sup>th</sup> November 2020 to 21<sup>st</sup> April 2021

## Key Findings:

- There is a need to have the improved continuous skill and knowledge development of nurses to support nurses overcome challenges in care.
- There is a need to address psychological issues and ensure efficient infection control

## BACKGROUND

The research study aimed to explore nurses' experiences in providing nursing care for COVID-19 patients in the Tree Top Hospital (TTH) COVID-19 facility of the Maldives. Understanding nurses' experiences will help analyze the nursing care and further develop



Figure 1 shows the major Themes themes developed

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 was performed for researcher bias.

## **RESULTS/FINDINGS AND 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 developed. Further analysis determined the themes from the clusters.

## **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, 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.

# QUALITY OF HEALTHCARE SERVICES AND ITS RELATIONSHIP WITH THE LEADERSHIP STYLES: A STUDY OF HOSPITALS IN THE MALDIVES

Authors: Dr. Sidra Jamil

Duration: 9<sup>th</sup> September 2020 - 16<sup>th</sup> February 2021

## Key Findings:

- It was observed that Distributive Leadership (DL) style was more prominent
- 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.

## BACKGROUND

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 provider's 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.

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)

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 AND IMPLICATIONS**

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.

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.

## **CONCLUSION**

Leadership styles of the care providers (clinical/non-clinical) need to be identified and how leadership as a process effects 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:

1. Exploring leadership styles of the healthcare administrators
2. Studying healthcare employee's performance after additional management training
3. 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.

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# QUALITY OF WORK LIFE AMONG NURSES AT INDIRA GANDHI MEMORIAL HOSPITAL IN THE MALDIVES: A CROSS-SECTIONAL STUDY

Authors: Aishath Hudha

Duration: 1<sup>st</sup> June 2019 – 31<sup>st</sup> August 2019

## Key Findings:

- In work life / home Life the main factor causing satisfaction among the participant was that they were able to balance the work.
- The main elements which caused disagreement were to deliver employees on-site childcare services, ill childcare services and day care for elderly parents.

## BACKGROUND:

The aim of this research is to assess the quality of work life of nurses and identifying the factors impacting work life of nurses working at Indira Gandhi Memorial Hospital. The research objectives were:

To assess the quality of work life of nurses working at Indira Gandhi Memorial Hospital. To identify factors which impact work life of nurses working at Indira Gandhi Memorial Hospital. Research Questions:

1. What are the quality of work life of nurses working at a tertiary care hospital in the Maldives?
2. What are the factors which impact quality of work life among Nurses in Indra Gandhi Memorial Hospital of the Maldives?

## METHODOLOGY

1. A deductive approach and a cross-sectional quantitative research paradigm was used in the study.
2. Sampling technique used to select the participants was stratified random sampling The tool used in this data was (Brooks and Anderson, 2004) Brooks' quality of nursing work life survey.
3. Home Life, Work Design, Work Context and Work World

## RESULTS/FINDINGS AND IMPLICATIONS

The study had shown that the nurses working at IGMH had moderate QWL. In work life /

home life the main factor causing satisfaction among the participant was that they were able to balance the work. However, the main elements which caused disagreement were to deliver employees on-site childcare services, ill childcare services and day care for elderly parents.

## **CONCLUSION**

The health sector would be able to assess the quality of work life of nurses thus identifying the factors which impact work life of nurses.

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# DOES SOCIAL SUPPORT EXPLAIN THE PSYCHOSOCIAL WELLBEING OF FAMILY MEMBERS OF SUD PERSONS IN THE MALDIVIAN POPULATION? – A QUALITATIVE STUDY

Authors: Azra Abdul Sattar

Duration: March 2019 - September 2019

## Key Findings:

- The CFMs were observed to endure several obstacles and distress in their attempts to assist their relative. The CFMs do receive informal social support from a close person. Formal social support was observed to be insufficient.

## BACKGROUND

The aim of the study was to understand the challenges that the families go through due to having a substance use disorder (SUD) person in the family, specifically if the presence or absence of informal social support (from society and close persons) serves to influence coping. Additionally, we will explore the importance of developing a formal support system (government or NGO) for families of SUD persons.

