An Epidemiological Study of Slums with Reference to Poor Hygiene in Tehsil Rajan Pur

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Original Article

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Abstract

The research aimed at exploring the effect of poor hygiene and bad sanitation on health. The major area of concern was the diseases related to poor hygiene and malpractices to sanitation. Awareness of hygiene among slums areas were also explored as an interlinking factor between the health and illness. The present quantitative study was conducted to study the impact of poor hygiene on social life in Tehsil Rajan Pur, District Rajan Pur. The universe for the present study was the Tehsil Rajan Pur consisting of 150 people. The target population was married women residing in the slums. Because women give more information about the poor hygiene and infections diseases. 150 women were selected through stratified random sampling. Description of the data and analysis was done through SPSS. It was concluded that the poor hygiene has great impact on human health. It was founded that the poor hygiene causes disease, like diarrhea, hepatitis, itching in human. All those draw backs affects the socio –economic life of the slums area people.

Keywords: Hygiene Awareness, Slums, Illness, Diseases, Hepatitis, Malpractices, Determinants

Introduction

Epidemiology is an essential discipline that investigates the prevalence and spread of diseases across diverse demographic cohorts, while also analyzing the determinants that impact their occurrence. Public health professionals are able to formulate effective strategies for disease prevention and management through their comprehension of the epidemiology of diseases. This methodology encompasses specific methodologies for gathering and analyzing data, employing technical terminology to thoroughly examine and articulate diseases. The research encompasses a range of methodologies, including outbreak examinations, tracking diseases, case-control and group studies, diagnostic laboratories, and molecular epidemiology. Furthermore, it examines the dynamics of disease transmission and assesses the efficacy of interventions in real-world contexts. Epidemiological research encompasses a range of notable disease syndromes, including but not limited to acute respiratory infections, HIV, Malaria, Vector-borne diseases, Tuberculosis, Measles, Hepatitis, Diarrheal diseases, Sexually Transmitted Diseases, and respiratory infections. Epidemiology, with its comprehensive and systematic methodology, assumes a pivotal role in enhancing population health and addressing diverse health issues (Terris, 1998; Health Library, 2009).

According to the United Nations agency UN-Habitat, a slum can be described as an urban area that exhibits deteriorated housing, substandard living conditions, and a scarcity of essential services and safety measures. During the time span from 1990 to 2005, there was a notable decline in the percentage of urban residents living in slums within developing nations, with the proportion decreasing from 47% to 37%. Nevertheless, notwithstanding this downward trend, the escalating urban populace has resulted in a surge in the total count of individuals residing in impoverished urban areas. Currently, the global population residing in such circumstances amounts to one billion individuals, with estimations indicating a projected increase to two billion by the year 2030 (Taher & Ibrahim, 2014). The enduring existence and expansion of slums serve as a poignant reminder of the persistent obstacles in tackling urban poverty, highlighting the pressing necessity for sustainable urban development strategies aimed at enhancing the quality of life for marginalized communities.

According to Eze and Chijioke (2018), the features connected with slums differ depending on geography. In general, slums are characterized by urban deterioration, widespread poverty, and elevated levels of unemployment. These regions are frequently regarded as environments conducive to the emergence of social problems such as criminal activities, substance abuse, alcohol dependency, and heightened prevalence of mental health disorders and suicidal tendencies. Furthermore, it is observed that numerous economically disadvantaged nations experience a significant prevalence of disease within their slum areas, primarily attributable to unhygienic living conditions, inadequate nutrition, and limited access to fundamental healthcare services. Governments across the globe have endeavored to tackle the problem of slums through a strategy commonly referred to as "slum clearance." This approach entails the demolition of dilapidated housing units and their subsequent replacement with contemporary, frequently high-rise, buildings that offer enhanced sanitation facilities. Nevertheless, it should be noted that these clearances do not consistently offer novel housing solutions, and the residents of these revitalized regions continue to encounter difficulties related to poverty and unemployment. Comprehensive and sustainable strategies are imperative in addressing the intricate characteristics of slums, in order to effectively enhance the living conditions and promote the social well-being of their inhabitants.

