
“A Cross-Sectional Study on Personal and Environmental Hygiene Practices of Mothers in Selected Primary Health Centres”

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ABSTRACT

Maintaining personal and environmental hygiene is crucial for preventing infections, such as diarrhea, among children under five years of age. This study has assessed the personal and environmental hygiene practices of mothers attending primary health centers in Nagarur, Dasanapura Hobli Bangalore North.

KEYWORDS: *Environmental hygiene, Personal hygiene, Diarrhea, Infant morbidity, Infections, Personal hygiene of mothers.*

METHODS

A descriptive cross-sectional design was employed to evaluate the hygiene practices of mothers attending baby wellness clinics. Data were collected using a semi-structured questionnaire and a checklist. The results were analyzed using descriptive statistics, presented in tables and charts.

RESULTS

The findings revealed that 60.3% of respondents consistently washed their hands with soap and water before feeding their children, while 60.9% only occasionally washed their hands after using the toilet. The majority (78.8%) of breastfeeding mothers reported washing their brassieres weekly. In terms of environmental hygiene, 71.52% of respondents cleaned their surroundings daily, though 24.51% still disposed of their waste by the roadside. Overall, the hygiene level of mothers was low, with an average index value of 0.5428.

CONCLUSION

The study has found poor hand hygiene practices to be prevalent among the mothers surveyed. There is a need for increased health education and public awareness campaigns focusing on personal and environmental hygiene practices.

Diarrhoea remains one of the leading causes of morbidity and mortality among children under five years of age in developing countries [1]. In 2016, diarrhea contributed to 8% of

global under-five deaths [2]. According to Oloruntoba *et al.* [3], approximately 2.5 million children under five years of age experience episodes of diarrhea annually, with the situation remaining unchanged for two decades. In 90% of cases, poor maternal hygiene is a major contributing factor [4].

Hygiene plays a pivotal role in health promotion and illness prevention. It involves practices that promote a clean and habitable environment, thus supporting individual well-being and reducing illness incidence [5]. The concept of hygiene, rooted in nursing principles, emphasizes illness prevention and health promotion, with cleanliness being central to these objectives [6].

Environmental hygiene is particularly crucial for the health of pregnant women and their unborn children, underlining the importance of maintaining hygienic practices to prevent infections [7]. While personal hygiene focuses on maintaining the individual's cleanliness, environmental hygiene pertains to the cleanliness of one's surroundings [8]. Though both men and women are responsible for environmental cleanliness, societal expectations often place this burden on women. For instance, Uchem and Ngwa [9] assert that despite the hard work exhibited by many African women, they continue to face discrimination and are often relegated to menial roles within the household.

Poor environmental and personal hygiene contributes significantly to under-five diarrhea cases. Many of these cases result from maternal negligence in maintaining cleanliness during child feeding [4], leading to severe illnesses that may require hospitalization. According to WHO [10], children under five suffering from diarrhea represent a significant portion of hospital admissions, with cases often linked to poor feeding practices.

Nun *et al.* [11] emphasized that proper hygiene involves more than personal cleanliness, extending to behaviors that prevent disease transmission. Personal hygiene practices include grooming, skin care, oral hygiene, and handwashing [7]. Given the critical role of environmental hygiene in health promotion, this study aimed to assess the current personal and environmental hygiene practices of mothers of under-five children in Nagarur , Dasanapura Hobli Bangalore North.

Furthermore, this study sought to determine the hygiene index using the parameters observed.

Study Design

This cross-sectional study was conducted among mothers of children under five attending three primary healthcare facilities in in Nagarur , Dasanapura Hobli Bangalore North.between June 1 and July 30, 2023. The study has assessed the personal and environmental hygiene practices in relation to infant morbidity profiles.

Study Setting

This study was conducted in in Nagarur , Dasanapura Hobli Bangalore North.,three health centers were selected for the study based on their functional status and central location within in Nagarur , Dasanapura Hobli Bangalore North., making them accessible to both urban and rural residents. Its services include antenatal care, family planning, delivery, ultrasound scanning, immunization, pediatric clinic, health education, and community mobili- zation. It offers a wide range of specialized clinical services, including antenatal care, deliveries, immuni- zation, pediatric clinics, HIV/AIDS services, childhood disorder treatments, newborn development moni- toring, family planning, nutritional support, immunization,

health education, and community mobilization. The center also has an onsite laboratory and pharmacy.

Study Participants

The source population comprised women of child-bearing age (20 to 45 years), attending clinics across the various primary health in Nagarur , Dasanapura Hobli Bangalore North. Participants included mothers of children aged two years and below who were attending baby wellness clinics at the selected centers. The study unit included mothers randomly selected from the total mothers visiting the selected health centers. Mothers who did not provide consent were excluded from the study.

