

## The Determinants of Health Quality among Internal Migrants in Bangladesh

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### Abstract

Internal migration is a widespread phenomenon in Bangladesh, driven by social, economic, and environmental factors. This movement has profound implications for health and well-being among migratory populations. The purpose of this study is to examine the factors associated with perceiving quality of health among individuals who have migrated within Bangladesh, focusing on social support, education, food availability, occupation, and environmental conditions. Data were collected from the Bangladesh Environment and Migration Survey (BEMS), which involved 1,754 migratory families. The analyses were conducted utilizing Stata software with weighted data and the chi-squared test. The study found that the majority of the respondents perceived quality health after migration. Most migrants reported good health after receiving emotional and social support from the community, particularly those with a better educational background or who did not experience an improvement in their health status after migration. Bivariate chi-square analyses revealed that professional occupations reported the highest quality of health perceived compared to other occupations ( $p < .001$ ). Regarding environmental aspects, both the perceived quality of health and health experiences changed, regardless of cyclone severity. Contrary to common belief, this study finds a weaker relationship between education, food shortages, or social support and the quality of health after migration. These findings have important implications for understanding perceived quality of health, suggesting that other factors associated with the control variables may play a more significant role. A major limitation of this study is the use of cross-sectional data, which restricts the ability to infer causal relationships between migration and perceived quality of health.

**Keywords:** Internal Migration, Bangladesh, Health, Social Support, Occupation, Environment.

### I. INTRODUCTION

Migration has become a pressing issue in South Asian countries, such as Bangladesh, where internal migration, driven by a range of social, economic, and environmental factors, has grown increasingly significant in recent years. Migration is a common phenomenon worldwide, often viewed as a pathway to better opportunities and improved living conditions [1]. Whether the benefits of migration are realized can depend on numerous factors such as social support, educational background, and environmental shifts, including climate events like cyclones, which are common in Bangladesh [2] [3]. One potential measure of success post-migration could be perceived quality of health. In this study, we investigate the determinants of perceived health quality among people who have migrated within Bangladesh, examining how support systems and environmental conditions collectively impact perceptions of quality health, where migration is increasingly recognized as a determinant of health [4]. Bangladesh is a developing nation; it has experienced substantial rural-to-urban and interregional migration. Notably, the density of the capital city, Dhaka, is increasing rapidly due to internal migration. Migratory families experience significant changes in their social environment, which affects both physical and mental well-being. Factors before, during, and after migration in the social environment can have either a positive or negative impact on well-being. For example, Carling [5] highlighted that support from family and community networks can mitigate the stress associated with relocation and improve mental health outcomes for migratory individuals. This research investigates whether social support, whether received or not, correlates with perceived health quality among migratory individuals in Bangladesh. Environmental vulnerability is a big issue for migration in the context of Bangladesh. Particularly, cyclones impose significant health risks, with implications for both immediate physical well-being and longer-term mental health stability.

Migration within Bangladesh, primarily driven by socioeconomic and environmental factors, has been highlighted in numerous studies as influencing the quality of health among migratory populations, including access to social support, education, occupation, and exposure to environmental stressors. This literature examines these factors, drawing on existing research to provide a foundation for understanding the determinants of health quality among migratory individuals in Bangladesh. Social support is one of the well-documented protective factors for health, particularly in the context of migration [8]. Social networks offer emotional,

material, and financial support, which can help mitigate the negative impacts of relocation and socioeconomic instability. Household heads who migrated with other households or a larger community described the maintenance or re-establishment of social ties, which seemed to be linked with a more positive migration experience, with possible implications for mental health and wellbeing [9]. Aneshensel [10] suggested that social support acts as a buffer against stress, fostering resilience among vulnerable populations in Bangladesh. In particular, social support plays a crucial role for migratory individuals who are often disconnected from their traditional support systems [1]. Similarly, emotional support has been shown to alleviate stress and promote mental well-being, essential for navigating the complexities of post-migration life [2]. Additionally, Parrenas [2] explored the possibility that out-migration could have some beneficial effects on emotional health, by reconstructing local gender relations and increasing the autonomy and decision-making power of left-behind women.

