ADOLESCENT GIRLS IN URBAN SLUM: ENVIRONMENTAL HEALTH PERSPECTIVE

Shidratul Moontaha Suha  
Graduate Student of Development Studies  
University of Dhaka

Md. Reazul Haque, PhD  
Associate Professor of Development Studies  
University of Dhaka

ABSTRACT

This research has investigated the reason behind carrying poor health and its future impacts on adolescent girls, who live in urban slums. We have chosen Tejgaon Railgate Slum, Dhaka, Bangladesh as our research area and aimed to look into the consequences of environmental factors which affect those marginalized people. We have used both primary and secondary information and feminist methodology as a tool for conducting qualitative research. Research assessments found out adolescent girls are losing their capabilities due to gradual degradation of Environmental Health. Data analysis shows that the influential Capability approach by Martha Nussbaum sets with slum adolescent girls. The situation analysis proved that factors of environment (for example water, ventilation, air, noise) are causing poor health among slum adolescent girls. These very factors are pointed in Nightingale’s Environmental Theory, which holds another big platform in our research. Although Nightingale’s avoided accepting John Snow’s Germ Theory, it is not so ignorable rather it could be placed with Nightingale’s principles and these two theories are interrelated and able to develop adolescents’ capabilities in broader sense. In conclusion, this research slots in some general recommendations by focusing National Health Policy, 2011 and argues that it is an urgent need to give prior concern on environmental sustainability and health right in adolescent girls and incorporate their voice while formulating further policy.

Key Words: Adolescent Girls, Environmental Health, Capability Approach.
1. INTRODUCTION

The concentration of public health issues and adverse environmental circumstances within slums\(^1\) is an increasingly important concern for developing countries like Bangladesh. As we entered the new millennium, the concept of health for all remains a distant dream, especially for adolescent girls\(^2\) who have always been the neglected group of Bangladeshi society. It is to note that from single slum in the 1950’s, the number of slums in Dhaka city has now increased to 4,966 in the 2005 Slum Census of Urban Bangladesh (Midline Survey, 2009). Therefore, it is quite natural that in these slums in Dhaka city, public health, water and sanitation services are almost non-existent. Thus, slums are generally characterized by poor environmental circumstances and services. This insisted us to find out how future generations are losing their capabilities due to gradual degradation of Environmental Health\(^3\) and what the possible remedies that may help to overcome this area-specific crisis could be.

In the above background our study has aimed at achieving some objectives. First, is to focus on environmental health in the urban slum areas. Second one is to highlight the conditions of adolescent girls’ health as perceived by the slum households. Then, to describe the underlying factor that may influence adolescent girl’s health at risk. And, finally, to suggests some general recommendations and other related issues for the benefits of adolescent girls. This delves into the essential risks factors due to adverse environmental circumstances within slums and to check whether these issues affect adolescent girls or not. We have chosen Tejgoan Railgate slum situated in Dhaka city, for conducting our field works. As this research was self-funded, therefore we have chosen Dhaka city, our living place, for conducting field works.

2. STATUS OF ADOLESCENT GIRLS LIVING IN URBAN SLUMS AND ENVIRONMENTAL HEALTH SECTOR DEVELOPMENT PROGRAM: REVIEWING SOME LITERATURE WITH THEORITICAL LINKAGE

Environmental health, in theory, research, and practice has always incorporated topical challenges across the interface between the problem areas of health, environment, and development (Parkes M. et al, 2003). The ten capabilities\(^4\) identified in Women and Human Development (Nussbaum M., 2000) are essentially the same. All those capabilities presented in frontiers of justice. The main title of each is the same but there are some minor adjustments made to the wording of the explanations of each capability. The current (2006) version of the list contains alterations noted. In another light, the capabilities can be seen to be extraordinarily interconnected; none of them can be satisfied independently of all the others (Nussbaum, ed., 2009).

An authoritative declaration by Florence Nightingales not to do harm expresses the ideas, as

\(^{1}\) The term has traditionally referred to housing areas that were once relatively affluent but which deteriorated as the original dwellers moved on to newer and better parts of the city, but has come to include the vast informal settlements found in cities in the developing world (UN-HABITAT 2007 Press Release).


