Health Belief Model and Healer Choice in a Medically Pluralistic Society: A Study on Urban Youths

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Abstract

The choice of a healer in a medically pluralistic society is a complex process. This paper examined the usefulness of Health Belief Model (HBM) and other confounding factors in determining healer choice of the urban youths and tested four components of HBM in relation to socio-demographic characteristics and preferred treatment mode of the respondents. The study revealed that socio-demographic characteristics - sex, years of schooling, household income, marital status, occupation, listening to radio, watching television have been found significantly associated with preferred treatment choice of the respondents. Perceived Severity is moderately associated with the preferred treatment mode ($p<0.05$). In addition, respondents with higher levels of education and income are more likely to have higher levels of Perceived Susceptibility, Severity and Benefits. The study findings indicate that youths with greater economic vulnerability tend to choose traditional healer for receiving treatment.

Background

Adolescents and youths comprise the biggest segment of the population of Bangladesh. Nearly one-third (32%) of the country's population is composed of adolescents and youth (10-24 years) (BBS, 2008). Despite this huge population of this category very little is known about their treatment choice behaviour. The choice of a healer in a medically pluralistic society is a complex process. It depends on a great variety of conditions such as the severity of the disease, patient's perceived risk of the disease, relative proximity of the healer, cost of health care, transportation facilities, gender of the patient, patient's attitude toward different systems of medicine, past experience of the patients, perception on illness, belief system on disease causation and the like (Helman, 1995; Kleinman, 1980; Ahmed, F.H. et. al., 2010). Every society has its own beliefs and practices regarding health and disease. Perception of illness, customs and practices shape and direct health seeking behaviour of the community. Socio-cultural pattern of the community is one of the major factors towards the availability and use of different kinds of treatment. Health and disease are related to sociological and cultural resources of a community in a specific environment. The treatment of disease in any particular society depends on the world view of the people concerned- it is directly related to the attitude of the general public in respect of looking at the universe.

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There has been the hegemony of rational decision making paradigms in analysing many public health issues such as health threats of HIV/AIDS, immunization practices, family planning, adolescent reproductive health behaviors and so forth. In the recent past, in explaining any social or health problems various socio-psychological and cultural variables have been identified as the core determinants of health behavior of the individual actors. Research in the areas of health seeking behaviour in relation to different acute and chronic diseases has been wide internationally. However, the dynamics of health seeking behaviour of the urban youths have so far been overlooked in Bangladesh. In spite of the apparent abundance of health related literatures, nonetheless, very little attention has specifically been devoted to healer choice of the urban youths in Bangladesh. One of the obvious reasons might be the lack of funding for empirical research. In a wave of donor-driven health studies, thorough empirical research has become a far cry in this area. In Bangladesh only a few studies have made an effort to explore the interpersonal, socio-psychological and cultural factors that affect an individual's health seeking behaviour. In this context, this study is a modest endeavor to explore factors affecting choice of treatment seeking; ascertain the level of association between selected socio-demographic characteristics and health seeking behaviour of the urban youths. The present study also examined the applicability of Health Belief Model in explaining the behavior related to health seeking behaviour of the urban youths in Dhaka city.

Health Care System in Bangladesh: Medical Pluralism

The existence of several therapeutic traditions in the same cultural setting is an important feature of health care in the transitional society like Bangladesh. It is because patient may feel uncertain as to what type of care provider can cure their illness, leading them to consult different therapists. Otherwise, they may think that treatment of certain illness requires more than one type of assistance. In addition, patients have differential beliefs on disease causation and perception of illness. The daily life of health and healing of the urban population comprised of a wide range of medical beliefs, knowledge, practices and of distinctive categories of healers. A wide range of therapeutic choices is available, from self-care to folk and western medicine (allopathic). The box-1 presents different cadre of health care providers in Bangladesh.

Box-1: Different cadre of health care providers in Bangladesh (adopted from Ahmed, 2005)

Self-care: expanding from no medication other than rest and nursing to instances when common home-remedies (e.g. oral saline), over-the-counter (OTC) drugs, or herbal preparations are taken without consultation with any healthcare provider including drug store salesmen.

Drug store salesman (unqualified allopathic): when consultation is made to seek diagnosis and treatment from a drug store salesman; these drug retail outlets are mostly unlicensed and unregulated and only few of the salespeople may have 4 to 6 weeks certificate course on dispensing drugs.

Traditional: when treatment is sought from herbalists (*Kabiraj/totka*) and spiritual healers; also included are homeopathic practitioners, negligible in proportion.