Health Risks and Difficulties of Slum Living

The living conditions prevalent in slums pose a multitude of health hazards to their residents. The limited availability of educational opportunities contributes to a restricted understanding of the health risks associated with unhygienic surroundings, resulting in a dearth of knowledge regarding disease prevention. Furthermore, the presence of poverty intensifies the circumstances, as there is a prevalence of limited access to food that lacks essential nutrients, leading to elevated levels of malnourishment, particularly among the younger population. The vaccination rates within the population are notably low, thereby rendering them susceptible to diseases such as polio and cholera, which have achieved near eradication in other regions. Within this particular framework, the concept of health assumes a foundational status as an essential requirement for all human societies, playing a pivotal role in the overall welfare and advancement of communities (United Nations Human Settlements Programme, 2019).

The incidence of diverse health conditions within slum areas encompasses a spectrum of ailments, such as hypertension, dysentery, cholera, diarrhea, abdominal discomfort, typhoid fever, diabetes mellitus, pyrexia, malaria, hepatitis, as well as dermatological and ocular infections.

Dispensers and medical professionals have observed a higher prevalence of water and excreta-related diseases, which occur at a rate twice as high as that of other diseases. The prevalence of these conditions is impacted by various factors, including the individual's surrounding environment, dietary intake, and housing arrangements (Gupta, 2017). The role of sanitation in public health is of utmost importance, as it encompasses the appropriate management and disposal of waste materials, specifically human excrement and urine. Implementing this measure is crucial in order to mitigate the transmission of diseases. The maintenance of adequate sanitation is of utmost importance, particularly in the segregation of water supply systems from the discharge of sewage. Nevertheless, a considerable proportion of the global population faces insufficient access to fundamental sanitation facilities. This predicament arises from a confluence of economic challenges and, notably, the challenges posed by overcrowding and overpopulation. Given the finite capacity of the earth's land and water resources to fulfill sanitation requirements, it is crucial to prioritize the resolution of water-based sanitation issues (Hyun et al., 2019).

Statement of the Problem

The global phenomenon of slums and the health challenges they entail has emerged as a significant and urgent issue. Across the globe, a significant number of individuals inhabit economically disadvantaged urban regions that are marked by subpar living conditions, insufficient sanitation facilities, and restricted availability of fundamental amenities. The presence of slum environments facilitates the proliferation of diseases and presents substantial health risks to the individuals residing within them. The incidence of water and excreta-related illnesses is significantly elevated in these particular environments, and the limited understanding and awareness regarding health hygiene serve to intensify the issue. Focusing specifically on Pakistan, the nation encounters a multitude of challenges pertaining to the presence of slums and inadequate sanitation conditions. In certain geographical areas such as Tehsil Rajan Pur, the living conditions within slums contribute to a wide array of health issues, encompassing hypertension, dysentery, cholera, diarrhea, typhoid fever, and various other ailments. The presence of limited resources and high population density are contributing factors to the perpetuation of these challenges, resulting in an increased prevalence of diseases and health inequalities among slum populations.

This study seeks to undertake an epidemiological inquiry of slums in Tehsil Rajan Pur, with the objective of comprehending the repercussions of inadequate hygiene practices on the overall well-being of the public. Through an analysis of the incidence of water and excreta-related illnesses and an evaluation of the extent of awareness and understanding regarding health hygiene and sanitation among residents of slum areas, this study aims to provide insight into the particular health difficulties encountered by this population. Furthermore, this study aims to investigate potential correlations between hygiene and sanitation issues in the slum environment, offering valuable perspectives on the intricate dynamics of health inequalities in this particular geographical area.

Study Objectives

1. To explore the health hazards due to consumption of unhygienic drinkable water.
2. To find out awareness in terms of knowledge and importance attached to various aspects of health hygiene and sanitation.
3. To see the relationship if any, between hygiene and sanitation problem.