\(^{3}\) The term refers to the theory and practice of assessing and controlling factors in the environment that can potentially affect health (Robert, Overview of the Environment and Health in Europe in the 1990s, WHO, 1999).

\(^{4}\) Nussbaum frames these basic principles in terms of ten capabilities. These are: life, bodily health, bodily integrity, senses, imagination, and thought, emotions, practical reason, affiliation, control over one’s environment, play and other species.
an inevitable basic condition for sustainable design. Written in *Notes on Nursing: What It Is and What It Is Not* (1860), Nightingale promotes her vision of sustainable design through analysis of the household environment and the underlying physical conditions. Her sustainable design principles include adequate ventilation, odor reduction in painted and papered rooms, and windows for natural light and outdoor views. Florence Nightingale’s Environmental Theory (NET) is applicable to our research. The reasons are: first, Nightingale converges mainly on environment/surroundings and she enumerates the attributes of a healthy environment. Second, Nightingale stated for apposite nursing care, healthy environment is crucial (Octaviano, E.F. & Balita, C.E., 2008) and it proves to be true because doctors, nurses, and other health workers can perform their job well if they move or work in a clean, well organized environment. Third, Nightingale defines sanitation as manipulation of the environment to prevent diseases. It is a process of establishing hygienic condition, that is, if cleanliness and proper arrangement is maintained, diseases are prevented. Finally, both patient and nurse should help each other since they have complementary functions for attaining one single goal and, therefore, the patient needs to cooperate with the nurse for his/her recovery and the nurse must perform his/her duty to them with dedication to achieve their one goal.

Finally, John Snow’s major interest included cholera (Snow J, 2005). Snow became very interested in the cause and transmission of the disease in 1832, while he was still a medical apprentice and treated cholera victims. In 1849, he published a pamphlet, "On the Mode of Communication of Cholera," which counted the conventional thinking regarding the disease. This prevailing “germ theory” academically rejected by Nussbaum’s Capability Approach (CA), which is not out of limitations. Within Nussbaum’s capability framework, our research aimed at analyzing capability endowment in the lens adolescent girls living in *Tejgaon Railgate* slum, Dhaka, Bangladesh in a given situation which is the point of departure of the evident social problems faced by our tomorrow’s women.

3. Research Methods and Data Collection Techniques

This research is qualitative in nature. The basic descriptive data of our research were some randomly selected cases. A semi-structured questionnaire was designed for the interviewee. The feminist research methodology has been followed for an in-depth examination of the related topic. The target group was the adolescent girls who are the worst victim of environmental degradation. We firmly maintained ethical issues. We took permission from the respondents that the name of the respondents will remain pseudonymous.

Two of my respondents among four were unmarried adolescent girls and the other two were married adolescent girls. This selection helped compare the situation of health risk-factors which vary from marital status though both of them live in same environmental condition.

We have also conducted two key informant interviewees to reflect their thought into recommendation part. One interview has been taken from Dr. Muhammad Munir Hossain. Another interview has been taken from Dr. Nafisa Lira Haq.

4. Data Analysis from Case Studies

The adolescent girls’ residing in *Tejgaon Railgate Slum* (TRS) faces many problems, e.g. improper sanitation, unhygienic environmental conditions, social, economic, health problems, and many more.

At first, we should take in consideration that a large portion of the respondents were living in these slums for a long time while one third of the respondents were residing in these slums for ten to twelve years. The basic problems inherent in TRS are health hazards. Lack of basic amenities like safe drinking water, proper housing, and drainage and excreta disposal services make TRS adolescent girls vulnerable to infections. Recently, Shabnoor, an
adolescent girl of seventeen years old, had been feeling pain in her abdomen\(^5\). Besides, sometimes she also feels itchy in her urinary pipe.