Para-professional (semi-qualified allopathic): when seeking treatment from: a) village doctors with short training in diagnosis and treating common ailments, mostly from private institutions of questionable quality; b) medical assistants who complete a three-year medical assistant training programme and family–welfare visitors who complete eighteen months training in pregnancy and delivery care, from a public institution; and c) various government and non-government community health workers who have some basic preventive and curative health training.

Professional allopath: comprised of allopathic practitioners who have undergone six years of professional training and one year internship (MBBS doctors) and registered under BMDC.

Study Design and Data Collection

The study was designed as descriptive cross-sectional study. The fieldwork for data collection was done during January and February 2010 and took approximately 22 days. Both quantitative and qualitative approaches were adopted to conduct the present study. A structured questionnaire survey was administered in order to obtain quantitative data. In addition, qualitative tools were also used in order to validate quantitative findings and to understand depth and breadth of the phenomenon being studied. Qualitative data gained through using informal conversations, occasional observation and individual interviews with key informants.

The study was conducted in different zones within Dhaka metropolitan areas. The list of households of Dhaka metropolitan areas prepared by the *Bangladesh Demographic and Health Survey-2007* was used as the sampling frame for this study. Firstly, Dhaka metropolitan areas were divided into 33 zones on the basis of *Thana* (a local administrative area) boundary. From these zones, eight zones were selected for the sample survey. Once a zone is selected, the required number of households was drawn from the sampling frame using SPSS generated random numbers and following simple random sampling strategy. At last one youth respondent was interviewed from each sampled household. Every effort was made to interview all target sample respondents from the sample households. At least two revisits were made to interview the sample respondents, while they were not available in the household at the time of interview. However, there were cases of non-response from respondents including cases of non-availability of target respondents. In this situation, alternative respondent from the alternative household was selected so that the overall sample size is achieved. Youth for the present study is defined as the 15-24 year following the definition of United Nations, 1997 and WHO, 1989.

Data Analysis and Ethical Issues

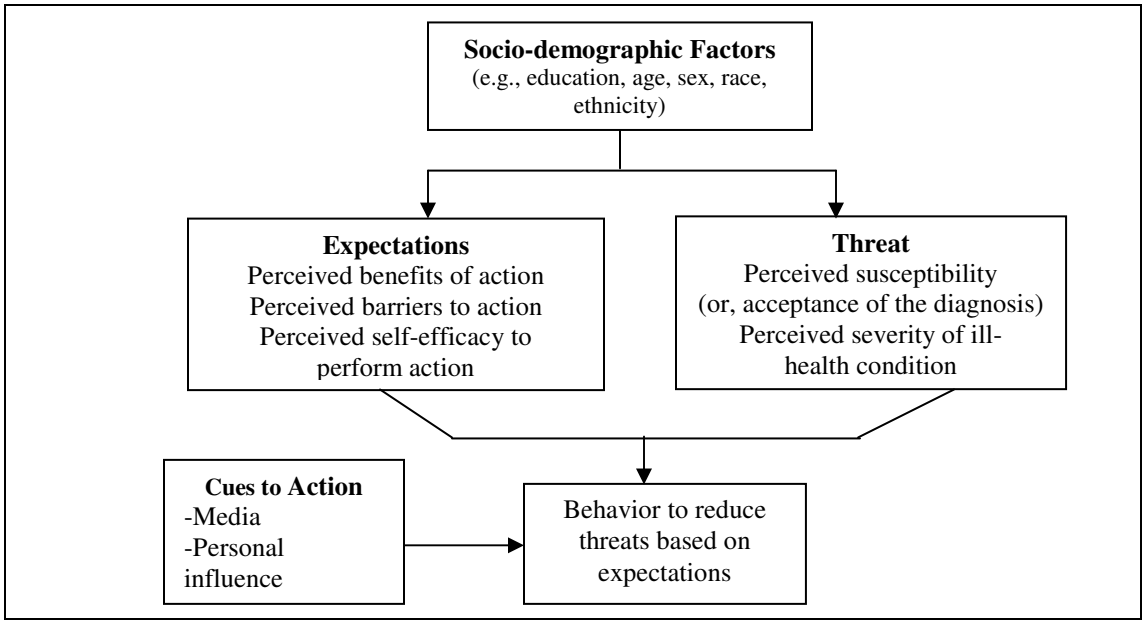
Responses relating to etiology of diseases, perception of illness and four components of Health Belief Model were listed and coded. Statistical significance of associations was examined using measures of association such as chi-square (χ^2) and Cramer's V. Statistical analysis used SPSS

for Windows (version 11.5). Voluntary participation of the respondents as well as the confidentiality of their information was maintained. Oral consent from each respondent was obtained for administering interviews with them. Any hint of coercion was strictly avoided in both getting their consent and interviewing. Privacy during the interview process was safeguarded.