Education is another critical factor that impacts the health outcomes of the migratory population. Higher levels of education are often associated with improved health, as they provide individuals with better access to resources and opportunities [3]. Maron et al. [7] noted that education can enhance resilience by equipping migratory individuals with the knowledge and skills necessary to facilitate adaptation to new environments. In Bangladesh, educational disparities are significant, and the level of education sometimes determines a person's ability to access health services, find stable employment, and navigate post-migration challenges [1]. Education mitigates the effects of migration on health by promoting economic stability and enabling families to make informed decisions about their health [3]. The occupation status of a migratory individual indicates a particular view of health outcomes. Occupations involving manual labor, such as agriculture, expose individuals to greater physical risks and strain, which can lead to adverse health effects. In Bangladesh, many migratory household heads engage in labor-intensive jobs, which may exacerbate health disparities due to poor working conditions and limited access to healthcare [7],[2]. On the other hand, professional employment often offers safer working conditions and access to health benefits, which contribute to improved health outcomes. Studies have shown that individuals in physically demanding jobs face higher risks of chronic illnesses and injuries, highlighting the importance of employment opportunities that support health and well-being for migratory families [10].

Environmental factors, particularly climate-related risks, are another dimension of perceived health among migratory individuals in Bangladesh. Bangladesh's geographical susceptibility to natural disasters, such as cyclones, adds an environmental layer of vulnerability for migratory populations [6]. Research has shown that exposure to severe weather events can lead to physical injuries, mental health issues, and long-term stress, which collectively impact overall well-being [3]. For instance, people who migrate to cyclone-prone regions face increased risks to both their mental and physical health. The experience of natural disasters induces trauma and stress, further exacerbating health issues among populations already facing economic hardships [11]. Food security is another crucial determinant of the health outcomes of migratory families. Previous research has demonstrated that access to sufficient and nutritious food is crucial for maintaining both physical and mental well-being among migrants [7]. While each factor has an individual effect on perceived health among migratory families, they also intersect with one another. For example, one study found that social support systems may offset some of the adverse effects of low educational attainment and physically demanding occupations. At the same time, education equips individuals to adapt to environmental changes and occupational challenges [1]. Moreover, environmental stressors, such as cyclones, interact with socioeconomic vulnerabilities, underscoring the need for a multifaceted approach to address health disparities among migratory individuals [2],[3].

The relationship between migration and the health status of migrants is a crucial issue to study. Especially in Bangladesh, thousands of families migrate within the country every year, and this migration has a positive or negative impact on their health status at multiple levels [12]. Thus, this study focused on perceiving health status as its dependent variable, with some environmental, social, educational, and occupational determinants serving as its independent variables. Because all of these independent factors are much more influential in determining health perceptions after migration within Bangladesh. Thus, perceiving health after migration of a migratory individual is interdependent on several factors, including social support, education, occupation, and environmental conditions after migration [3]. These study findings suggest that these factors are pivotal determinants of health among migratory populations. The relationship with these factors shapes health outcomes, whether they perceive their health as good or bad after migration within Bangladesh.

Although prior studies have examined various health issues among internal migrants in Bangladesh, much of this research has focused on specific communicable and non-communicable diseases, occupational injuries, or access to health services [13]. Few studies have explored how multiple social, occupational, and environmental factors interact to shape perceived health quality as a comprehensive outcome. Additionally, while the literature acknowledges the impact of social support and environmental stressors, such as cyclones, limited attention has been given to how migrants themselves subjectively evaluate their health after migration.

This study addresses this gap by integrating diverse determinants, including education, food security, occupation, social support, and environmental perceptions, into a single analytical framework. By centering on perceived health quality rather than solely clinical health measures, the research offers a novel perspective on the lived experiences and well-being of internal migrants in Bangladesh.