Second, poor sanitary conditions and poor quality of water lead to illnesses like diarrhoea and other water borne diseases that affect the life expectancy of this slum adolescent girls’. In dense, urban conditions it is often difficult for slum dwellers to find space to build latrines. Many have to defecate in the open space or share latrines with other families which tend to offer no privacy, safety or hygiene. The case of Shabnoor is heart touching. She feels shame to bath in an open space where people entered whenever they need. Therefore, she took her bath before early morning. During winter this practice becomes hard to maintain and sometimes she becomes ill also. Both of Shabnoor and Purnima are married and still in adolescence. On the one hand, Purnima’s husband loves her and does not allow her for work outside, which is mentioned by her. On the other hand, Shabnoor completed reading *Al-Quran*\(^6\) at her early age. These pictures make it conspicuous that Purnima’s have a conservative minded husband and Shabnoor’s have a religious minded family. But situation drives them to bath in an unsecured space. The impact of such practice will be discussed in the next section.

Third, inadequate access to safe water and sanitation leads millions of our people to various health problems. Water and vector born diseases like diarrhoea, dysentery, typhoid, and worm infestation are too common in the country. This is same for Poppy’s case. Poppy is belonging in a poor income family. Due to financial constraint she is unable to give taka 2/3 for each time in the purpose of using toilet. Therefore she has to run 300 meters away for using *Karwan bazaar*\(^7\) public toilet for free of cost. At late night Poppy avoids drinking water and holds her pressure to go for toilet for the risky slum environment. The research also found that on the slum streets sexual harassment is extremely common and sometimes this drives the slum girls to stop going to school or work. Young boys and men are usually addicted in TRS. They do irrational behavior with others, especially with adolescent girls’. Therefore, adolescent girls of TRS usually avoid using latrine after evening. As a result, during the time of interview, Poppy has been suffering from inflammation while urinating for the last few months as she stated. She did not face this problem before\(^8\).

Fourth, washing hands with soap or ash after toilet depends on adolescent girls’ disposal. Shabnoor rarely washes her hands with soap or ash after toilet use. Poppy can never think that it is an important issue. She said, “It is also difficult to carry ash or soap each time from my living place to that distant toilet which is placed at Karwan bazaar. At a time, that toilet is for public use. No one maintains hygiene there\(^9\)”.

Given picture of environmental sanitation\(^10\) is shoddier in TRS because there are ignorance, poverty, lack of space to set a toilet, traditional practice of open defecation, the use of hanging latrines, and lack of knowledge about hand wash that pose a serious threat to health.

Fifth, the condition of the set of water supply is not satisfactory. There is a small slab in bathroom which stands in an open place and is widely used for the purpose of bathing and daily household work. The place is visible from the road. The slab is always slippery and covered with moss. The bathroom place is also used for the purpose of cooking and washing things. So the place is always full of food waste garbage. The respondents, who do not boil water, said that they cannot think of boiling water for drinking as fuel for cooking is expensive. They were also not aware of the effectiveness of

\(^5\) Author’s interview with Shabnoor, 2012, Tejgaon Railgate Slum, Dhaka.
\(^6\) The Holy book of Muslim community.
\(^7\) Name of a market place situated in Farmgate, Dhaka.
\(^8\) Authors’ interview, 2012, Tejgaon Railgate Slum, Dhaka.
\(^9\) Authors’ interview with Poppy, 2012, Tejgaon Railgate Slum, Dhaka.
\(^10\) Environmental sanitation is the control of environmental factors that form links in disease transmission. Subsets of this category are water, air and noise pollution (Ehlers and Victor, 1943).
pure drinking water. Authors’ research experiences found no space in the TRS to play for. So she finds her enjoyment by taking unhealthy cheap food from the hawkers, mentioned by Poppy. She is not aware of the impact of taking such unhealthy food which is also made by some slum dwellers in an unhealthy environment. Like Poppy, Moushumi is also unmarried. She has afforded television (TV) of her own family. But she does not like to watch any educational program. This situation presents that these slum adolescent girls have a few or no chance to get knowledge on health and sanitation, importance of healthy environment and so on. Sixth, the respondents reported that generally they suffer from Intestinal infections such as Diarrhea, Dysentery, and Intestinal parasite. Diarrhoea was one of the most common diseases in the TRS slum mentioned by the respondents. It is noticeable that the slum adolescent girls do not know the causes of asthma and they did not take any treatment for this. They also said that they took advice from the shop keeper or shop owner of their nearest medicine store and got medicine from pharmacy or dispensary or clinic to get cured. Other diseases, as mentioned, are headache, fever, cough and cold, Gastric/Ulcer, Jaundice, Anemia, Skin Disease etc. In some cases they have some idea about the causes of the diseases, but in most cases they are not aware of real causes of diseases. The rail line goes through the middle of the slum houses and when train passed through the slum, Moushumi feels bad to get smoked by train. She thinks this bad smell and excessive noise made by train is the reason of her Gastric pain and regular headache respectively. Although Purnima had no other serious disease in her childhood, she has been suffering from dyspnea from the last three years of her teenage life.

