IMPLICATION OF OPEN DEFECATION ON PUBLIC HEALTH WITH SPECIAL REFERENCE TO CHOLERA AND HEPATITIS AGAINST THE BACKDROP OF SWACHH BHARAT ABHIYAN

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ABSTRACT:

In Developing and Underdeveloped Countries, one of the biggest challenges that is being posed to the respective Governments is of the insubstantial state of affairs in regards to Public Health due to incessant practices of Open Defecation. Open Defecation is the practise of excreting in open spaces where no facilities of proper disposal of the excreta is there. This in turn exerts innumerable amount of Health, Economic and Socio-Cultural Repercussions. In this Research Study, the Researcher will be focusing primarily on the Health Repercussions occurring as a result of Open Defecation, specifically at a time when the concerned Governing Authority has initiated the *Swachh Bharat Abhiyan*, the Researcher will tend to comprehend if the provision of Sanitized Toilets have indeed been provided by the Government as has been promised under the *Swachh Bharat Abhiyan* Programme and to further comprehend if any form of Health Implications, such as Cholera and Hepatitis are still occurring amongst those people. Hence, the objective of the Research would be to comprehend if the people belonging to the Slum area of Mumbai are indeed provided with Sanitized Toilets or otherwise and further the Researcher would be exploring about their Health Status by specially focusing on Cholera and Hepatitis. In order to draw data for the Research Study, the Researcher would be employing Purposive Non-Probability Sampling from 9 Respondents residing in three different Slums belonging to Greater Mumbai. The Result exhibited that even today after the initiation of National Level *Swachh Bharat Abhiyan*, there are approximately 77-80% of Slum Dwellers still residing without any form of accessibility to Proper Sanitized Toilets and many of them have/had experienced transmissible diseases like Cholera and/or Hepatitis. It is however of utmost salience to note that diseases like Cholera and Hepatitis can be easily prevented with timely vaccinations, reiterative messages focusing on awareness and construction of mobile as well as immobile toilets even in remote areas.

KEYWORDS: Cholera, Defecation, Open Defecation, Hepatitis, Hygiene, Sanitized Toilets

**SUB THEMES- Public Health Initiatives and Challenges**

INTRODUCTION:

 As has been highlighted, Open defecation deploys a very destructive repercussion having no optimistic outcomes. It results in a wide array of Diseases, Societal Barriers as well as a severe constraint on the Economy. When it comes to the discussion of Diseases, Open Defecation has been known to cause transmissible yet preventable diseases, such as, Cholera, Polio, Hepatitis, Trachoma, etc. It also mainly reprehensible behind the adverse rate of Child Mortality dying due to Cholera and Diarrhoea. It is pertinent to note that such diseases have been curbed by the intervention of Vaccinations and Medicines but such Diseases still continue to be a Pandemic in areas wherein Open Defecation, Regular consumption of contaminated water is rampant. Now when it comes to the discussion of Societal Barriers, Girls and Women often are not comfortable going out in the open to defecate during daylight, hence in such circumstances, they either need to wait for the Dawn or for the Dusk to defecate or even urinate. The reason they are made to wait for either Dawn and/or Dusk is because most of the Women shy away if they are caught defecating by men and therefore, prefer waiting for darkness rather than going out during broad day light. Hence, under such circumstances they are compelled to control their urges and hold their urge to either urinate or defecate and this in turn might cause irreparable damage to their Urinary Bladder and/or to the Colon causing chronic Acute/Chronic Constipation. Various girls when they start menstruating drop out from Schools due to lack of separate toilet facilities for them. As it is not an unknown fact that during menstruation, the usage of toilets become more. Various Girls and Women have also been victimized at the hands of various Sexual Crime when they were out defecating in the dark. Hence, from the above mentioned assertions it is unambiguous to note that the practise of Open Defecation is not only detrimental to an individual’s health but also it acts as a vicious form of Gender barrier. Open Defecation also compels the Lower Caste Dalits to act as a human scavenger. When there is no provision of Excreta disposal, then the people belonging to the Lower Castes are compelled to manually remove the excreta using their bare hands. This form of practise is not only defiling but is regarded as a vicious form of sub-human work. Open Defecation also has an Economic Implication in the sense, the more cases of Open Defecation and other such analogous form of insanitary living conditions the more cases of transmissible diseases like Cholera, Hepatitis, Trachoma etc. and hence more the burden on the health services of the Country. With more cases of diseases like Cholera, Hepatitis, Trachoma, the overall efficiency and productive level of the concerned individuals also decline. People incessantly being plagued by diseases would not be able to seek up a long lasting Occupation for themselves, they would repeatedly miss going to work as a result of their poor heath and this in turn would eventually effect the Economy of the Country. Therefore, the construction of more and more sanitized toilets in lieu with the exponential growth of Population with effective disposal of wastes would not only help evading Ill health but also help removing Gender barrier, Human Scavenging and Economic constraint.