This study aims to conduct a comprehensive investigation into the multifaceted determinants of health quality among migratory populations in Bangladesh, with a particular focus on the complex interplay between social support systems, educational attainment, occupational engagement, and individual perceptions of environmental conditions following migration. Recognizing the vulnerability of migratory communities to health disparities due to socioeconomic instability, inadequate access to services, and environmental stressors, the research systematically examines how these factors influence post-migration health outcomes. By employing quantitative and qualitative methodologies, the study seeks not only to generate empirical evidence on the differential impacts of these variables but also to contribute to a broader understanding of health equity in the context of internal and transitory migration. The findings are expected to inform the formulation of responsive public health policies and interventions tailored to the needs of mobile populations. Such insights may guide the implementation of inclusive strategies, including the strengthening of social support networks, the expansion of educational and vocational training opportunities, and the promotion of occupational safety and environmental health awareness, ultimately fostering improved health resilience and overall well-being among migratory individuals throughout Bangladesh.

## II. METHOD

This study utilized secondary data from the Bangladesh Environment and Migration Survey (BEMS) [14], which focuses on migratory households within Bangladesh. The study employed a sample size of 1,754, which is substantial and provides a robust representation of the population, enabling more reliable and meaningful correlations. The dataset provides a comprehensive examination of internal migration patterns, incorporating variables such as social support, education, occupation, environmental conditions, and perceived health quality. The current study was exempt from IRB review as it involved secondary analysis of publicly available and de-identified data. This approach aligns with ethical research practices and mitigates concerns related to participant privacy and data security. The BEMS study employed a robust sampling technique, which included a community census followed by random household selection, thereby ensuring a representative cross-section of migratory families across different regions in Bangladesh. Additional information regarding the dataset's collection procedures can be found in the BEMS methodology report [14]. To handle missing data, the survey employed a set of non-response codes, such as "not applicable" (NA), "don't know" (DK), and "refuses to answer" (REF), to maintain data integrity during analysis.

Of the BEMS survey respondents, 40% (n = 1,754) provided data on their perceived health status after migration. In comparison, 60% (n = 2,629) were excluded because they did not respond to the question, as they reported being either healthy or unhealthy. Accordingly, the final analysis was conducted on the 1,754 respondents, among whom 95.3% (n = 1,671) reported being healthy after migration. This study focuses on respondents classified as healthy to examine the factors associated with maintaining good health after migration. From the sampled respondents, 45.9% have the highest frequency of invalid answers. This highlights a significant portion of missing data. Having chosen not to answer some of the questions may reflect bias, potentially skewing the results. It is possible that non-response resulted from the fact that migrants' experiences, including their fears related to political or family matters, can impact their willingness to share information. Migrants may withhold information due to concerns over security or familial obligations, particularly when discussing sensitive migration-related topics [5]. This study examines the factors that influence health perceptions, including social support, educational attainment, occupational engagement, food availability, and environmental risks. While the dataset's design is well-suited for this analysis, it is essential to note that missing data and non-response bias were carefully addressed to ensure analytical rigor.

The survey asked about the quality of health following their last migration within Bangladesh. The household heads were asked, 'If you migrated within Bangladesh, what was your health status after your last migration?' They were provided four response options ranging from healthy to unhealthy. For analysis, the variable of health status was recoded into a binary measure classifying individuals as either "healthy" or "unhealthy," allowing for the assessment of overall health outcomes among migratory populations. This variable enables the analysis of health disparities and outcomes among migratory individuals after migration [1]. Several variables related to perceptions of migration and its impacts were selected to explore the relationship with health status among migratory household heads. The survey asked respondents if they had received any monetary or material goods-related social support in the last 12 months. Monetary and material assistance are crucial factors in enhancing individual well-being, particularly among vulnerable populations. Responses were provided in four categories (most monthly, occasionally, rarely, and never). For this analysis, social support is recoded as either

received (1) or not received (0). This binary measurement provides a clear distinction, allowing for easy assessment within the sampled population.