Theoretical Framework: The Health Belief Model

The Health Belief Model (HBM) is one of the oldest social cognition models. The HBM aims to predict whether individuals choose to engage in a healthy action in order to prevent the chances of diseases or the health threats. According to HBM, there are two main types of beliefs that influence people to take appropriate preventive action. These include beliefs related to readiness to take action and beliefs related to modifying factors that facilitate or inhibit action. The variables that are used to measure readiness to take action are *perceived susceptibility* to the illness or any health threats and the *perceived severity* of the illness. *Perceived benefits* (i.e. the perceived advantages of taking action) and *perceived barriers* (i.e. the perceived costs or constraints of the specific action) are the main modifying variables (Rosenstock, 1990; Norman and Brain, 2005). When individuals are faced with a potential threat to their health they consider their susceptibility to, and the severity of, the health threat.

Fig-1: A schematic outline of the *Health Belief Model* proposed by Rosenstock, 1990



According to HBM once an individual perceives a threat to his/her health and is simultaneously cued to action, and his/her perceived benefits outweigh his/her perceived threats then the individual is most likely to undertake the recommended preventive health action. Thus, as

Rosenstock notes in describing this model, "The combined levels of susceptibility and severity provided the energy or force to act and the perception of benefits (less barriers) provided a preferred path of action" (Rosenstock, 1966). For instances when applied to parents' immunization behavior, the HBM suggests that simply having knowledge and awareness about infectious diseases will not necessarily result in increased visits to a hospital for vaccinations. Instead, the model specifies four related elements that must be present for knowledge about disease to be translated into preventive action. First, an individual must perceive that he or she is susceptible to an infectious disease, and second, that person must also perceive that the disease is a serious condition. Third, he or she must believe that there are benefits in taking preventive action. Finally, the individual must also perceive that any potential barriers to taking preventive actions are outweighed by potential benefits (Matsuda, 2002; Norman and Brain, 2005; Onta, 1998). More recently, the concept of "self-efficacy" has been added to some versions of the HBM (Bandura, 1992). In this respect, Rosenstock suggests that self-efficacy was not explicitly incorporated into early versions of the HBM because the original focus was on circumscribed preventive actions, such as receiving an immunization or accepting a screening test. He proposes that self-efficacy is more useful in understanding behaviors, such as those related to chronic illness/diseases, which occur over a period of time and require lifelong changes in behaviors. There have been a number of attempts to relate the variables in HBM to a variety of health behaviors including adolescent's HIV/AIDS-risk (usually sexual) behavior, parents' immunization behavior, drug use, breast self-examination among women and so on (Amanullah, 2002; Matsuda, 2002; Norman and Brain, 2005). In several studies it has been found that socio-demographic variables are related to the various health behaviors and components of HBM (Matsuda, 2002; Ahmed, 2005; Ratanasuwan et. al., 2005; Norman and Brain, 2005). Some community psychologists have used HBM variables as a base for developing educational and BCC strategies and intervention programs.

Results and Discussion

Characteristics of the respondents

A total of 255 youths from different zones of Dhaka city are interviewed for this study. Respondents are predominantly Muslim (96.1%), male (69%) and unmarried (73%). The average household size of the respondents is 5.41, the average age being 21 with a standard deviation of 4.1. The average monthly household income is Tk. 17940 with a standard deviation of Tk. 3038. In terms of the occupation, 32 per cent is students, 25 per cent is day labour or household worker, 16 per cent is government and non-government service holder, 13 per cent is petty businessman, 11 per cent is rickshaw puller and 4 per cent is homemaker. In terms of education, 18 per cent respondents have no formal education; 29 per cent have some primary level schooling; nearly 23 per cent attend secondary or higher level schooling and 30 per cent attend tertiary level of education. In terms of the media exposure of the youths, 61 per cent listen to radio while 88 per cent watch television (see table-1).