*Swachh Bharat Abhiyan* is reckoned to be one of the most celebrated programmes being launched by the Prime Minister of India. Adhering by the ideals of Mohandas Karamchad Gandhi (Mahatma Gandhi) who had envisioned for a Cleaner as well as for a Healthier India, the Prime Minister laid foundation to transition the Country into a Clean and Hygienic one marked by good health for all its Citizens. It was launched on 2nd October, 2014 with the primary objective of making the Country defecation free. Under the programme, the Government boasts of having built approximately 10 Crore Toilets and further the Programme has rendered many States open-defecation free. So in light of this, the Researcher would be exploring the success of *Swachh Bharat Abhiyan* in the City of Mumbai wherein largest of the large Slums are found as a result of rapid Rural-Urban Migration and further would be evaluating the provision of sanitized toilets for these slum dwellers by correlating it with their Health.

REVIEW OF LITERATURE:

1. Open Defecation Practise and its determinants among households in Sub-Saharan Africa: Pooled Prevalence and Multilevel Analysis of 33 Sub-Saharan Africa Countries Demographic and Health Survey:
* [**Daniel Gashaneh Belay**](https://tropmedhealth.biomedcentral.com/articles/10.1186/s41182-022-00416-5#auth-Daniel_Gashaneh-Belay-Aff1-Aff2)**, [Melaku Hunie Asratie](https://tropmedhealth.biomedcentral.com/articles/10.1186/s41182-022-00416-5%22%20%5Cl%20%22auth-Melaku_Hunie-Asratie-Aff3), [Fantu Mamo Aragaw](https://tropmedhealth.biomedcentral.com/articles/10.1186/s41182-022-00416-5%22%20%5Cl%20%22auth-Fantu_Mamo-Aragaw-Aff1), [Nuhamin Tesfa Tsega](https://tropmedhealth.biomedcentral.com/articles/10.1186/s41182-022-00416-5%22%20%5Cl%20%22auth-Nuhamin_Tesfa-Tsega-Aff3),** [**Mastewal Endalew**](https://tropmedhealth.biomedcentral.com/articles/10.1186/s41182-022-00416-5#auth-Mastewal-Endalew-Aff5)**& [Moges Gashaw](https://tropmedhealth.biomedcentral.com/articles/10.1186/s41182-022-00416-5%22%20%5Cl%20%22auth-Moges-Gashaw-Aff4)**

**FINDINGS: - The Study primarily focuses on 33 Sub-Saharan Countries which are engulfed in Absolute Poverty over many years. The Research Study projects that Open Defecation is caused by a wide array of factors and hence is inter-linked with other factors. Other determinants, such as, Educational Level, Accessibility to Open Drinking Water, Exposure to Media and overall Household Income pose a direct correlation with Open Defecation. As per the findings of this Study, less the Population attaining Educational Level, less the population’s exposure to mass media, less the Population’s respective household income and less the population’s accessibility to uncontaminated i.e. safe drinking water then more are the chances of them openly defecating as their exposure to the external world as well as their overall level of awareness level is extremely limited. The Research Study therefore, recommends that each and every Country should adapt immediate measures to eradicate Open Defecation, especially the Countries which has majority of the Population stricken with Poverty, also the Country which has got majority of the People residing in Rural areas and the areas in which limited water accessibility are there. In order to do so, the Study further recommends that more and more Population ought to be exposed to Mass Media and Education too ought to be reinforced. The Study advices the concerned Policy makers and Programme Planners to take their Research Study as a part of preliminary evidence and hence they should commence drafting policies on the particular issue accordingly.**