Literature Review

Swift Urbanization and the Prevalence of Slum Conditions on Health

In recent decades, there has been a notable phenomenon of rapid urbanization in developing regions, resulting in a significant concentration of approximately 80% of the world's major cities within these countries. According to Sting's research conducted in 1990, approximately 60% of the population residing in the area is classified as slum dwellers. The process of geographical migration from rural areas to urban localities entails the exposure of migrants to novel environmental conditions, potentially including distinct bacteriological circumstances. The inhabitants of urban slums are subjected to substandard environmental conditions, characterized by issues such as overcrowding, inadequate access to clean drinking water and sanitation facilities, and absence of waste management systems. The lack of knowledge and challenging living conditions prevalent in slums often contribute to reduced utilization of healthcare services and limited awareness of proper hygiene practices.

Additionally, individuals residing in these areas may have limited understanding of the causes of illnesses and appropriate treatment methods, as well as inadequate dietary habits and suboptimal breastfeeding practices. Furthermore, there is often a lower acceptance of vaccination within these communities. The situation is exacerbated by the absence of essential healthcare facilities, medications, immunizations, and healthcare professionals. There have been documented instances of mistreatment perpetrated by personnel at the healthcare facilities, as reported by Rahman et al. (1989). Children residing in such circumstances are particularly susceptible to the six diseases (namely, diphtheria, pertussis, tetanus, measles, poliomyelitis, tuberculosis) that are specifically addressed by the expanded Programme on Immunization (EPI). Consequently, these children have been the primary beneficiaries of enhanced immunization initiatives, as highlighted by Hughart et al.,1992.

There is a paucity of epidemiological research examining the impacts of these intricate and interconnected environmental factors on the health of individuals residing in slum areas. In order to fully optimize the advantages offered by the World Health Organization's Expanded Programme on Immunization (EPI) and the United Nations Children's Fund's Child Survival Revolution (CSR) initiative, it is imperative to enhance our understanding of the health implications associated with migration to urban regions.

Paradoxically, despite their significant influence on the disease burden in developing nations, our comprehension of slum health and the transmission dynamics of communicable diseases within slums remains limited. Without a comprehensive comprehension of this concept, the efficacy of disease control strategies becomes significantly constrained. The interconnectedness of transportation systems and the movement of people across borders, which are both outcomes of globalization, can lead to the rapid spread of communicable diseases within local communities. This poses a significant risk to the health of populations in other regions, potentially affecting a large portion of the world (Relman, 2010). Slums, akin to the urban regions in which they are situated, play a significant role in the phenomenon of globalization, as evidenced by the exchange of goods, financial resources, and individuals between slums and distant locations across the globe (Pieterse, 2011). Wherever there is a movement of individuals, there exists the possibility for the transmission and dissemination of pathogens. Therefore, it is of utmost importance that we strive to enhance our approaches in order to effectively mitigate the transmission of diseases across different levels within developing nations.

Extensive empirical research spanning several years has consistently revealed that the primary factor contributing to the incidence of tuberculosis (TB), including its drug-resistant variants, in numerous developed nations, such as the United States, is the influx of populations originating from regions where TB is prevalent, predominantly found in developing countries. These areas encompass impoverished urban settlements, commonly referred to as slums. It is plausible that a significant portion of the tuberculosis (TB) burden in the United States and other developed nations may stem from these slums. However, it is important to note that there is currently insufficient empirical evidence to definitively establish this correlation. According to Kain, Benoit, Winston, and MacKenzie et al., (2008), logic would strongly indicate this. Therefore, there is a significant demand for meticulously planned studies in the fields of epidemiology, geography, and demography pertaining to this particular subject matter. As a result, it is imperative that public health research places considerable emphasis on addressing this need. This would not only contribute to the advancement of theoretical knowledge and empirical research, but also hold significant implications for the field of public health practice and the development of protocols.

Theoretical Framework

The epidemiological profiles of societies are influenced by the ways of life that are established through prevailing and evolving societal structures of power, property, and the generation and perpetuation of social and biological existence. These arrangements encompass human beings, other species, and the biophysical environment in which we reside (Krieger, 2001).