Seventh, overall health status of a person is measured on level of hemoglobin of a person (Kulkarni M. V. et al, 2012). Prevalence of anemia within slum area is higher in adolescent girls. In addition, it gets precipitated by blood loss during menstruation. Anemia in adolescent girls attributes to high maternal mortality rate, high incidence of low birth weight babies, and fetal wastage in future. But most of the respondents of TRS do not have proper knowledge of menarche hygiene and balanced diet which are important for keeping healthy body of adolescent girls. But as the slum dwellers are very poor and sometimes they live from hand to mouth, they cannot even think of having balanced diet. Generally they take moldy wet-rice with dried-pepper, onion and salt and hardly get any chance to eat red-meat or mutton. Adolescence is the approach sided by girls who must have to cross the narrow bridge to reach at the end as adult young women. The path is a risky one for the girls (Population Council, 2010). Moreover, it is in high risk for the slum adolescent girls. They are significantly vulnerable than their male counterparts. They may fall off the bridge while passing through this stage. Like Poppy, others face poorer outcomes for taking unhealthy food from the hawkers which is their first choice. They are more likely to become infected by bacteria and other germs which remain on those unhealthy foods. Even foods are not properly washed before cooking. Gradually they loss their strength and finally a fewer have contributed in income generating activities.

Then, Moushimi and Poppy; on one hand, Moushumi had guidance of her school teacher, elder sister and female classmates and also had scope to gather health knowledge from TV. She tries to maintain hygiene during menarche. On the other hand, Poppy never went to school. Thus, she had no idea of the importance of hygiene during menarche. Again, by comparing Purnima’s case with 85% of cases it is due to asthma, pneumonia, cardiac ischemia, interstitial lung disease, congestive heart failure causes. Treatment typically depends on the underlying cause (Shiber JR, Santana J, 2006).

11 Author’s field observation, 2012, Dhaka.
12 Dyspnea, shortness of breath (SOB), or air hunger, is the subjective symptom of breathlessness. It is a normal symptom of heavy exertion but becomes pathological if it occurs in unexpected situations.
Shabnoor’s, who are married adolescent girls’, both of them should maintain hygiene strictly. Both of them have to meet sexual intercourse as they are married mentioned earlier. Purnima is already having a gynecological problem which is mentioned earlier. Again, we can take the cases of Purnima, a married adolescent and Poppy, an unmarried adolescent girl in consideration, as they are fully illiterate. But what is about Shabnoor? She still goes to Caritas Bangladesh’s regular weekly session where health issues are discussed. But it is found later that, she went there not for adopting health knowledge but for getting TK 1000 per month. This raises questions about awareness giving project’s sustainability as well as respondent’s adoptability.

Ninth, a health worker from Aparajeyo Bangladesh came to visit Shabnoor’s house, she said. The program was only for pregnant women and children. By these campaigns they sensitized the slum dwellers on various diseases, its prevention procedure and provided free vaccine, free medicine etc on holidays. But there is no special and specific project or program for slum adolescent girls in TRS experienced by respondents.