1. **Open Defecation Practices in Rural Areas Threat Public Health: An Assessment of Selected Area in Sokoto, Nigeria**
* Mukhtar Abubakar Abdullahi, Yusuf Sarkingobir, Asiya Gidado Yabo

**FNDINGS: -**

**The Study has been conducted on the Province of Wurno, a Local Self Government in the Country of Nigeria, Africa. The Study directly addresses the Health issues due to the practise of Open Defecation. The Study in its Conclusive Analysis, appropriately highlights how the practise of Open Defecation can be responsible for the transmission of various diseases and infections. The Study highlights when excreta are left out in the open, the probability automatically accentuates for other people to come in contact with the excreta. The Study asserts that Excreta when left out in open emit out millions of microbes to the environment and hence, the probability of catching diseases like typhoid, cholera, hepatitis and malnutrition positively increase. Therefore, on the basis of the findings various advices have been provided by the concerned Researchers through the medium of this Study. The first recommendation has been to construct toilets in not only one’s home but also in schools, specifically for females. The second recommendation that has been provided in the study is to usher in awareness by simultaneously launching massive campaigns among the local residents on public health and hygiene. For the same, Leaders and Teachers have been expected to discharge a very salient role.**

RESEARCH METHODOLOGY-

The Data of the Research would be collected by employing Interview Schedule on the basis of Purposive Non-Probability Sampling from a total of 9 Samples. 3 Samples from 3 different Slums would be selected for the purpose of this Research and also in order to avoid bias as well as Homogeneity.

AREA OF RESEARCH-

The 3 Slums which have been selected by the Researcher is Mapla Wadi Slum in Colaba, South Mumbai (Ward E), Ambedkar Nagar in Dharavi (Ward FN), Mumbai and SPV Nagar, Dharavi, Mumbai (WARD FN).

OBJECTIVES OF THE STUDY-

1. To comprehend the Open Defecation situation in the Slums of Mumbai with special reference to the health of these Slum Dwellers, specifically after the launch of the program *Swachh Bharat Abhiyan.*
2. To provide relevant suggestions on the basis of the data that has been generated by the Researcher.

DATA ANALYSIS:

GRAPH 1.1 exhibits out of 9 Respondents an overwhelming majority of 7 Respondents do not have any form of accessibility to proper sanitation and/or bathroom facilities for Defecation and only 2 Respondents claimed of being provided with proper sanitation and/or bathroom facilities for Defecation.

GRAPH 1.2 exhibits that out of 7 Respondents who had responded in affirmative to the previous question, 3 Respondents claimed of defecating near the bushes, 1 Respondent claimed of defecating in Open Fields and the remaining 3 Respondents claimed of defecating in Railway Lines.

GRAPH 1.3 exhibits that out of 9 Respondents being Interviewed, an overwhelming number of 6 Respondents claimed of having experienced Cholera in the past 3 years and only 3 Respondents remaining claimed of not having experienced Cholera in the last 3 years.

GRAPH 1.4 exhibits that out of 6 Respondents responding in affirmative for having experienced Cholera, an overwhelming number of 5 Respondents amongst them claimed of having experienced Chronic Cholera (Severe, lasting for more than 2 Weeks) and only 1 Respondent claimed of having experienced Acute Cholera (mild to moderate, lasting for less than 1 Week).

GRAPH 1.5 exhibits us that out of the 9 Respondents interviewed in the Study, 5 of them and/or their Children claimed of having experienced Hepatitis and the remaining 4 of the Respondents claimed of not having undergone any such disease or its variant.

GRAPH 1.6 exhibits us that out of the 5 Respondents 1 Respondent claimed of having experienced only a mild form of Hepatitis, another Respondent claimed of having experienced moderate form of Hepatitis and the majority i.e. 3 Respondents claimed of having experienced Severe form of Hepatitis.

GRAPH 1.7 exhibits us that out of the 5 Respondents claiming having contacted Hepatitis, 2 Respondents claimed of having caught Hepatitis A variant, 1 Respondent claimed of having caught Hepatitis B variant and the remaining 2 Respondents claimed of having caught Hepatitis E variant.

GRAPH 1.8 exhibits that amongst the 9 Respondents, 7 out of 9 Respondents claimed of not having any Sanitary Inspector visiting them and the remaining 2 out of 9 Respondents claimed of not having any idea regarding the same.