Within Gruskin. (2001) the framework of this investigation, slums are distinguished by substandard living conditions and limited availability of fundamental amenities, such as access to clean potable water and adequate sanitation facilities. The aforementioned circumstances arise from the societal structuring of power and property, which consequently results in marginalized communities residing in substandard housing and experiencing a dearth of fundamental resources. The living conditions experienced by slum dwellers are expected to have a significant impact on their epidemiological profile, as they are more susceptible to health risks resulting from inadequate hygiene practices and the consumption of unclean drinking water. In societies characterized by social stratification based on wealth and influence, where a small fraction of the population possesses the highest levels of power and resources, the individuals with less power and fewer resources, who constitute the majority, bear a greater absolute burden (and potentially a greater relative burden) when it comes to health outcomes that are more widespread (Conard, 2009).

Within the study's framework, individuals residing in slums are prone to experiencing substantial disparities in health as a result of their marginalized position and constrained access to resources. The higher burden imposed on vulnerable populations due to the prevalence of health issues associated with poor hygiene, inadequate sanitation, and consumption of unhygienic water is primarily attributed to their significant representation within the slum community. The presence of social stratification rooted in wealth and influence plays a significant role in the inequitable allocation of health outcomes, whereby individuals residing in impoverished urban areas bear a disproportionate burden of illness (Phelan & Link, 2010).

In brief, the eco-social theory offers a valuable conceptual framework for comprehending the health disparities prevalent in slum communities as a result of inadequate hygiene and sanitation practices. The significance of societal structures and power dynamics in influencing health outcomes is underscored, rendering it pertinent to the research's objective of investigating health risks and the correlation between hygiene and sanitation issues in urban slums.

Methodology

The primary objective of this quantitative research was to examine the health and hygiene obstacles encountered by women residing in slum communities. A sample of 150 married women was collected from four slum areas in Rajan Pur in order to obtain data. The researchers employed a stratified sampling methodology in order to guarantee a sample that is both representative and diverse. The main tool utilized for data collection in this study was an Interview schedule, specifically designed to acquire pertinent information from the participants. After the completion of data collection, a thorough analysis was conducted utilizing the Statistical Package for the Social Sciences (SPSS) software. The utilization of this analytical methodology facilitated a thorough investigation of the data, thereby empowering the researchers to discern patterns, correlations, and noteworthy discoveries pertaining to health and hygiene concerns within the slum regions.

Results and Discussion

Table No.1

Percentage Distribution of Respondents Regarding use of Food in taking Pattern with Respect to their Family Income

Categories	Frequency	Percent
Vegetable	28	18.7
Meat	1	.7
Lasi	114	76.0
Dall	3	2.0
Achar	4	2.7
Total	150	100.0

The table illustrates the proportional distribution of survey participants according to their food consumption patterns relative to their household income. The dataset presents the food preferences of 150 participants, wherein their choices have been classified into various categories. Within the surveyed population, a notable 18.7% of participants indicated the inclusion of vegetables in their dietary habits, suggesting a considerable segment of individuals who prioritize a well-rounded and nourishing food intake. In contrast, a minimal proportion of respondents, specifically 0.7%, indicated their consumption of meat, suggesting a comparatively diminished inclination towards non-vegetarian food items within this specific sample.

It is noteworthy that a significant proportion of participants, specifically 76.0%, indicated the inclusion of lasi (buttermilk) as a prominent component in their dietary regimen. The findings of this study suggest that buttermilk is a popular beverage choice among the participants, potentially due to its affordability and beneficial effects on nutrition. Moreover, a minority of participants (2.0% of respondents) indicated the inclusion of dall (lentils) in their dietary consumption, implying the

integration of this nutrient-dense food item into their eating habits. Similarly, the utilization of achar (pickle) was observed among 2.7% of the participants, suggesting the inclusion of savory condiments in the dietary choices of specific individuals.

The data shown in the table demonstrates a notable disparity in food preferences among the participants, with a majority showing a predilection for vegetable-based choices. Furthermore, it is worth mentioning that lasi has emerged as a favored beverage option among the participants.The data presented in this table offers significant insights on the dietary habits and food choices of individuals living in the urban slum region. The findings presented in this study provide a more comprehensive insight into the correlation between individuals' food consumption habits and their family income.

