

Mothers' Knowledge and Practice on Prevention of COVID-19 in Sinna Urani Area, Batticaloa in Sri Lanka

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DOI: <https://doi.org/10.5281/zenodo.7255115>

Published Date: 26-October-2022

Abstract: The recent outbreak of coronavirus disease 2019 (COVID-19) is the worst global crisis. Still there is no specific treatment for this pandemic disease. Very recently vaccination is started so, it would be control and prevent only by knowledge and practice on prevention of COVID-19 in the community. Thus, this study aimed to assess knowledge, and practice on prevention of COVID-19 among mothers in Sinna Urani, Batticaloa in Sri Lanka. A Community Based Descriptive Cross Sectional Quantitative study was conducted from October 2020 to September 2021 among 305 mothers from Sinna Urani PHM area in Batticaloa. Participants were selected using simple random sampling method and a pre-tested, interviewer- administered questionnaire was used to collect data. Statistical Package for the Social Sciences 25 was used to enter and analyze the data. Among the 305 mothers recruited for this study, overall knowledge on prevention of COVID-19 was adequate in the majority (92.5%). Most of the mothers (87.2%) had adequate overall practice on prevention of COVID-19. There is strong evidence of significant positive association between educational level and overall knowledge on prevention of COVID-19 (Chi-square=14.922, df=6, p<0.05) and overall practice on prevention of COVID-19 (Chi-square=12.115, df=3, p<0.05) in this study. Knowledge and practice on prevention of COVID-19 among mothers in this study was adequate in many aspects.

Keywords: COVID-19, mothers, knowledge, practice, vaccine, treatment.

I. INTRODUCTION

The recent outbreak of coronavirus disease 2019 (COVID-19) is the worst global crisis. Still there is no specific treatment for this pandemic disease. Very recently vaccination has started. So, it would be control and prevent only by knowledge and practice on prevention of COVID-19 in the community. Thus, this study aimed to assess knowledge, and practice on prevention of COVID-19 among mothers in Sinna Urani, Batticaloa in Sri Lanka.

II. OBJECTIVES

General objectives

To assess the knowledge and practice on prevention of COVID-19 among mothers in Sinna Urani area.

Specific objectives

To evaluate the knowledge about prevention of COVID-19 among mothers.

To assess the current practice to prevent COVID-19 among mothers.

To identify the association between knowledge, practice and socio demographic factors among mothers.

III. STATEMENT OF PROBLEM

COVID-19 virus is a respiratory transmitted disease which caused high morbidity and mortality rate in Sri Lanka. This is spread through the droplets of an infected person mainly. Except the droplet transmission, air borne transmission can also happen in certain circumstances. This COVID-19 virus causes massive destruction for both social and economic status of the society.

The main reason for spreading of this virus is lack of knowledge and practice among the public. The preventive measures for this virus must start within the family. Mothers hold a greater responsibility within the family. Therefore, they must have a good knowledge and practice about COVID-19. Rural area mothers sometimes won't have this knowledge and practice due to several reasons. It can be due to age, economic status of the family, educational level of the mother, religion, type of family and difficulty in receiving government's announcements and notices.

The purpose of this study is to assess mothers' knowledge and practice on prevention of COVID-19 in Sinna Urani area, Batticaloa in Sri Lanka. It would be useful to formulate strategies that can be used to prevent further spreading of COVID-19 and improve the knowledge and awareness of mothers.

IV. LITERATURE REVIEW

Knowledge about prevention of COVID-19

Study in knowledge on COVID-19 among hospital staff in Italy showed 71.6% of health care workers and 61.2% of non-health care workers have good knowledge about the pandemic (Moro et al., 2020). A study among frontline healthcare workers in Nepal showed that 76% of them have adequate knowledge on COVID-19 (Tamang et al., 2020).

A study among medical students in Iran showed that 86.96% of students have average knowledge on COVID-19 (Taghrir et al., 2020). In Jordan 90% of medical and non-medical students have a good knowledge on COVID-19 symptoms and more than 79% are aware about the unavailability of vaccine and specific treatment for COVID-19 (Alzoubi et al., 2020). Iranian medical students showed an average of correct answers of knowledge (86.96%) and 79.60% had high level of related knowledge on COVID-19 (Taghrir et al, 2020). Among university students in Japan all respondents (100%) showed they possessed knowledge on avoiding enclosed spaces, crowded areas, and close situations (Hatabu et al., 2020).