And finally, the physical environment causes problems in TRS areas. Drains are not covered or kept clear there. These forms a breeding ground for mosquitoes and also increases the danger of malaria and dengue fever. The cramped conditions of the slums, number of people per home and close proximity to others enables disease to spread rapidly. The problem is made worse during the rainy season. They do not have regular access to public health services and private health care service is very expensive mentioned by them. In these conditions, it is virtually impossible for them to remain healthy and avail themselves of health services and information.

5. FINDINGS: THE STATE OF ADOLESCENT GIRLS’ IN URBAN SLUM

Conditions of TRS pose many dangers to the inhabitants’ health. Lack of education means that people are unaware of the health problems caused by unsanitary conditions, and do not know how to prevent the spread of disease. The research found that when health problem becomes apparent, people are often reluctant to seek medical help due to the costs involved. They can be misled by the advice offered by local "quacks" - people who pose as doctors but have no medical training. Their incorrect diagnoses and unsuitable medication pose more damage than the patients' illnesses themselves.

5.1 Life in Urban Slum: Associated Risk Factors in Adolescent Girls

According to the World Health Organization (WHO), the location where people live affects their health and life outcomes (WHO, 2008). This means impoverished people’s health outcomes are especially determined by whether they live in an urban or rural area. Living situation is an especially strong determinant of health in poverty. The research presents health risks through poor living condition among adolescent girls’. Daily living conditions of TRS put enormous impact on health.

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13 Caritas Bangladesh (C B) is a social arm of the Catholic Church in Bangladesh, mandated by the Catholic Bishops’ Conference of Bangladesh (CBCB). It was registered under the Societies Registration Act XXI of 1860 (July 13, 1972) and under the Foreign Donations (Voluntary Activities) Regulations Ordinance 1978. Caritas has experienced a rapid growth process through many and far-reaching changes in the backdrop of the country and global events: Coming at the wake of the War of Independence (1971), Caritas has operated according to the Teaching of the Gospel, keeping in view the authentic directions contained in the four State Principles of democracy, socialism, secularism and nationalism (Philosophy of Caritas Bangladesh, 1994).

14 Author’s interview with Shabnoor, 2012, Tejgaon Railgate Slum, Dhaka.

15 This is a national child rights organization, which works with children living in and around the slums of Dhaka city.
equity too. Equity in living conditions, such as access to quality housing and clean drinking water and hygiene, have been greatly degraded in TRS by increasing truck-dependence, land use for roads, inconvenience of non-car transportation, air quality and greenhouse gas emissions from industries.

5.2 Nutritional Status of Adolescent Girls’ in TRS

We can relate Nussbaum’s concept of life directly with nutritional intake. This research also found that the common food behavior of TRS does not fulfill nutrition required for adolescent girls. Dr. Lira's thought on this issue is significant in this case. Poverty leads to the slum adolescent girls to eat only for survival need not to meet the nutritional need. But lack of knowledge also matters. Poor diet is very common among adolescent girls living in slums. So they are diseased with gastrointestinal disorders (GID's) mentioned by Dr. Lira.

5.3 Lower Standard Housing and Construction

Proper housing is a very important factor for social and psychological development of adolescent. But the practical situation of all TRS indicates a dreadful life with poor lighting, lack of ventilation facilities, high crowding and living and cooking either close to or at the same place. Most of the rooms built by tin or thatched in squatters are made of low quality materials with no construction standards. Most of them hold a single room for the whole family that makes the slums very congested. Most of the rooms have been poorly built and now have seeped out roofs and some empty wreck buildings. This research found that poor quality and inadequate housing add health problems among adolescent girls such as infectious and chronic diseases and poor adolescent development. Case of Purnima is an ideal example of these findings which is stated in previous section. As a result, her life might be so trim down as to be worth living as marked by Naussbaum’s CA.