Table No.

Percentage Distribution of Respondents Regarding Source of Water which is used for Drinking

Categories	Frequency	Percent
Hand pump	89	59.3
Well	7	4.7
Canal	20	13.3
Tube well	34	22.7
Total	150	100.0

Among the participants in the sample population, a significant majority of 59.3% reported utilizing a hand pump as their primary method for obtaining potable water. Hand pumps are widely utilized in various regions, including slum communities, as a prevalent and easily accessible method for water acquisition. The extensive adoption of hand pumps underscores their significance as a dependable and trustworthy source of potable water for the population under examination.

A minority of participants, specifically 4.7%, indicated reliance on a well as their primary source of potable water. Throughout history, wells have played a crucial role as a primary water source, especially in rural and peri-urban regions. However, the relatively low representation of wells in this study may indicate a decrease in their prevalence within urban slum environments.

Furthermore, a notable proportion of participants, specifically 13.3%, indicated that they utilized canal water for the purpose of drinking. Canals can function as a water source in certain areas; however, their appropriateness for potable water purposes is frequently uncertain due to the possibility of contamination and absence of treatment. It is noteworthy that 22.7% of the participants indicated their utilization of tube wells as their primary drinking water source. Tube wells are commonly utilized in both urban and rural areas to draw groundwater. The study findings highlight the significant presence of tube wells, emphasizing their significance as a feasible option for accessing safe drinking water.

The examination of the table indicates that a notable percentage of participants rely on the predominant means of accessing drinking water for the population under study is hand pumps, followed by tube wells as the secondary method of choice. The comparatively limited consumption

of well and canal water may indicate the challenges connected with accessing uncontaminated water from these sources, leading individuals to choose for more reliable alternatives.

The findings presented in this table offer significant insights into the drinking water sources within the slum area, emphasizing the prevalent utilization of hand pumps as the primary means of accessing potable water. It is imperative to comprehend the distribution of water sources among the participants in order to ascertain potential concerns pertaining to the quality and availability of water.

Table No.3

Percentage Distribution of Respondents Regarding type of Water that is available in the Village

Categories	Frequency	Percent
Saltish	143	95.3
Sweet	7	4.7
Total	150	100.0

In this table data showed that 95.3 % respondent were using saltish water which is available in the village and 4.7 % respondents were using sweet water which is available in the village. In slums area highest number of respondents were using the saltish water.

Table No.4

Percentage Distribution of Respondents Regarding existing Sources of Water Supply

Categories	Frequency	Percent
Hand pump in the house	80	53.3
Hand pump out side the house	11	7.3
Well	7	4.7
Canal	18	12.0
Tube well	34	22.7
Total	150	100.0

In this table data showed that 53.3% respondents were using hand pump for water supply in the houses ,7.3% respondents were using hand pump for water supply out side the house, 4.7 %respondents were using well for water supply ,12.0% respondents were using canal for water supply and 22.7% respondents were using tube well for water supply. In slums area highest number of respondents were using hand pump for water supply in the houses .

Table No. 5

Percentage Distribution of Respondents Regarding Common Disease Found in Village

Categories	Frequency	Percent
Hepatites	72	48.0
Malaria	30	20.0
Diarrhea	20	13.3
Scabies	12	8.0
Dysentery	5	3.3
Kidney Problems	4	2.7
Mums	5	3.3
Fever	2	1.3
Total	150	100.0

In this table data reflected that 48.0 % respondents gave answer that hepatites is a common diseases in the village , 20.0 % respondents gave answer that Malaria is a common diseases, 13.3% respondents gave answer that Diarrhea is a common diseases,8.0 % respondents % respondents gave answer that scabies is a common diseases ,3.3.% respondents gave answer that Dysentery is a common diseases, 2.7 % respondents gave answer that kidney problems is a common diseases, 3.3%respondents gave answer that Mums is a common diseases and 1.3% respondents gave answer that Fever is a common diseases in the village. In slums area highest number of respondents gave answer that hepatitis is a common disease in the village.