DATA INTERPRETATION:

* The first data of the Research Study focuses on analysing the number of People in Slums having accessibility to proper Sanitation, for example, Latrines and Toilets. This is unequivocally salient for each and every one of us to comprehend that due to lack of sanitary toilets, people are coerced into defecating in the open and this in turn not only makes those people susceptible to a wide range of Health predicaments, such as, Diarrhoea, Cholera, Polio, Trachoma, Hepatitis but it also makes various Women and/or Girls prey to different Sexual Predators. Therefore, having accessibility to Sanitized as well as Safe toilets and latrines not only exerts Health importance but also has got a Social implication attached. As per the result of the data being evoked, it was exhibited that out of the 9 Respondents only 2 Respondents have accessibility to proper Sanitary Latrines and Toilets, whereas an overwhelming number of the Respondents being covered in the Study are not provided with any Sanitary Toilets and/or Latrines and therefore, defecate in the open. Hence, through the medium of this data it can be safely comprehended that approximately 77% of these people are susceptible to a wide array of transmissible diseases, such as, Cholera, Diarrhoea, Hepatitis and Trachoma which could be easily prevented and therefore, perpetually avoided. Further, through the medium of the data it was exhibited that 3 Respondents usually defecate near any bush, 1 Respondent claimed of defecating in open fields (wherever found) and the remaining 3 Respondents claimed of defecating in Railway tracks and hence, it can be safely deduced that defecating in such areas, such as Railway Tracks are not only hazardous but also extremely unhygienic.
* As has already been specified, one of the biggest drawbacks of open defecation and leading an insanitary lifestyle is the repercussions that it exerts on the Health of the concerned individuals. One of the most common Health Predicaments that is being found amongst people practising open defecation is Cholera and other such analogous form of Intestinal Diseases. The Indian Government boasts of having able to eradicate Cholera and other form of transmissible Intestinal Diseases if not fully, so in order to further investigate the claims, the Researcher contemplated in analysing if the same health issues are prevalent amongst the Respondents or otherwise. An overwhelming number of 6 Respondents claimed of having faced Cholera in the last 3 years and those 6 Respondents were the ones who have claimed to openly defecate and the Respondents who claimed of having accessibility to proper Sanitary Toilets, none of them claimed of suffering from Cholera in the past 3 years. So with this particular data, it can be understood that Cholera can be extremely common amongst people those who are found openly defecating over people those who use a Sanitary Toilet for defecation. Therefore, open defecation can lead to an accentuated number of fast transmission of diseases even more than being anticipated. As per the data derived from UNICEF, it has been asserted that over 700 Children die per each day as a result of Open Defecation and also due to Unhygienic Living Conditions, such as consumption of Unsafe drinking water. Further upon investigating, it was revealed that amongst the 6 Respondents who had claimed of having experienced Cholera, an overwhelming number of 5 Respondents claimed of having severe i.e. Chronic Cholera which lasted for more than 2 Weeks, whereas only 1 Respondent claimed of having experienced mild to moderate form of Cholera i.e. acute Cholera which lasted less than 2 Weeks. It is hence, manifested that even the nature of Cholera occurring with the Respondents who openly defecate is of extremely grave nature. It is therefore imperative to note that the Governing authorities ought to commence constructing more toilets estimating the exponential growth in Population and simultaneously regular inspections need to be conducted by the concerned sanitary inspectors in order to oversee the sanitation status of the individuals, specifically the ones living in slums and/or the streets.
* Hepatitis is another grave condition which results in the direct inflammation of one’s liver. Hepatitis A and Hepatitis E can be caused by a lack of Sanitary lifestyle. Open defecation and consumption of unsafe drinking water is attributed as one of the most common factors behind the prevalence of Hepatitis, in developing and underdeveloped countries. Therefore, looking at the phenomenon, the Researcher found it to be extremely pertinent to comprehend if there is any occurrence of Hepatitis amongst the Slum Dwellers being covered in the Study. The data again evoked a not so surprising result in the form of only the Respondents claiming of openly defecating responded in affirmation that they have or their children have suffered from Hepatitis in some point of their lives. In order to explore further, the Researcher investigated the variant of Hepatitis that they have experienced, to which it was observed that 2 Respondents claimed of having experienced Hepatitis A, 1 Respondent claimed of having caught Hepatitis B and the remaining 2 Respondents claimed of having caught Hepatitis E. Hepatitis E most often occurs due to the consumption of unhealthy contaminated drinking water and also due to open defecation. Hepatitis E if not surmounted can also lead to short term liver failure and might cause mortality to Pregnant Women, although rarely. Therefore, open defecation needs to be eradicated by constructing more toilets, specifically Mobile Toilets in almost every area that can cater to the needs of various Population Segment which otherwise cannot access traditional immobile toilets near their area of residence as its too far from them.
* Owing to the various predicaments on Health due to the Insanitary lifestyles being led by some segment of the Population and the extra burden that it causes on the Government Health Departments, it is quite imperative to comprehend that most of the diseases occurring might be grave but still can be easily prevented not only by vaccinations but also by imbibing a healthy sanitary lifestyle, specifically among the slum dwellers who are still found practising open defecation. For this purpose, periodic inspections from the Sanitary Department is necessitated. Hence, in order to comprehend the efforts initiated by the Government Authorities, the Researcher contemplated asking the Respondents residing in Slums if the Health Inspectors periodically visit their Slum to ensure Sanitation or otherwise, to which the data projected a shocking result. Majority of the Respondents i.e. 7 out of 9 Respondents claiming that no such Health Inspector has ever come to conduct periodical inspections and the remaining 2 Respondents claimed of not being aware if such Inspectors really come or otherwise. Reiterative inspections along with proper awareness on Sanitation and Public Health is extremely crucial to evade such transmissible diseases which are preventable. Regular Inspections can help notifying the concerned Government Authorities as well as its relevant Departments about the lack of sanitation facilities in a certain area so that the responsible department of the Government can commence their works on the same line. Due to such apathetic attitude of Government officials, the Health Predicaments befalling on such poverty stricken slum dwellers is extremely deplorable and such ordeals not only exert repercussion on the overall health infrastructure of the Country but also on the Economic Infrastructure. It is of extreme salience to note that no matter how seriously grave these diseases are but with effective as well as periodic interventions marked by honest vigilance and timely construction of Mobile as well as Immobile toilets, such diseases can not only be prevented in due course of the time but also can be eradicated from Slums on a perpetual basis.