Household heads were asked, in the last 1 year/12 months, did you ask any family or friends for emotional support and advice? This support plays a vital role in individual well-being, particularly in coping with stress and enhancing mental health. Their responses were also recoded in four categories (most monthly, occasionally, rarely, and never). This classification offers a straightforward method for assessing the presence of emotional support within the population, revealing how widely individuals perceive themselves as supported. The variable education captures the educational attainment of individuals who migrated. The survey participants asked, “What is the level of education of the household head?” They were provided seven response choices, ranging from no schooling (0) to all other potential options of schooling (1). Although binary categorization may overlook variations in education levels, it is helpful for fundamental descriptive and comparative analysis.

The survey asked respondents, “In the last 12 months, did they or other adults (18+ years) in the household cut the size of the meals or skip meals because there was not enough food?” Response choices were yes or no, categorized as no reduction (0) and reduction (1). This binary variable is significant for analyzing food security and nutritional status post-migration. Cutting meals is a key indicator of economic hardship and adverse health outcomes, making it an essential measure of well-being in migratory studies. For example, Gundersen & Ziliak [15] found that food insecurity, characterized by behaviors such as cutting meals or skipping meals due to a lack of resources, is linked to adverse outcomes, including malnutrition, chronic illness, and psychological stress. The household heads were asked about their profession after their migration. All 19 response choices placed into four main groups: “agriculture (e.g., landowner, agricultural worker, fisherman and farmer),” “professional worker,” “worker (e.g., Construction worker, Domestic servant, Nonagricultural worker, and driver/ construction supervisor/ Seamstresses/tailor),” and “others,” which consistence of small traders, unemployed/students, retire, pensioners, homemakers, businessman, etc. This classification provides a clear snapshot of the types of employment individuals engaged in after their migration within the country. Survey respondents were asked, ‘Did you notice a decrease, increase, or no change in these environmental conditions (severity of cyclones) over the past 20 years?’ The response was recoded as decrees, increases, and no change. Data were collected after migration, but the questions were asked over the last 20 years, considering the longevity of someone’s life. This classification provides valuable information about the environmental risks faced by people after migration and how these changes impacted their health status.

This study employed a comprehensive analytical strategy to examine the factors associated with perceived quality of health among migratory individuals in Bangladesh, using an univariate and bivariate statistical analysis framework. The dependent variable, perceived health quality, was measured as a binary outcome (healthy vs. unhealthy). In contrast, the independent variables included social support (both monetary/material and emotional), education, occupation, food security, and environmental conditions, such as the severity of cyclones. The analyses were conducted utilizing Stata 15 software with weighted data and the chi-squared test. Univariate analysis provided a descriptive statistic of the data, while bivariate chi-square tests explored relations between the DV and IVs. Statistical significance was determined with a p-value that is  $p < .001$ ,  $p < .01$ , and  $p < .05$ . Missing data were excluded, and non-response bias was acknowledged as a limitation of the study. The results were interpreted in the context of existing literature to inform the assessment of the perceived health quality of migratory individuals in Bangladesh.

### III. RESULTS AND DISCUSSION

Univariate Statistics indicated that 95.3% ( $n = 1,671$ ) of respondents reported being healthy after migration. In terms of social support, 72.4% ( $n=1,271$ ) of respondents received social support, while 65.2% ( $n=1,143$ ) received emotional social support. Regarding education, 65.5% ( $n = 1,149$ ) of the respondents reported having received some form of education. Food security was high, with 92.5% ( $n = 1,622$ ) of respondents indicating that they did not reduce meal size or skip meals, suggesting that they had adequate food availability. The occupational distribution of the respondents was as follows: 20.1% ( $n=352$ ) were engaged in agricultural work, 15% ( $n=263$ ) were professionals, 26.5% ( $n=465$ ) were workers, and 38.4% ( $n=674$ ) fell into the “other” category. Perceived changes in cyclone severity after migration were reported as follows: 73.2% ( $n=1,284$ ) indicated a decrease in severity, 18.5% ( $n=326$ ) reported an increase, and 8.2% ( $n=144$ ) reported no change in cyclone severity.