Table 1: Socio-demographic characteristics of the respondents

Socio-demographic characteristics		N	%
Sex	Male	177	69.4
	Female	78	30.6
Religion	Islam	245	96.1
	Hinduism	10	3.9
Marital status	Unmarried	187	73.3
	Married	64	25.1
	Divorced	4	1.6
Occupation	Student	81	31.8
	Petty Business	32	12.5
	Govt./NGO Service	41	16.0
	Day labor/ Household worker	63	24.7
	Rickshaw puller	28	11.0
	Homemaker	10	3.9
Monthly family income	Less than 10,000	129	50.6
	10,000-20,000	45	17.6
	20,000-30,000	42	16.5
	30,000-40,000	14	5.5
	More than 40,000	25	9.8
Level of Education	No formal education	46	18.0
	Primary	75	29.4
	Secondary/Higher secondary	58	22.7
	Tertiary	76	29.8
Listening to radio	Yes	156	61.2
	No	99	38.8
Watching television	Yes	225	88.2
	No	30	11.8

Perception of Illness

Perception of illness has been found to vary with cultural, ethnic and socio-economic differences. Every society has its own beliefs and practices regarding health and illness. Perception of illness, customs and practices influence direct health seeking behaviour of a community. Illness perceptions are central not only for understanding responses to specific diseases but also can be used to interpret an individual's treatment adherence. Illness perceptions are the organized cognitive representations or beliefs that people have about their illness. Illness perceptions or cognitive representations directly influence an individual's response to the illness and their coping behaviour. These perceptions have been found to be important determinants of behaviour and

have been associated with a number of important outcomes, such as treatment adherence and functional recovery.

While conducting occasional field observation and unstructured interviews with youths of different occupations, they usually spoke of illnesses that themselves or members of their family suffered. It is important to note that few youths sometimes overlapped the concept of illness with disease. Regardless of religion, illness is perceived when an individual a) is unable to perform his/her daily activities (e. g. working in the field, doing domestic works, going outside for business etc.) due to pain or discomfort b) suffers from pain in different part of his/her body, c) looses appetite, d) suffers from headache, e) looses his/her weights, power of eye sight and physical strength to work in the rice field. While conducting in-depth interviews a number of verbatim on varied perception of illness was recorded. Some of these verbatim are mentioned below:

> Illness means feeling pain in the hands and legs. It also means physical weakness, feeling unwell and depression etc. When family members quarrel with each other, I mentally feel pressure - this is a kind of illness. [Rahim Miah, Age 21, Unmarried, Lalbagh, Dhaka]
>
> Illness refers to the inability to work, physical weakness resulting from hard work [Tauhidur Rahman, Age 25, Married, Muhammadpur, Dhaka].
>
> Illness is a condition of physical pain, nausea, absence of happiness in mind, feeling restless, giddy, stomach ache and pain in limbs due to hard work. [Rahima Akter, Age 19, Married, Middle Badda, Dhaka]
>
> To me illness means physical discomfort, restlessness, abnormality, physical weakness, reluctance to speak etc. [Susmita Sen, Age 18, Unmarried, Shajahanpur].
>
> Illness is the physical condition in which a person cannot work like a healthy person and loses appetite, the process of speaking, walking and moving gets hindered. A person feels headache and pain in the whole body. [Shahan Shan, Age 24, Married, Mirpur-1, Dhaka]

Cognitive Appraisal of the Etiology of Illness

People hold a wide variety of beliefs concerning the causes of illness. Such beliefs vary across cultures and, among indigenous people may be influenced by many factors, such as natural, supernatural, including, gender, level of education and experience of illness and treatment. The present study provides an understanding of the etiology of illness. Regardless of the socio-economic condition, religion, gender and occupation, youths of the study areas mentioned the following causes of illnesses: a) working under hot sun and heavy rain, b) drinking unclean or impure water, c) working hard in the agricultural field, d) using of fertilizer/chemicals in

production of vegetables or fruits, e) due to virus/bacteria, f) due to frequent weather change, g) due to too cold, h) due to insufficient diet, i) due to immense pressure in occupational duties, j) due to habit of using computer/other technology for long hours.

However, a few youth from lower socio-economic stratum and having low level of education give a personalistic explanation of illness. According to them, to a certain extent, illness is the result of the intervention of bad sprits, or supernatural power (e.g. *jin, voot*). It is also evident in their treatment of some illnesses for which youth often rely on faith healers, religious specialist or local traditional healer (e.g. *Kabiraj, Boidya, Oja*).