Study Variables

- Dependent variable: Morbidity profile of children under five.
- Independent variables: The personal and environmental hygiene practices of mothers, as well as household information that may influence these practices.

DATA COLLECTION AND MEASUREMENT

Data were collected using a pre-tested, self-administered questionnaire consisting of 47 items. The questionnaire, adapted from previous studies, was divided into four sections:

1. Section A: Socio-demographic information of the mothers.
2. Section B: Household information of the respondents.
3. Section C: Personal and environmental hygiene practices.
4. Section D: Morbidity profile of children under five.

To assess the validity of the instrument used, a copy of the questionnaire was reviewed by experts in the relevant field. Both face and content validity were considered to ensure that the instrument was aligned with the study's objectives. The questionnaire was evaluated for its relevance, coverage of the subject matter, and content appropriateness by the research supervisor and subject matter experts.

To ensure reliability, the test-retest method was employed. This involved administering the same questionnaire to the same group of participants under similar conditions on two separate occasions.

RESULTS

Out of a target population of 390, 151 mothers were proportionately recruited from three primary healthcare centers. Each participant was randomly selected from each primary healthcare facility.

Socio-demographic Characteristics

Table 1 Shows sociodemographic characteristics of respondents. The mean age of mothers was 32 ± 2.7 years. A higher percentage (49%) of the respondents had children aged 3-5 years, 38% had children aged 1-3 years, while about 12.5% had children less than 1 year old. Most (66.89%) of the respondents were married. Regarding the educational status of mothers,

almost half (47.68%) of the respondents had secondary school education, 11.26% had tertiary education, and 25.83% had only primary education. The occupation status showed 23.54% of the participants to be civil servants, 3.31% to be housewives, 37.75% to be in business, 20.53% to be farmers, and 14.57% to be involved in the sale of crafts.

Household Information of Respondents

The household information of respondents is presented in Table 2. The majority of the participants (71.53%) used a closed drainage system. Concerning building type (place of residence of the respondents), 61.59% lived in bungalows, while 38.41% lived in “face-me-i-face-you” apartments (a low-cost house with multiple rooms facing each other rented out to individuals or multiple families with shared facilities), with none were living either in duplex or other living arrangements. The results showed 17.88% of the participants to obtain their drinking water from pipe water, 11.26% from open wells, 43.05% from borehole water, 27.81% from sachet water, and none from bottled water. 19.21% of the participants obtained water for food preparation from pipe water, 26.49% from open wells, 54.31% from borehole, and none from other sources, respectively. The water used for other household activities was obtained as follows: 22.52% obtained pipe water, 73.51% borehole water, 3.97% from rivers or streams, and none from other sources of water.

Personal Hygiene Practices of Mothers

Regarding the personal hygiene practices of mothers, 60.27% responded that they always washed their hands with soap and water before feeding their children, while 32.45%, 6.62%, and 0.66% washed their hands occasionally, rarely, and never washed their hands, respectively, before feeding their children. The majority (60.93%) of the respondents showed that they occasionally washed their hands after using the toilet. Similarly, 64.90%, 32.45%, and 2.65% always, occasionally, and rarely cleaned their cooking and feeding utensils before and after use, respectively (Table 3). Table 4 further revealed some personal hygiene practices of mothers in this study. The table reveals that all of the participants took bath daily, 20.52% once daily, and 78.15% twice daily, while it varied for 1.33% of the participants. 93.38% reported to wash their hands before breastfeeding their children, while 6.62% did not, and of those who reported to wash their hands before breastfeeding, 94.70% reported to do this occasionally, while 5.29% of the participants reported to do it rarely. With respect to how often the participants washed their bra, 19.21% said that they wash it daily, 78.81% reported that they wash their bra weekly, while 31.99% reported to wash it monthly.

Environmental Hygiene Practices of Mothers

Regarding the environmental hygiene practices of mothers (Table 5), 71.52% of the respondents reported to clean their surroundings daily, while 21.19% and 1.99% reported to clean their surroundings weekly and monthly, respectively. With regards to clearing the bushes or grasses around the house, 2.65% of the participants reported to not clear bushes or grasses, 5.96% of the respondents reported to clear them daily, 58.94% weekly, 24.50% monthly, and 7.95% any time the bush or grass around their surrounding are ground. 15.23% of the respondents stated that they have stagnant water around their houses, while 84.77% of the respondents stated an absence of stagnant water around their houses. Finally, the frequency of opening the windows was considered and 30.46% of the participants stated that they keep their windows open always, 62.92% reported that they often open their windows, while 6.62% of the participants reported to rarely open their windows, respectively.