Practice on prevention of COVID-19

A study among frontline healthcare workers in Nepal showed that 78.9% of participants have appropriate practice on COVID-19 (Tamang et al., 2020). Iranian medical students showed average rate of practicing preventive behaviors as 94.47% and 94.2% had high level of performance in preventive behaviors (Taghrir et al, 2020). Among university students in Japan most respondents showed a moderate or higher frequency of washing their hands or wearing masks (both at 96.4%). In addition, 68.5% of respondents showed a positive attitude towards early drug administration (Hatabu et al., 2020).

A study among age more than 20 years general population in Cameroon presented 60.8% for practice towards COVID-19 (Ngwewondo et al., 2020). Another study in Bangladesh showed that 51.6% of young adults had good practices towards COVID-19 (Banik et al., n.d.). In China, 2136 general population have 96.8% of good practice on COVID-19 (Gao et al., 2020). From 1,214 study participants among adult population in southern Ethiopia, 65% responded on practice for COVID-19 and from them 24.4% of participants had proper practice (Yoseph et al., 2021).

V. METHODOLOGY

Study design

This study is the community based descriptive cross sectional quantitative study.

Study area

This study was carried out in the Sinna Urani PHM area, Batticaloa in Sri Lanka.

Study setting

The list of house numbers of mothers was obtained from Public Health Midwife in Sinna Urani PHM area and mothers were randomly selected from the list.

Study population

Mothers who are in Sinna Urani PHM area in Batticaloa.

Sample size

The total population of mothers in Sinna Urani area: 837

According to Krejcie & Morgan formula (1970),

$$\text{Sample size (n)} = \frac{x^2 NP(1 - P)}{d^2(N - 1) + X^2 P(1 - P)}$$

X^2 = Table value of chi-square @ df =1 for desired confidence level

0.10 =2.71, 0.05 =3.84, 0.01 =6.64, 0.001 =10.83

N = Population size P = Population proportion d = Degree of accuracy

Calculated sample size is 270.

10% non-responsive rate is considered.

So, the total sample will be 297.

Inclusion criteria

- Mothers who are living in this area.

Exclusion criteria

- Mothers who are not present at the time of study.
- Mothers who refuse to participate the study.

Sampling methods

Simple random sampling method was used to select the sample. The name list of the target population (mothers) was collected from office of the Public Health Midwife, Sinna Urani. The sample population was randomly marked and selected according to sample size.

Study period

12-month duration (from October 2020 to September 2021).

Study instrument

A structured interviewer-administered questionnaire was adopted (Annexure I) from other researcher to collect information which was pre-tested in Debre Tabor hospital by investigators in research done in Addis Zemen hospital, Northwest Ethiopia. According to the pre-test, the reliability of the knowledge, attitude and practice questionnaires were checked and the values of Cronbach's alpha were 0.855, 0.793, 0.795 respectively (Akalu et al., 2020).

The developed questionnaire was reviewed by an expert panel consisting of 02 senior lecturers and clinical microbiologist who are in the COVID response team in Faculty of Health Care Sciences to establish the judgmental validity consisting of face validity and content validity. According to the review suggestions, questions were added or deleted. The finalized questionnaire was tested in a pilot study.

Data collection

Permission for collecting data was obtained from the Medical Officer of Health in Batticaloa, Public Health Nursing Sister in Batticaloa and Public Health Midwife in Sinna Urani. The purpose and benefits of the study were explained to the respondents by the researchers and information sheet was given after obtaining the written consent sheet from the participants, data was collected using pre-tested, interviewer-administrated questionnaire.

Pilot study

Pilot study was conducted among 20 mothers in Thiraimadu PHM area in Batticaloa. Some questions were modified in questionnaire after the pilot study. Modified questionnaire was used for data collection.

The reliability of knowledge and practice of questionnaire was checked, and the values of Cronbach's alpha were 0.706 and 0.697 respectively.

Data analysis

Section 1: Socio demographic details was analyzed by descriptive method. (5 questions)

Section 2: The questionnaire assessing knowledge (14 questions) was answered on a Yes /No basis and an additional “don’t know” option. A correct answer was assigned 1 point and an incorrect/don’t know answer was assigned 0 point. The total knowledge score ranged from 0 to 31 and it was converted to 100%.

Section 3: Questions assessing practice (10 questions) were answered yes or no, and don’t know the correct answer was assigned 1 point and an incorrect / don’t know answer was assigned 0 point. The total practice score ranged from 0 to 17 and it was converted to 100%

The level of knowledge in Sections 2 and level of practice in section 3 were categorized according to the allocated marks range as follows.

| Score | Grade |
|--------|------------|
| <50% | Inadequate |
| 50-74% | Moderate |
| ≥75% | Adequate |

VI. RESULTS

Socio demographic details of the participants

This study included 305 mothers from whom the questionnaires were filled and collected by investigators. Mothers in the age group under 18 years had lowest percentage (3.0%) of the population and the mothers in other age groups were equally distributed among the population. Majority of the mothers were Tamil (99.0%). Most of the mothers had completed their education up to grade 5 (31.8%). Most of them had family income around Rs.10 000 – 25000 (44.9%). Nearly half of them live as a nuclear family (65.9%).