**Table 1 Bivariate Regression Results of Perceived Health Quality after Migration**

Variables	Healthy after Migration
<b>Independent Variables</b>	
Monetary or Material Support	
Received	94.7% (n=1,204)
Not Received	96.7% (n=467)
Emotional Support	
Received	94.9% (n=1,085)
Not Received	95.9% (n=586)
Education	
Educated	95.4% (n=1,437)
Not Educated	95.0% (n=234)
Food Security	
Not Cut Meals	95.5% (n=1,549)
Cut Meals	92.2% (n=122)
Occupations ***	
Agriculture	96.0% (n=338)
Professional	98.9% (n=260)
Worker	95.7% (n=445)
Other	93.2% (n=628)
Cyclone Severity	
Decrease	94.9% (n=1,219)
Increase	96.6% (n=315)
No Change	95.1% (n=137)

N = 1,671

**Dependent Variable:**

Health Status after Migration coded as 1 = Healthy, 0 = Not Healthy

\*p < .05, \*\*p < .01 \*\*\*p < .001

Table 1 displays the results of bivariate analyses examining the association between each independent variable and perceived health status. Among respondents who reported receiving monetary or material support mainly, occasionally, or rarely in the past year after migration, 94.7% (n = 1,204) reported being healthy, compared to 96.7% (n = 467) of those who did not receive such support. Emotional support received in the year following migration was also positively associated with health outcomes, with 94.9% (n = 1,085) of those who mostly, occasionally, or rarely received emotional support reporting being healthy, compared to 95.9% (n = 586) of those who did not receive emotional support. Among households where the head had schooling (Class I to College), 95.4% (n = 1,437) reported being healthy after migration, while 95% (n = 234) of those with no schooling reported being healthy. Food availability also had an impact on health, with 92.2% (n = 122) of respondents who cut meals reporting being healthy, compared to 95.5% (n = 1,549) of those who did not cut meals. Each of these four independent variables was not statistically associated with health issues after migration.

The occupational breakdown of migratory families shows varying health outcomes: 96% (n=338) of those in agricultural work, 98.9% (n=260) of professionals, 95.7% (n=445) of workers, and 93.2% (n=628) of those in other occupations like small traders, unemployed/students, retire, pensioners, homemakers, etc. The professional category reported being healthy after migration, and this relationship was statistically significant (p < 0.001). Perceptions of cyclone severity after migration also appeared to correlate with health outcomes. Among those who reported a decrease in cyclone severity, 94.9% (n=1,219) reported being healthy, compared to 96.6% (n=315) of those who experienced an increase and 95.1% (n=137) of those who observed no change. However, this variable was not statistically significant in relation to the perceived quality of health among migratory families.

Various factors drive migration within Bangladesh, and the perception of health after migration is an important issue to address. By focusing on internal migratory families, this research aims to provide insights into the determinants of health in vulnerable populations. Some of the previous studies often explored individual factors; however, this study integrates social, occupational, and environmental dimensions, offering a comprehensive lens to understand health outcomes in the migratory context [1][3]. This study utilized secondary data from the Bangladesh Environment and Migration Survey (BEMS) [14] to explore the relationship between perceived health and various factors, including social support, educational attainment, food security, perceived

environmental stability, and perceptions of health. Social support is widely recognized as a protective factor for health, particularly among vulnerable populations, such as migrant families [16]. However, the current study suggests that the impact of social support, both monetary and emotional, on perceived health outcomes among migratory household heads may not be as pronounced as previously thought. This study found similar health outcomes among those who received social support and those who did not. This could be because social support cannot explain changes in perceived health on its own, especially when economic stability and access to healthcare are not guaranteed [22].