Dynamics of Treatment seeking Behaviour

In order to explore the choice of treatment, all of the youths were asked about the treatment they sought for their last episode of illness. It is found that 30% youth go to pharmacists for receiving treatment. In our occasional observation it is found that youth of every stratum go to pharmacists for receiving treatment. It is observed that most of the youth initially go to pharmacists for taking medicine and advice for any given illness. They want to come round quickly by taking modern allopathic medicines. Often they become cured with the treatment of the pharmacists too. However, pharmacists are paid hardly for the treatment or advice youths received. In this way a good relation is built among pharmacists and youth. For this reason youth become dependent on pharmacy to some extent. A pharmacy is not only medicine selling centre but also a centre of gossiping of youth too. Often one or multiple youth proprietor or youth salesman are found working in pharmacy. Many youth come here for their company. In this way they get mixed with pharmacists, gossiping with them and get advice about their illness at the initial stage. As a friend some times pharmacists suggest youth to MBBS doctor or hospital if they fail to give proper treatments.

Table 2: Types of treatment sought for the last episode of illness

Types of treatment sought	Frequency	Percent
Unqualified allopaths	76	29.8
Qualified allopaths	82	32.2
Para-professionals	46	18.0
Traditional healer	26	10.2
No treatment	25	9.8
Total	255	100.0

In the study it is found that 32 per cent youth go to qualified allopathic practitioners for getting treatment. That is they go to MBBS doctor's private chambers or medical doctors working in government or non government hospital. Though MBBS doctors who are practicing in private chambers are costly for youth but in order to get better treatment a significant number of youth goes to them. Besides, many poor youth for instance, day labourers or rickshaw-puller tend to receive treatment from government hospitals. It is because these poor youth have less financial capability. However, youths with financial solvency and higher level of education tend to visit

clinics or chamber of private allopathic practitioners. It is found that 10 per cent youth go to traditional healer for receiving treatment. It means they go to ayurvedic, unani, herbalists, faith healer, religious healer, homeopathic practitioners etc. Some youth think medicines provided by the traditional healers have less reaction and treatment cost is very low compared to modern allopathic treatment. A significant number of youths (10%) did not seek any treatment during the last episode of illness. Though they didn't take any medicine but they got family assistance during their illness. In such cases the youths receive home therapy or self care.

Socio-demographic Characteristics and Components of HBM

Measures of association such as Chi-square (χ^2) and Cramer's V coefficients[1] were computed in order to examine the association between a set of socio-demographic characteristics and the components of the HBM and preferred treatment mode of the youth. Some of the demographic characteristics were found to have association with the components of the HBM such as occupation and watching television of the respondents were moderately associated with all the components of HBM, while years of schooling, monthly family income and marital status have been associated with three components of HBM- perceived susceptibility, perceived severity and perceived barriers (see table 3).

Table 3: Association between socio-demographic characteristics and components of HBM

Component of HBM	Socio-demographic characteristics							
	Sex	Years of schooling	Family income	Marital status	Occupation	Age	Listening to radio	Watching television
Perceived Susceptibility	V=0.26**	V=0.40**	V=0.35**	V=0.32*	V=0.29**	χ^2 = 4.29 df = 3	χ^2 =5.32 df = 3	V=0.22*
Perceived Severity	χ^2 =.629 df = 3	V=0.43**	V=0.27**	V=0.45**	V=0.51**	χ^2 = 2.29 df = 2	χ^2 =2.17 df = 3	V=0.20*
Perceived Benefit	χ^2 =3.95* df = 3	V=0.22**	V=0.58**	V=0.40**	V=0.36**	V = 0.15	χ^2= 27** df = 3	χ^2 = 12** df = 1
Perceived Barriers	χ^2 =2.38 df = 1	V=0.17	V=0.18	V=0.16	V=0.47**	V = 0.17	χ^2 = 12* df = 3	χ^2 =27** df = 3

** Significant at the 0.05 level, ** Significant at the 0.01 level*

These test coefficients also reveal that level of perceived susceptibility, perceived severity and perceived benefit was higher for the respondents with higher income and higher level of educational attainment. It is thus easily understandable that such respondents as service holders, graduate/undergraduate students and businessmen perceived higher level of susceptibility severity and benefit due to their better economic position than those of rickshaw-pullers, home maids, and day labourers. The HBM is a psychosocial model, it accounts for only as much of the variance in health behaviors as can be explained by attitudes and beliefs that are obvious to and consciously

[1] Given the predominance of nominal level variables Chi-square (χ^2) and Cramer's V test is used. For larger than 2x2 cross table Cramer's V is applied while for 2x2 cross table Chi-square (χ^2) is applied. (For details about the criteria on applying measures of association, see Bryman, A., 2004. *Social Research Methods*, Oxford University Press. pp. 230-240.)

evaluated by individuals. Other extraneous factors related to the individual, such as personality factors, social support, previous health experiences, culturally constructed beliefs and myths may play a role in determining behavior. Unfortunately they are not an explicit part of this model. In addition, concepts reflective of the larger social structure, such as institutional or public policy, poverty, and social isolation that may affect access to health care, are not included in the HBM. Norman and Brain (2005) and Matsuda (2002) showed that demographic variables had only minimal impact on the strength of the components of HBM, when it was applied as a theoretical background in a study related to immunization behaviors of the parents in Nepal.