Table No. 6

Percentage Distribution of Respondents Regarding Treatment

Categories	Frequency	Percent
Allopathic	95	75.3
Homeopathic	9	67.1
Spiritual/Peer	22	17.4
Total	126	100.0

In this table data showed that 75.3% respondents were getting treatments in allopathic, 67.1. %

respondents were getting treatment in homeopathic and 17.4 % respondents were getting treatment in spiritual (peer)

Table No.7

Percentage Distribution of Respondents Regarding Infection Diseases in Children

Categories	Frequency	Percent
Diarrhea	83	55.3
Hepatites	45	30.0
Fever	8	5.3
Malaria	6	4.0
Scabies	6	4.0
Kidney Problems	2	1.3
Total	150	100.0

The data presented in the table represents the proportion of children who have been impacted by various infectious diseases, as reported by the individuals surveyed. Within the cohort of children surveyed, a significant proportion of 55.3% was found to have experienced the affliction of diarrhoea, thus establishing it as the most prevailing infectious ailment within the community. Hepatitis constituted 30.0% of the reported cases, signifying a substantial prevalence of this ailment among the paediatric population residing in the village.

Lower percentages of fever, malaria, and scabies were observed, with 5.3%, 4.0%, and 4.0% of the children being affected by these conditions, respectively. The prevalence of kidney problems was found to be the lowest, as indicated by a mere 1.3% of the respondents reporting instances of such conditions in children. The table provides a comprehensive overview of the prevalence of various infectious diseases among children residing in the village. In summary, the table presents an overview of the prevalence of infectious diseases among children residing in the village, highlighting diarrhoea and hepatitis as the predominant illnesses.

The independent variable are low socio-economic status that measured the type of residence and the dependent variable is poor hygiene that measured the sanitary facilities.

Cross tabulation between socio-economic status and poor hygiene

Type of residence	Type of sanitary facilities respondents have		Total
	Open field	Lavatory inside the house	
Cottage	37	10	47
Mud house	30	73	103
Total	67	83	150

Chi-Square = 32.121Mudhouse
Degree of freedom = 1
Tabulated Value = 3.84
Level of significance = 0.05

Discussion

The chi-square test result shows that null hypotheasis was rejected and alternative hypothesis was accepted. The null hypothesis stated that there is no relationship between low socio-economic status and poor hygiene .But the low socio-economic status effected on health and create diseases and become the cause of the poor hygiene. Thus, it is concluded that people of low socio-economic status are mostly lack sanitation and hygiene facilities and they are mostly affected by sanitation issues.

Conclusion

Many people living in poor urban area experience that they perceive personal hygiene such brush teeth bathing the body although not as frequent as desired. Lack of resources such as water result in poor hygiene level toilets cannot be washed there is no enough water to shower, it is because of non availability pure drinking water and other sceneries related with personal hygiene include in unbalanced diet and non-availability of proper bathrooms toilets which result ally leads to poverty on grounds of sickness, illness and diseases but sever and infections diseases. The poor existence of slum area of Rajan Pur region sell out all of their assets for sake of curing their diseases which are mostly caused by poor hygienic external environment .As it is the universal declaration that poverty leads to vulnerability of poor existence expose of the fact where basic but fundamental necessities of clean drinkable water and eatable edibles are not in pure position then the matter of hygiene and sanitation. Water shortage and poor hygiene is thus not an issue of natural scarcity; it is socially generated scarcity as well created as a results of distortions in social and economic polices

Suggestions for Future Research

There is nothing about which we can set, it is perfect. There is always need of improvement and development in every field. Even the most modern societies do not free from problems .Following are the suggestion given by researcher according to the response of respondents.

- This problem of water born diseases is affecting the health and economy of the people, so this issue must not be ignored.
- Water crises and poor hygiene are the basic unit all over the world; it must be Government and social sector should not overlook this problem.
- Much more research work is needed at national and local level.
- Sanitation system should be improved because lot of diseases born due to poor sanitation.
- Adult education programs should be started for the health education.

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