Emotional and psychological social support, such as engaging in conversations or providing consolation, plays a pivotal role in perceived health outcomes, especially for households after migration [17]. Nevertheless, this study found that while emotional support is often regarded as beneficial, the relationship between having such support and perceiving better health outcomes was not statistically significant. This suggests that structural factors, such as access to employment opportunities or food security, may play a more dominant role in shaping health perceptions among migratory households [23][24]. Education has a strong connection with health outcomes, as it provides individuals with greater knowledge and resources to navigate health risks and improve socioeconomic status [21]. However, this study found no differences in perceived health by education, suggesting that other factors may be more critical in determining health outcomes among migratory populations [3]. Food security is a crucial determinant of health. It often leads to adverse health outcomes, particularly among migratory families who face economic instability and limited access to social safety nets [18]. However, this study's findings reveal that health outcomes were relatively high among those who experienced food insecurity.

Employment type has been identified as a significant factor influencing health among migratory populations, with physically demanding jobs often associated with greater health risks [25]. The findings of this study similarly indicate a significant relationship between occupational group and perceiving health status after migration within Bangladesh. Respondents employed in professional occupations reported the highest levels of perceived health, followed by those engaged in agricultural work. In contrast, workers and other categories, such as small traders, unemployed students, retirees, pensioners, and homemakers, reported comparatively lower levels of perceived health. Environmental stressors, especially those related to climate events, add a layer of vulnerability for migratory families. Bangladesh is a highly susceptible, disaster-prone country, and natural disasters, particularly cyclones, pose ongoing health risks [19]. However, this study's results demonstrate perceived good health regardless of changes in cyclone severity experienced. These findings suggested that migratory families may demonstrate resilience in the face of environmental challenges, possibly due to adaptive coping strategies and community support [5].

#### IV. CONCLUSION

The study examines the factors influencing perceived health quality among migratory populations in Bangladesh, with a focus on the roles of social support, education, food security, occupational engagement, and environmental conditions. The findings suggest that social support and education had a limited direct impact on perceived health quality. Similarly, food security had only a marginal effect, as many respondents reported good health after migration despite experiencing food shortages. Additionally, environmental changes, such as cyclone severity, did not show a strong connection with perceived health outcomes, suggesting that migrants may have developed adaptive coping mechanisms. However, occupational engagement appeared as a significant determinant of perceived health quality. By addressing these factors, this study connects migration and health issues in a way that can inform policy interventions aimed at promoting sustainable health and well-being among migratory populations in Bangladesh. The cross-sectional nature of the data in this research restricts the ability to infer causal relationships between migration and health perceptions. Important indicators such as political participation and household decision-making dynamics [20] were not included in the survey. Additionally, some questions had a high prevalence of unanswered responses, which may have introduced bias. Migratory families may withhold information due to concerns over security or familial obligations, particularly when discussing sensitive migration-related topics [5]. For the study, a longitudinal approach would help establish causal relationships and provide a deeper understanding of how health evolves post-migration [26]. Future research should expand its scope to include regional and international comparisons of migratory health outcomes, providing a broader insight into the unique challenges faced by Bangladeshi migratory families. Perceiving health quality may vary between gender and age groups during migration. Another future study should also examine how factors like gender dynamics and household roles influence perceived health quality among migratory families. This study only asked questions to the household head; a future study should include the entire household as the study population. Taken together, this study underscores the need for in-depth, longitudinal research to capture the complex dynamics of the health of internal migrants in Bangladesh. Future policies and interventions must consider these nuances to enhance health equity among migratory populations.