Knowledge about prevention of COVID-19

Regarding the symptoms of COVID-19, majority 297(97.4%) had responded that COVID-19 has fever. The other symptoms mentioned were cough 290(95.1%), shortness of breath 281(92.1%), fatigue 205(67.2%), stuffy nose 221(72.5%), runny nose 202(66.2%) and sneezing 276(90.5%). (Table 2). 68% of mothers have adequate knowledge on signs and symptoms of COVID-19.

Most of mothers have mentioned that people with chronic diseases 273(89.5%) and elderly people 284(93.1%) got more chance to develop complications from COVID-19.

Less number of mothers have responded that there is no effective treatment for COVID-19 76(24.9%) and 71 (23.3%) of mothers don’t know about It. most of them have responded there is effective treatment for COVID-19 158(51.8%). majority of mothers have mentioned there are vaccines for COVID-19 297(97.4%).

Regarding how COVID-19 is spread, majority have responded touching or shaking hands of the infected person spreads COVID-19 virus 274(89.8%). Other methods are touching mouth, nose or eyes with unwashed hands 260(85.2%) and through sneezing or coughing of an infected person 294(96.4%).

Most of the mothers have responded that carriers have the ability to transmit COVID-19 284(93.1%).

Majority of mothers know the risk of getting COVID-19 can be prevented by avoiding crowded places 301(98.7%) and maintaining social distance is an important measure to reduce the spreading of COVID-19 304(99.7%).

Regarding who should be isolated to prevent COVID-19, majority has responded infected people 299(98%) and people who have close contact with infected people 293(96.1%).

All mothers 305(100%) have responded that wearing mask when moving out is important to prevent COVID-19.

Majority of mothers 303(99.3%) have reported that washing hands with soap and water for at least 20 seconds is important in prevention of COVID-19 and 290(95.1%) of mothers agreed that usage of alcohol-based hand sanitizers frequently prevents COVID-19.

Most of mothers 282(92.5%) had adequate level of knowledge, 21 (6.9%) had moderate level of knowledge and 2(0.7%) had inadequate level of knowledge on prevention of COVID-19.

Practice on prevention of COVID-19

The prevalence of adequate practice among mothers was 87%.

The majority of mothers 246(80.7%) won't touch their eyes, ears, and nose after touching the mask.

Majority of the study participants 276(90.5%) maintain social distance at least 1m in crowded places.

Most of mothers 192(63%) clean themselves after coming back home from outside. But some does household activities 113(37%).

There is a differentiation in the food items they intake daily to improve their immunity. They are fresh vegetables 301(98.7%), fresh fruits 282(92.5%), meat/egg/fish 278(91.1%) and dairy products 273(89.5%).

All the study participants 305(100%) follow the directions of the government on prevention of COVID-19.

Almost all mothers 304(99.7%) responded they wear masks when leaving home. Most of the study participants 273(89.5%) used Surgical mask. Reusable masks were used by 166(54.4%). Most of the mothers 248(81.3%) wash reusable mask after one time using. Regarding surgical masks, 213(69.8%) mothers dispose them properly after one time using.

Regarding hand hygiene, mostly 280(91.8%) they use water with soap and alcohol-based hand sanitizers 264(86.6%). Some used normal water only 47(15.4%).

Most of mothers 266(87.2%) had adequate level of practice and 39(12.8%) had moderate level of practice on prevention of COVID-19.

VII. CONCLUSION

The study intended to analyze the mothers' knowledge and practice on prevention of COVID-19 in Sinna Urani area, Batticaloa and to find an association between demographical factors with knowledge and practice.

Overall knowledge on prevention of COVID-19 among mothers in Sinna Urani area in Batticaloa is adequate. There is adequate level of practice on prevention of COVID-19 among mothers in this study.

This study shows significant association between the educational level with knowledge and practice on prevention of COVID-19.

As Sinna Urani was lockdown because of high prevalence of COVID-19 infected people, they must have got sufficient information from government authorities regarding the disease. In our study, most of mothers 282(92.5%) had adequate level of knowledge on prevention of COVID-19. Similarly, 91.2% of participants in China among 2136 general population have average knowledge on COVID-19 (Gao et al., 2020).

The prevalence of adequate practice among mothers was 87.2% and 12.8% had moderate level of practice on prevention of COVID-19 in our study. But only 78.9% of frontline healthcare workers in Nepal have appropriate practice on COVID-19 (Tamang et al., 2020).

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