5.4 Body Image and Depression among Adolescent Girls

Adolescence is the period while “Our bodies ourselves” is a stirring theme (National Institute of Public Cooperation and Child Development, 2008). New perception, new thought and new feelings about the body have to be confronted by the adolescent girls’. Given its importance, Nussbaum put this factor into her capability basket. Bodily integrity includes “being able to move freely from place to place” (Nussbaum 1997), and that almost no girl living in TRS really has this capability to the same extent that man have it. Here the persistent threat of violence acts, as surely as the reality of violence, diminishes human capabilities. Our research found that slum adolescent girls of TRS are being violated of this set of capability. This is particularly affecting slum girls than boys. Thus they are twice as likely as boys to experience depression. They start feeling unable to move freely from place to place for such bashful event encountered by Poppy. Depression from sexual assault can change the way they see themselves, their lives, and the people around them. It leads to sadness, discouragement, and a loss of self-worth and interest in their usual activities.

5.5 Bodily Health Is Unsupportive To Adolescent Girls in TRS

Nussbaum frames “bodily health” into her CA (Nussbaum M., 2000). But research experience did not find any evidence which can show that

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16 This may include differences in the "presence of disease, health outcomes, or access to health care" (Goldberg, J. et al., 2004).
17 All diseases that pertain to the gastrointestinal tracked are labeled as digestive diseases.
18 Author’s observation, 2012, Dhaka.
19 Author’s observation during interview, 2012.
20 Author’s interview with Dr. Nafisa Lira Haq, Assistant Scientist, Public Health Science Division, ICDDR,B, Dhaka.
adolescent girls living in TRS is adequately nourished. Menstrual hygiene has an environmental impact (EEPA, 2007), in the form of a growing waste problem. In the TRS, this already causes problems which frequently have poor waste management infrastructure. This type of waste will certainly produce larger problems. Hygiene factor has been given importance by Nightingale. She represents a connection between environmental health and patient health. If environment cannot make certain quality of life to the host of the existing environment, then they will be the victim of long-suffering.

5.6 Frequent Infections Cause Health Risk

Reproductive health is an important area of concern in adolescent health. Shabnoor, one of the respondents of the research was married but adolescent girl. She lives in TRS since her childhood. Shabnoor is recently carrying infectious disease which is also risky for reproductive health. Problems also include, as she stated, pressure or pain in lower back or feeling tired and shaky. She is experiencing chills or fever. Shabnoor has been suffering in Urinary Tract Infections (UTI)\(^{21}\), identified by Dr. Munir\(^{22}\). Women are the worst victim of UTI\(^{23}\) than men. Recurrences are common. Risk factors include

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21 Author’s interview with Dr. Mohammad Munir Hossain, 2012, Project Manager, ASRHR, Project Manager, Plan Bangladesh, Dhaka.
22 Author’s interview with Dr. Mohammad Munir Hossain, 2012, Project Manager, ASRHR, Project Manager, Plan Bangladesh, Dhaka.
23 A urinary tract infection (UTI) is a bacterial infection. It affects in the part of the urinary tract. When it affects the lower urinary tract it is known as a simple cystitis (a bladder infection) and when it affects the upper urinary tract it is known as pyelonephritis (a kidney infection). Symptoms from a lower urinary tract include painful urination and either frequent urination or urge to urinate (or both), while those of pyelonephritis include fever in addition to the symptoms of a lower UTI (Nicolle LE, 2008).

female anatomy, sexual intercourse and family history. Therefore, alike Shabnoor, unhealthy environment is harmful for other married adolescent girls.

5.7 Infertility Creation among Urban Slum Adolescent Girls

Purnima experiences extremely poor living condition in TRS which is already described earlier. As she was slipped off on the slippery slab, she has been losses her capability of being mother for the next time. Her doctor diagnosed other symptoms and told her that she had been affected by Pelvic Inflammatory Disorder (PID)\(^{24}\). PID can cause scaring inside the reproductive organs. This can later cause serious complications, including chronic pelvic pain, ectopic pregnancy and other dangerous complications of pregnancy.

5.8 Health Effects of Environmental Pollution in Urban Slum

The current environmental quality of TRS is degraded from the last ten years\(^{25}\) as it is difficult even to provide basic health, especially among adolescent girls. Poor environmental conditions in such areas lead to poor health, which aggravates poverty and often results in lower educational levels, as well as loss of income owing to sickness, disease, and increased spending on health care, which may deplete household savings (Dubbale D. & Tsutsami J., 2010). Poor health of adolescent girls results from several diseases. These diseases are the consequences of environmental degradation.