Research questions:

1. Are there strains on the family members who take on the role of guardian or care-giver due to providing care for substance use disorder (SUD) person?
2. Do the family members receive social support in the form of formal support from organizations (government and NGO)?
3. Do the family members receive social support in the form of informal social support (from other family members, relatives, community and friends)?

The aims of this research are;

1. To explore the issues and burdens concerned family member (CFM) of SUD persons may face due to the possible absence of formal and informal support from the society. The research is based on the population of Maldives; a community of people who have close-knit family ties and shares a homogeneity across the country with regard to their religion, culture, language and traditions.
2. It is notable that research on this specific population (families of SUD people in Maldives) is non-existent despite the

prevalence of SUD and substance use problem behavior.

3. In addition, the field of addictions research would benefit from the knowledge of the limitations and complexities a Small Island Developing State (SIDS) face in provision of assistance and intervention for SUD.

## **METHODOLOGY**

All data were collected using qualitative method (interviewing), one-on-one with participants.

In order to explore the lived experiences of families of SUD persons, interviews were conducted with the CFM. Recruitment of participants was facilitated by the National Drug Agency (NDA). The participants were the registered caregiver at the agency. To practice consistency of experiences with SUD person and the participants, a condition for purposive sampling was that the SUD person and the family member share (or have shared) the same household. The participants were a parent, spouse, adult children, siblings or a relative.

To understand the view of service providers in the field of drug prevention and treatment, two professionals were interviewed (two officials of authority, one from NDA and one from Journey). These participants were able to shed light based on their expertise in the field to the current services and assistance provided to the family members of SUD persons and improvements or changes they see were necessary in order to assist the family members. They were also questioned on the importance of the family's role in the treatment of SUD persons.

The interview schedule was developed based on literature and the requirements for the study.

The interview schedule was based on phenomenological semi-structured interview basis. This allows focus and control on directing the interview to cover all important objectives of the study. All interviews were transcribed and analysed manually utilising thematic analysis as described by Braun and Clark (2006).

## **RESULTS/FINDINGS AND IMPLICATIONS**

The first question explores the possibility of strains on the CFM in provision of care for their relative. The CFMs were observed to endure several obstacles and distress in their attempts to assist their relative. Additional questions asked from the CFM to investigate the availability of formal and informal social support demonstrated that the CFM do receive informal social support from a close person. However, they also face a lot of difficulties due to other members in the community. Formal social support was observed to be insufficient. Due to the lack of formal support as well as the hardship due to the community, the informal social support the CFM receive from a close person alone seems to be insufficient in lifting the strains they endure.

The research suggests that due to the insufficient formal support as well as the scrutiny the CFM face from members of the community, their wellbeing is markedly strained.

Formal support needs to be increased, this includes hotlines to call in emergencies, drop-in centers in addition to regular family



counselling sessions is important. This is of utmost importance as the family members play a major role in the recovery of SUD persons; the wellbeing and awareness of CFM will contribute to a smooth recovery and transition back into the society of the SUD relative.

## **CONCLUSION**

Currently, there is no known data on this topic for the Maldivian population. Therefore, this research is expected to assist in understanding the complaints and obstacles the CFM undergo.

# ACHIEVING UNIVERSAL HEALTH COVERAGE IN SMALL ISLAND STATES: COULD IMPORTING HEALTH SERVICES PROVIDE A SOLUTION?

Authors: Mariyam Suzana, Helen Walls, Richard Smith & Johanna Hanefeld

February 2018

## Key Findings:

- Tuvalu and the Maldives were the highest importers of healthcare and notably have public schemes that facilitate medical travel and help lower the out-of-pocket expenditure on medical travel.

## BACKGROUND

Universal health coverage (UHC) is difficult to achieve in settings short of medicines, health workers and health facilities. These characteristics define the majority of the small island developing states (SIDS), where population size negates the benefits of economies of scale. One option to alleviate this constraint is to import health services, rather than focus on domestic production. This paper provides empirical analysis of the potential impact of this option.