 RECOMMENDATIONS (CONCLUSIVE ANALYSIS):

1. Many of the Slum Dwellers residing in the City of Mumbai are rendered with no proper sanitation facilities and hence are susceptible to a wide array of transmissible diseases. It is hence, comprehended that the Governing Authorities under the much celebrated *Swachh Bharat Abhiyan* Programme ought to take the growing population in deep consideration and provide basic sanitation facilities in the form of toilets in accordance to the population. Through the medium of the data, it has become quite evident that the number of population is outnumbering the amount of sanitary toilets available. In a city like Mumbai, where the availability of adequate spaces, more specifically, in slum like areas constitute to be a major challenge, hence in such areas constructing Immobile toilets can be a major ordeal, therefore construction of Mobile toilets i.e. Portable Toilets which consume lesser space than an archetypal Immobile Toilets can be a better alternative. By the construction of Mobile Toilets, the concerned Governing Authorities can also felicitate in a lesser amount of Transmissible Diseases that are more or less preventable. This in turn can put a lesser amount of burden on the Health Infrastructure and hence, on the Government Exchequer. The Government then can utilize the money that was otherwise being spent on treating Transmissible Diseases on other welfare and development projects for the amelioration of the Country and its Citizens.

1. Despite the availability of Sanitary Toilets, various Studies have projected that there are certain people those who still prefer defecating out in the open. Hence, it can be safely deduced that merely with the construction of sanitary toilets, the ordeal of open defecation cannot be explicitly reduced. Various awareness programs, such as Public Issue Advertisements through various platforms of Mass Media and Mass-Campaigns in those areas where Open Defecation and Insanitary Living Conditions is not an uncommon sight need to be initiated on a periodical basis ought to be reiteratively conducted. The message showcasing how Open Defecation exerts Health, Economic, Social repercussions ought to be disseminated as well as demonstrated. Periodic Health and Sanitary inspections also need to be ensured in such Slum like areas where the Mortality rate due to Insanitary living conditions tends to be always on a higher range as compared to other areas.

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