5.9 Water Borne Diseases

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24 PID is a vague term and can refer to viral, fungal, parasitic, though most often bacterial infections. PID should be classified by affected organs, the stage of the infection, and the organism(s) causing it. This can lead to infertility.
25 Author’s interview with Moushumi, 2012, Tejgaon Railgate Slum, Dhaka.
Dr. Lira further says that the use of impure water in cooking and other works results in the outbreak of many water borne diseases. Due to the repeated attack of diarrhea they loss strength and weight. These symptoms are mentioned by Poppy while interviewing her. This physical weakness may weaken her mental strength in the long run.

5.10 Airborne Diseases among Urban Slum Adolescent Girls’

Airborne diseases are most commonly seen in unsanitary TRS household conditions. It is closely linked to both overcrowding and malnutrition. Overcrowding or congested living and malnutrition is common among all the cases of this research. Respondents are at high risk of health because of regular inhalation of train smoke and secondhand smoking. Often, inhaling train smoke cause inflammation in the nose, throat, sinuses and the lungs. Dust mites, mold, secondhand smoking bring in both indoor and outdoor air pollution among these slum girls’ also.

6. SKETCHING ADOLESCENT HEALTH FROM ENVIRONMENTAL PERSPECTIVES

Ultimately, the need for more interactions to be described among human and the environment is immense. Knowing the impact of unhealthy environment on human health is mandatory. A careful reflection of sound health, freedom, and well-being, open spaces for playing or scope of entertainment can shape adolescent girls senses of imaginations, thought and capability of decision making. For example, one of the respondents, at her early age denied marrying but her ambiance did not give her scope to decide her own choice. Now she is a breast feeding mother of her child, although she has poor health because of poor diet. Similarly factors associated with environment marked by Nightingale is absent in TRS. Thus lack of consciousness on environment, poor knowledge on health, affects them much. Dirty nails, clothes and contagion food were also observed by the researchers. There must be hidden germs which affect their health. These altogether make us understand that if one is provided pure drinking water, access to fresh air or facilities of proper waste disposal system; but does not maintain hygiene of their own, can never have a sound health. Therefore, positive outcomes are only possible by accepting all these three ideologies given by Nussbaum M., Nightingale F. and Snow J. to achieve a sustainable health outcome.

7. THE RIGHT TO HEALTH

Some adolescent girls with disabilities or persons living with acute health hazards face specific hurdles in relation to the right to health. These can result from biological or socio-economic factors, discrimination and stigma, or, generally, a combination of these. Considering health as a human right requires specific attention to different individuals and groups of individuals in society, in particular those living in vulnerable situations. In case of TRS, state should adopt constructive measures to ensure that adolescent girls are not dispossessed. For instance, policy makers should incorporate adolescence health laws and policies and alter those laws if needed. Governments and health professionals should treat all adolescents in a non-discriminatory manner. This means they should pay particular attention to the needs and rights of this specific group. Girls should enjoy equal access to adequate nutrition, safe environments, and physical

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26 Author’s interview with Dr. Nafisa Lira Haq, 2012, Assistant Scientist, Public Health Science Division, ICDDR,B, Dhaka.  
27 Airborne diseases commonly known as ARI, acute respiratory infections kill more than 4 million people per year and are the leading cause of death among children under age 5 (World Health Organization, 1996). This range of infections, which includes pneumonia in its most serious form, accounts for more than 8 percent of the global burden of disease (Christopher J. L. Murray and Alan D. Lopez, eds. 1996).
and mental health services. Appropriate measures should be taken to abolish harmful traditional practices that affect mostly girl’s health, such as, early marriage, and preferential feeding. While adolescents are in general a healthy population group, they are prone to risky behavior, sexual violence and sexual exploitation. Adolescents’ right to health is therefore dependent on health care that respects confidentiality and privacy and includes appropriate mental, sexual and reproductive health services and information.