Socio-demographic characteristics and preferred treatment mode

Seven socio-demographic characteristics have been found significantly associated with preferred treatment choice of the respondents as shown in table 4. These characteristics include sex, years of schooling, family income, marital status, occupation, listening to radio, watching television. Rational decision-making models, which include the health belief model and the theory of reasoned action, are models that conceptualize human behavior (in this case healer choice) as purposive, rational and intentional rather than mindless pathological or deviant.

Table 4: Cramer's V values for preferred treatment mode and socio-demographic characteristics

Socio-demographic characteristics	Preferred treatment mode
Sex	V=28**
Years of schooling	V=0.51**
Family income	V=32**
Marital status	V=0.30*
Occupation	V=0.44**
Listening to radio	V=0.39*
Watching television	V=0.47**

** Significant at the 0.05 level ** Significant at the 0.01 level*

These theoretical models also believe as underlying principle that human behavior is influenced by imposed knowledge that is knowledge helps persons to make decisions rationally, which consequently results in the changes in attitude and practice. But the findings related to treatment choice in this study didn't support the conventional flow of rational decision-making paradigms (Table 5).

Table 5: Cramer's V values for components of HBM and preferred treatment mode

Components of HBM	Preferred treatment mode
Perceived Susceptibility	V=0.18
Perceived Severity	V=0.32*
Perceived Benefit	V=0.14
Perceived Barriers	V=0.12

** Cramer's V is significant at the 0.01 level*

It was hypothesized that level of perceived susceptibility, perceived severity, and perceived barriers determined choices of treatment. But only perceived severity of the illness was found having association with the treatment choice of the youth (Table 5). It has been found that psychological constructs (e.g. perceived susceptibility) cannot merely change the behavior. For instances when applied to parents' immunization behavior and commercial sex workers' health behaviors, the findings suggest that simply perceiving susceptibility and severity about diseases will not necessarily result in increased visits to a hospital for vaccinations and taking preventive measures like consistent condom use (Matsuda, 2002; Amanullah, 2002).

Conclusion

The theoretical model on which this study is predominately based is a psychosocial framework, which can only account for as much of the variance in health behaviors as can be explained by attitudes and beliefs that are apparent to and consciously evaluated by individuals. Other factors related to the individual, such as demographic variables, personality factors, social support, previous health experiences, poverty, social isolation or stigma, cultural norms and myths may play a role in influencing individuals' behavior. Unfortunately they are not an explicit part of this model. Taken together, the results of this study indicate the importance of looking beyond the traditional framework of HBM in order to achieve a more culturally sensitive context for understanding health seeking behaviors and risk perceptions of the concerned individuals. In addition to the salient components of the Health Belief Model and the statistically significant demographics, culture specific knowledge, beliefs and experiences must also be considered if future educational or structural interventions are to be successful.

This study contributes most obviously by examining the perception of illness and health seeking behavior of urban youths by identifying their capacity to access and benefit from the available therapeutic channels, indicating where the greatest potential for health needs lies. It provides the empirical base to understand the causes of illness and some socio-demographic determinants of health seeking behavior. A better understanding of the diversity and determinants of illness causal beliefs can be of value in improving our understanding of illness experience, and in developing more effective health services and strategies for the urban youths.

The results of this study are of immediate policy relevance. It is found that a good number of urban youths from lower socio-economic strata receive treatment from unqualified allopaths and traditional healers. In addition, pharmacy men (drug seller) have been identified as one of the popular sources of providing treatment. Therefore, effective training on basic ideas of modern medicine, and use of modern health care facilities should be extended to these huge numbers of traditional and unqualified allopathic practitioners. Furthermore, health education program targeting the youth's felt health needs can be telecast using radio and television as youths have been found significantly exposed to these mass media. Information about providers' perspectives on quality of care is limited. An attempt can be made to identify the potential barriers from the health service provider to deliver quality of care to the poor people.

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