## METHODOLOGY

Analysis was based on publicly accessible data for 14 SIDS, covering health-related travel and health indicators for the period 2003–2013, together with in-depth review of medical travel schemes for the two highest importing SIDS—the Maldives and Tuvalu.

## FINDINGS

Medical travel from SIDS is accelerating. The SIDS studied generally lacked health infrastructure and technologies, and the majority of them had lower than the recommended number of physicians in a country, which limits their capacity for achieving UHC. Tuvalu and the Maldives were the highest importers of healthcare and notably have public schemes that facilitate medical travel and help lower the out-of-pocket expenditure on medical travel. Although different in approach, design and performance, the medical travel schemes in Tuvalu and the Maldives are both examples of measures used to increase access to health services that cannot feasibly be provided in SIDS.

## **CONCLUSION**

Our findings suggest that importing health services (through schemes to facilitate medical travel) is a potential mechanism to help achieve universal healthcare for SIDS but requires due diligence over cost, equity and quality control.

## **CITATION:**

Suzana M, Walls H, Smith R, et al. Achieving universal health coverage in small island states: could importing health services provide a solution? *BMJ Glob Health* 2018;3:e000612. doi:10.1136/bmjgh-2017-00061

## **ACCESS TO FULL ARTICLE FROM:**

<https://pubmed.ncbi.nlm.nih.gov/29527349/>

# NEWLY GRADUATED NURSES' EXPERIENCES IN TRANSITION TO PRACTICE: A PHENOMENOLOGICAL APPROACH

Authors: Hawwa Irasha Adam

Duration: 28th January 2018 – 30th July 2018

## Key Findings:

- The findings from the research highlight the importance of orientation on transition or probation period and preceptorship or mentoring.

## BACKGROUND

To become a registered nurse, students at the School of Nursing, the Maldives National University, spend more than three years enrolled and are exposed to clinical experience under supervision. The transition from a student to a registered nurse is challenging and stressful. This period is the most important time that shapes the future of the nurse. An effective preceptorship was one recommendation that came out from extensive research elsewhere, and this is widely practiced in hospitals in developed countries. There is no evidence of a similar research in the Maldives. Therefore, this research is an attempt at addressing this critical knowledge gap.

Given the national development infrastructure occurring in Hulhumale' Hospital (HMH), it is situated to become one of the central health service providers in the country and is the focus of this research.

The aim of this study is to learn the experiences of the newly graduated nurses in their first year as a nurse.

## METHODOLOGY

Phenomenology is used as the underling research approach as the aim of the research is to seek out perceptions and lived experiences of new graduated nurses. In-depth individual interviews were conducted with 7 nurses purposely selected with the inclusive criteria of: newly graduated nurses within the preceding six months with a Diploma or Bachelor Degree in Nursing, nurses who do shift duties at HMH, and Maldives citizen. Because of the in-depth nature of the interviews as well as the small scale of research, a minimum of 5 nurses were targeted. Also being mindful of data saturation, sample size was increased to 7 participants.

## **RESULTS/FINDINGS AND IMPLICATIONS**

The findings from the research highlight the importance of orientation on transition or probation period and preceptorship or mentoring. Further to this, a rich set of data was gathered on the experiences and expectations of a newly graduated nurse which is important for the development of future plans and to improve the support system for new recruits of MHM for the strengthening of nursing care.

This study will provide guidance for creating orientation programs, develop preceptorship, and build strategies to promote retention of new graduates. This will help newly graduated nurses in their clinical work settings during their transition period, thus improving the quality of care delivered by these nurses.

The researcher believes that, the findings from this research will be an asset to improve the nursing care as the newly graduate nurses will get proper guidance on transitioning to become competent nurses.

## **CONCLUSION**

The transition to practice were noted to be helpful when they were guided and they expected more support from experienced nurses. Moreover, a good orientation and induction programs were suggested by the participants. The importance of a preceptorship was highlighted by most of the participants. This research helps in recruiting new nurses in HMH in future, as the participants have shared their valuable experiences and this has highlighted the importance of giving good and adequate guidance to a newly graduated nurse.



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