The waste disposal methods practiced by respondents are shown in Fig. (1). 35.76% of the participants reported to dispose waste in the dustbin, 7.95% stated that they burn their waste, 12.58% disposed their waste by throwing it into the bush, 1.32% buried their waste in the ground, 24.51% disposed it along the roadside, and 17.88% of the participants disposed their waste at the general refuse dump. Information regarding the toilet facilities used by respondents is shown in Fig. (2) where the majority reported to use a water closet (the modern toilet), although very few participants used the pit latrine and very few did not have a toilet at all.

the morbidity profile/status of under-five children as reported by their mothers. 22.5% had suffered a cold in the past 1 month and the majority (94.7%) claimed that their child did not have diarrhea episodes in the past 1 month.

Hygiene Index of Mothers

The overall hygienic practices categories. We classified respondents with a score of 75% or more as having “good” practices, and otherwise “poor” practices. This estimate suggests that 39.46% of the respondents had good personal and environmental hygiene practices, while 60.54% had poor hygiene practices.

CONCLUSION

This study has assessed personal and environmental hygiene practices among mothers of children under five in in Nagarur , Dasanapura Hobli Bangalore North. The results have revealed poor hand hygiene in several instances, particularly after using the toilet and before feeding children. Although other hygiene practices have been satisfactory, there have been concerns about the infrequent washing of bras, which could expose children to infections. Additionally, waste disposal practices, such as open dumping and burning waste, have been prevalent among the respondents. Overall, the hygiene level among mothers in the study area has been low, with an average index value of 0.5428. These findings highlight the need for targeted public health interventions aimed at improving hygiene practices among mothers.

REFERENCES

- i. Moharana SS, Panda RK, Dash M, *et al.* Etiology of childhood diarrhoea among under five children and molecular analysis of antibiotic resistance in isolated enteric bacterial pathogens from a tertiary care hospital, Eastern Odisha, India. BMC Infect Dis 2019; 19(1): 1018.
- ii. Troeger C, Blacker BF, Khalil IA, *et al.* Estimates of the global, regional, and national morbidity, mortality, and aetiologies of diarrhoea in 195 countries: A systematic analysis for the Global Burden of Disease Study 2016. Lancet Infect Dis 2018; 18(11): 1211-28.
- iii. Oloruntoba EO, Folarin TB, Ayede AI. Hygiene and sanitation risk factors of diarrhoeal disease among under-five children in Ibadan, Nigeria. Afr Health Sci 2015; 14(4): 1001-11.

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- iv. Tariq M, Farooq S, Khalid S, Qureshi IS, Khan R, Azhar S, *et al.* Association of literacy and knowledge regarding personal hygiene among mothers of children suffering from acute diarrhea. *Ann Res* 2020; 1: 1-6.
 - v. McMichael C. Water, sanitation and hygiene (WASH) in schools in low-income countries: A review of evidence of impact. *Int J Environ Res Public Health* 2019; 16(3): 359.
 - vi. Culang CE, Cabal EM, Guzman MFD. The implementation of water, sanitation, and hygiene (wash) in schools of zone 1 division of Zambales. *Scholars Journal of Arts, Humanities and Social Sciences* 2021; 9(6): 250-9.
 - vii. Go to reference
 - viii. Bourguignon JP, Parent AS, Kleinjans JCS, Nawrot TS, Schoeters G, Van Larebeke N. Rationale for Environmental Hygiene towards global protection of fetuses and young children from adverse lifestyle factors. *Environ Health* 2018; 17(1): 42.
 - ix. Peters A, Schmid MN, Parneix P, *et al.* Impact of environmental hygiene interventions on healthcare-associated infections and patient colonization: a systematic review. *Antimicrob Resist Infect Control* 2022; 11(1): 38.
 - x. Uchem RN, Ngwa ES. Subordination of Women in 21st-century Africa: Cultural Sustainability or a New Slavery? Implications for Educational Development. *Dev Ctry Stud* 2014; 4(24): 143-50.
 - xi. Chakravarty I, Bhattacharya A, Das S. Water, sanitation and hygiene: The unfinished agenda in the World Health Organization South-East Asia Region. *WHO South-East Asia J Public Health* 2017; 6(2): 22-33.
 - xii. Nun D, Adesuyi E, Olawoore S. Knowledge attitude and practices of pregnant women attending comprehensive health centre, Isolo, Ondo State towards hygienic practice. *Int J Trop Dis Health* 2018; 30(2): 1-10.