8. RECOMMENDATION BASED ON RESPONDENTS OPINION

According to the slum adolescent girls following steps should be taken to improve the quality of health service of TRS area. But this minority group presents the health need of adolescent girls of the whole nation in a broader sense.

- Hospital and more health care centers should be established in the locality.
- Environment of health care center should be healthier and hygienic.
- Medicine should be provided at free of cost.
- Door to door health service should be provided in the slum area by government and NGOs.
- Quality of health services should be improved.
- Behavior of doctors and health service provider are needed to be more cordial.
- Medicine price should be reduced, so that slum people can afford it.
- Quality of sanitation facilities need to be improved.
- Distribution of iron tablet and vitamin tablet by the Government in the locality was needed.
- Government and NGOs should work in increasing awareness on adolescent health issues.
- Female doctors need to be appointed in the maternal child health center.
- It is an urgent need to spray regularly in the locality, for controlling mosquito.
- City Corporations step’s is needed for proper garbage cleaning facility that should be taken to improve the quality of health service of urban slum area.

9. NATIONAL HEALTH POLICY-2011: STATE’S ROLE

Most of the adolescents are illiterate and live in pathetic conditions and lack knowledge in critical areas of life that is essential for leading a healthy and meaningful family life and parenthood. As an official of a research organization, Dr. Lira has revealed her experience by following lines: “Bangladesh is in its previous states. Ultimately it has gained no positive changes!”

National Health Policy, 2011 contains 18 principles and 39 strategies with many more objectives NHP, 2011. But unfortunately this minor group, adolescent girls’ health issue is skipped from the policy option! There are a lot of gaps in the present level of knowledge of adolescents and their requisite knowledge in the areas like body growth and functions and sex-related diseases.

10. ENVIRONMENTAL SANITATION AND CLEANLINESS: THE WAY TO GOOD HEALTH

Over the years Government has organizes public, manages educational campaigns and programs to sensitize people on environmental sanitation and cleanliness. They do these activities to engage task forces to monitor the compliance of the environmental protection and its integrity. In fact, the cities in Bangladesh, especially urban slum of Dhaka, have some time now battled with varied environmental challenges. Among all of them environmental sanitation and health is topical. One should, therefore, not be surprised to see some

28 Author’s interview with Dr. Nafisa Lira Haq, 2012, Assistant Scientist, Public Health Science Division, ICDDR,B, Dhaka.
inscriptions on billboards and fence walls warning people not to urinate at certain places or throw refuse anyhow. All these are done to make the environment clean, beautiful and disease free. However, indiscipline in the environment has become so gross.

It is high time we began to treat issues of environmental sanitation and health with all the seriousness that it deserves. There is the need for all Ministries, Agencies, Departments, NGOs, religious bodies and individuals to come on sponsoring environmental sanitation programs. So that people can fully understand the need to keep the environment germ-free, for example, clear air for breathing, safe water for drinking, healthy sanitation facilities.

11. CONCLUSION

Keeping in view the larger interest of the masses, a few facts become clear. First, some factors which are affecting environment need special concern from policy makers and implementers. There urgently needs an agent initiative to shape the agent-host-environment triad model29 in reality. Second, despite improvements in our environment over the last century, many human health problems are still linked to environmental pollution and environmental factors. Nurses like Nightingale have undertaken initiatives to develop an environmental health component in their professional practices. By assessing and understanding the environments in which their patient’s live, work, and play, nurses are providing better health care to their patients. They have conducted environmental exposure health histories and educated community members about exposures to environmental health hazards. Third, the erroneous attribution of John Snow’s work suggesting the possibility of harm allows the invocation of action. As the precautionary principle becomes increasingly incorporated in international treaties and in national governance, the potential impact of the strength of the interpretation on the development of environmental health science becomes greater. Thus, taking slums as hope, it is needed to treat slum people; especially slum adolescent girls, who are the producer of our future generation, as center for concern. The considering issue is, to make them capable of taking further opportunities to prove themselves as an agent of future project, who is now the host of health hazards. Thus the remaining agent-host-environment triad approach can act upon their best for better health for our adolescent girls.

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