## REFERENCES

- [1] K. N. Koly *et al.*, “Health-related quality of life among rural-urban migrants living in dhaka slums: A cross-sectional survey in Bangladesh,” *Int J Environ Res Public Health*, vol. 18, no. 19, Oct. 2021, doi: [10.3390/ijerph181910507](https://doi.org/10.3390/ijerph181910507).
- [2] R. S. Parrenas, *Children of global migration: Transnational families and gendered woes*. California: Stanford University Press, 2005, doi: [10.1515/9781503624627/html](https://doi.org/10.1515/9781503624627/html).
- [3] F. Vergunst, H. L. Berry, K. Minor, and N. Chadi, “Climate Change and Substance-Use Behaviors: A Risk-Pathways Framework,” *Perspectives on Psychological Science*, vol. 18, no. 4, pp. 936–954, Jul. 2023, doi: [10.1177/17456916221132739](https://doi.org/10.1177/17456916221132739).
- [4] H. Castañeda, S. M. Holmes, D. S. Madrigal, M. E. D. T. Young, N. Beyeler, and J. Quesada, “Immigration as a social determinant of health,” Mar. 18, 2015, *Annual Reviews Inc.* doi: [10.1146/annurev-publhealth-032013-182419](https://doi.org/10.1146/annurev-publhealth-032013-182419).
- [5] J. Carling, “Migration in the age of involuntary immobility,” *J Ethn Migr Stud*, vol. 28, pp. 5–42, 2002, doi: [10.1080/13691830120103912](https://doi.org/10.1080/13691830120103912).
- [6] F. Vergunst *et al.*, “Association of youth climate change worry with present and past mental health symptoms: a longitudinal population-based study,” *Clim Change*, vol. 177, no. 10, Oct. 2024, doi: [10.1007/s10584-024-03807-1](https://doi.org/10.1007/s10584-024-03807-1).
- [7] P. D. Maron, J., K. L., P. O., G. de M. E., “Occupational inequalities in psychoactive substance use: A question of conceptualization?,” *Addiction Research & Theory*, vol. 24, no. 3, pp. 186–198, 2016, doi: [10.3109/16066359.2015.1102891](https://doi.org/10.3109/16066359.2015.1102891).
- [8] H. Doma, T. Tran, P. Rioseco, and J. Fisher, “Understanding the relationship between social support and mental health of humanitarian migrants resettled in Australia,” *BMC Public Health*, vol. 22, no. 1, Dec. 2022, doi: [10.1186/s12889-022-14082-z](https://doi.org/10.1186/s12889-022-14082-z).
- [9] P. N. Schwerdtle *et al.*, “A risk exchange: Health and mobility in the context of climate and environmental change in Bangladesh—a qualitative study,” *Int J Environ Res Public Health*, vol. 18, no. 5, pp. 1–17, Mar. 2021, doi: [10.3390/ijerph18052629](https://doi.org/10.3390/ijerph18052629).
- [10] C. S. Aneshensel, “Social Stress: Theory and Research,” *Annual Review of Sociology*, vol. 18, pp. 15–38, 1992, doi: [10.1146/annurev.so.18.080192.000311](https://doi.org/10.1146/annurev.so.18.080192.000311)
- [11] M. R., & M. D. Chowdhury, “Cyclone resilience among rural communities in Bangladesh,” *Cyclone resilience among rural communities in Bangladesh. Asian Journal of Environmental Research*, vol. 12, no. 3, pp. 125–136, 2019.
- [12] F. Thomas, E. Chase, and P. Aggleton, “Health education and migration,” Feb. 01, 2019, *SAGE Publications Ltd.* doi: [10.1177/0017896918813592](https://doi.org/10.1177/0017896918813592).
- [13] Akhter S, Mahmood N, Rutherford S. A systematic review of the health of internal migrants in Bangladesh. *Int J Health Plann Manage.* 2022 Mar;37(2):673-690. doi: [10.1002/hpm.3380](https://doi.org/10.1002/hpm.3380). Epub 2021 Nov 12. PMID: 34773284
- [14] A., & D. K. M. Carrico, “Bangladesh Environment and Migration Survey (BEMS),” 2019. Accessed: Jan. 06, 2025, doi: [10.3886/ICPSR38846.v1](https://doi.org/10.3886/ICPSR38846.v1)
- [15] C. Gundersen and J. P. Ziliak, “Food insecurity and health outcomes,” *Health Aff*, vol. 34, no. 11, pp. 1830–1839, 2015, doi: [10.1377/hlthaff.2015.0645](https://doi.org/10.1377/hlthaff.2015.0645).
- [16] L. F., & G. T. Berkman, “Social integration, social networks, social support, and health,” *Social Epidemiology*, pp. 137–173, 2000, Accessed: Jan. 06, 2025, doi: [10.1093/acprof:oso/9780195138382.001.0001](https://doi.org/10.1093/acprof:oso/9780195138382.001.0001)
- [17] P. A. Thoits, “Mechanisms linking social ties and support to physical and mental health,” *J Health Soc Behav*, vol. 52, no. 2, pp. 145–161, Jun. 2011, doi: [10.1177/0022146510395592](https://doi.org/10.1177/0022146510395592).
- [18] J. T. Cook *et al.*, “Community and International Nutrition Food Insecurity Is Associated with Adverse Health Outcomes among Human Infants and Toddlers 1,2,” 2004, doi: [10.1093/jn/134.6.1432](https://doi.org/10.1093/jn/134.6.1432).
- [19] U. Haque, M. Hashizume, K. N. Koly, H. J. Overgaard, B. Das, and T. Yamamoto, “Reduced death rates from cyclones in Bangladesh: What more needs to be done?,” *Bull World Health Organ*, vol. 90, no. 2, pp. 150–156, Feb. 2012, doi: [10.2471/BLT.11.088302](https://doi.org/10.2471/BLT.11.088302).
- [20] C. Telsaç, “Deep economic factors causing migration,” *International Journal of Global Politics and Public Administration- LOPA Journal*, vol. 1, no. 1, pp. 39–53, 2024, Accessed: Jan. 06, 2025. [Online]. Available: <http://www.glopajournal.com>
- [21] D. Prasetyo, “Decision Support System to Determine Higher Education Resource Needs Using Accreditation Assessment Standards,” *International Journal of Engineering, Technology and Natural Sciences*, vol. 4, no. 2, pp. 175 - 184, Dec. 2022. doi: [10.46923/ijets.v4i2.214](https://doi.org/10.46923/ijets.v4i2.214).

- [22] Thoits, P. A. (2011). "Mechanisms linking social ties and support to physical and mental health," *Journal of Health and Social Behavior*, vol. 52, no. 2, pp. 145–161. doi: [10.1177/0022146510395592](https://doi.org/10.1177/0022146510395592)
- [23] M. Hynie, "The Social Determinants of Refugee Mental Health in the Post-Migration Context: A Critical Review," *Canadian Journal of Psychiatry*, vol. 63, no. 5, pp. 297–303, May 2018, doi:[10.1177/0706743717746666](https://doi.org/10.1177/0706743717746666).
- [24] J. Benach, C. Muntaner, C. Delclos, M. Menéndez, and C. Ronquillo, "Migration and 'low-skilled' workers in destination countries," *PLOS Medicine*, vol. 8, no. 6, pp. e1001043, Jun. 2011, doi: [10.1371/journal.pmed.1001043](https://doi.org/10.1371/journal.pmed.1001043).
- [25] Sumiyatun, E. Faizal, and H. Wasiati, "Analysis of Human Resource Placement Based on Ability and Work Skills Using the Profile Matching Method," *International Journal of Engineering, Technology and Natural Sciences*, vol. 1, no. 2, pp. 43–49, 2019. doi: [10.46923/ijets.v1i2.47](https://doi.org/10.46923/ijets.v1i2.47).
- [26] R. W. Aldridge, L. B. Nellums, S. Bartlett, A. L. Barr, P. Patel, R. Burns, S. Hargreaves, J. J. Miranda, S. Tollman, and J. S. Friedland, "Global patterns of mortality in international migrants: A systematic review and meta-analysis," *The Lancet*, vol. 392, no. 10164, pp. 2553–2566, Dec. 2018, doi: [10.1016/S0140-6736\(18\)32781-8](https://doi.org/10.1016/S0140-6736(18)32781-8).