PERCEPTIONS OF MENTAL ILLNESS AMONG ADOLESCENTS IN BAGNIBARI VILAGE

EkaterinovlaYakevnaNoykhovich

Department of Global Health School of Public Health and Health Services, George Washington University 2175 K Street, NW, Suite 200 Washington, D. C. 20037, USA Email: katya.noykhovich@gmail.com

Patience Bulage

James P Grant School of Public Health BRAC University
68 ShaheedTajuddin Ahmed Sharani, Mohakhali
Dhaka-1212, Bangladesh
Email: peshrac@yahoo.com

Mohammad Didar Hossain

James P Grant School of Public Health BRAC University 68 Shaheed Tajuddin Ahmed Sharani, Mohakhali Dhaka-1212, Bangladesh Email: ddrhossain@yahoo.com

ABSTRACT

Introduction: Mental illnesses have a large impact on a society, affecting economic productivity and bearing potential for destabilization of a society. About 16% of the population in Bangladesh suffers from mental illness. Previous studies in Bangladesh have focused primarily on mental illness in young children and adults in urban and rural populations, but not on adolescents.

Methodology: The research team conducted a short exploratory qualitative study utilizing grounded theory approach in Bagnibari village, Bangladesh. The study consisted of in-depth and semi-formal interviews, focus group discussions, and observations with adolescents, parents, traditional healers, and caretakers of adolescents.

Findings: The research team identified local terms and symptoms for the conditions of adolescents who had a mental illness. These terms were used to find an English equivalent for each condition. Community members had mixed responses to the use of traditional medicine and home remedies. Use of hospital and professional doctors was similar for complicated cases, especially after the failure of traditional medicine in relieving the condition. The behaviors of adolescents with mental illness included emotional changes and isolation.

Conclusion: The research teams categorized the common mental illnesses among adolescents into convulsions, supernatural, and worry illnesses. The perceived causes of mental illnesses varied from mother's fault to evil spirits. Social interactions of adolescents with a perceived mental illness varied throughout the community.

Key words: mental illness, adolescents, Bangladesh, supernatural condition, convulsions, worry

I. INTRODUCTION

The mental health of people is a major public concern worldwide. Mental health is an essential component and foundation of overall health status. According to WHO:"Health is a state of complete physical, mental and social well-being and not

merely the absence of disease or infirmity" [1]. Mental health is defined as a state of well-being in which every individual realizes his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community [1]. It is a positive state of psychological and emotional

well-being and the conditions that promote it, as well as the absence of mental illness [2]. Mental health problems affect society in general but there is a higher risk among the poor, unemployed, persons with low education, victims of violence, migrants and refugees, indigenous populations, children and adolescents, abused women and the neglected elderly [3]. Mental health problems create a burden, both economic and social, for the individuals and the society as a whole. Global estimates in 2002 showed that over 150 million people suffered from depression, 50 million from epilepsy, 25 million from schizophrenia and 15 million from drug use [1].

A global estimate indicated that there are about 14 million mentally ill people, 0. 5% of Bangladesh's population [4]. However, a recent study exploring the prevalence of mental disorders among adults from varying socio-economic classes and living in different settings (rural vs. urban) in Bangladesh was estimated to be 16% [5]. Global epidemiologic data reports that up to 20% of children and adolescents suffered from mental illness and up to 50% of all adult mental disorders are rooted in adolescence [6].

Child and adolescent mental health services are inadequate throughout developing countries due to the lack of consistent epidemiological data and lack of agreement on a framework of impairment [6]. Mental disorders among children and adolescents have a long-term impact on society in terms of both lost economic productivity and the potential for destabilization in communities. In addition, mental disorders are often associated with interpersonal violence and substance abuse among children and adolescents [6].

More than 50% of people in a Bangladeshi study believed that mental illnesses were caused by supernatural forces [5]. In Bangladesh, mental health activities are mainly concentrated in the field of hospital-based psychiatry. However, this excludes a large part of the population who do not usually report such cases to health centers [4]. Due to the supernatural beliefs surrounding mental illnesses in Bangladesh, patients and their families most often seek traditional treatments first [7].

Previous mental health research focused on adults in urban areas, children (5-10 year olds) in rural, urban and slum areas in Bangladesh, adults and their perceptions of mental illness in a rural village [8, 9, 10]. Emotional disorders such as anxiety, depression, and obsessive-compulsive disorder as well as behavior disorders were observed among children in urban areas [9]. The prevalence of behavior impairment among a sample of young children from rural Bangladesh was 14. 6%, indicating the importance of exploring mental health among adolescents [8].

There is a general deficiency in the literature on mental health among adolescents in Bangladesh, specifically in a rural setting. The exploration of mental health problems and coping strategies among the adolescent population in rural Bangladesh is warranted in that the presence of developmental conditions which appear in childhood or adolescence continue into adulthood and have implications for the society as a whole [11].

The purpose of the study was to explore the perceptions and coping strategies for mental illness among adolescents in Bagnibari village. Three main objectives of the study in Bagnibari village were to: 1) identify the local terms, strategies and causes for perceived mental illnesses among adolescents; 2) understand the coping strategies for mental illnesses among adolescents, and, 3) explore the social interactions of adolescents with a perceived mental illness.

II. METHODOLOGY

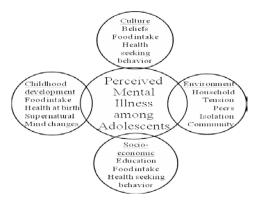
Context setting

Bagnibari village is a semi-rural village located about 25km from Dhaka City. Rapid urbanization is prevalent and its surroundings consist of factories, bazaars (marketplaces), teashops, and rice fields. Preliminary fieldwork revealed that residents are mainly farmers, factory workers, and small businessmen. The houses are semistructured, made of mud, brick or both. There is a combination of both single and joined families within the households. A 2001 census estimate by the Bangladesh Bureau of Statistics stated that in Savar district, the total population was 587,041 and in the Bagnibari village approximately 1,838; preliminary field visits with village members indicated an increased population of 7,000 with 500 households in the village [12].

Study design and conceptual framework

This short exploratory study utilized the grounded theory approach in qualitative methods to explore perceptions of mental illness among adolescents. A conceptual framework (see Figure 1 below) was developed to focus the study questions. Interrelated factors that contributed to perceptions of mental illnesses among adolescents such as culture, environment, socio-economic status and childhood development helped the research team in developing guidelines and checklists for the fieldwork. Culture plays a role in people's perceptions and health seeking behavior for mental illnesses. Environment refers to the family structure in the context of behaviors, feelings and familial practices, adolescents, their peers, and living place (rural or urban setting). Socioeconomic status reflects the ability and access to education and resources that influence health seeking behavior and perceptions of mental illness as well. Childhood development refers to the health status of a mother's pregnancy and the nutritional intake of the child.

Figure 1: Conceptual Framework



Sampling

The research team used convenience sampling to identify and speak with participants regarding perceived mental illnesses. They chose households, traditional healers' shrines and homes, and a school as areas of interest. Participants included adolescents (less than 20 years based on age at secondary school completion), adults (both men and women), children and traditional healers. Overall, twelve adolescents participated in the interview. Key informants were the two traditional healers in Bagnibari village who were interviewed through semi-formal interviews. Two teachers from a local primary school were interviewed. They provided information about symptoms adolescent pupils with mental illnesses, and behavior of other pupils towards the mentally ill in the school. The principal of the school arranged a focus group discussion (FGD) with adolescent girls (from Class 6-8), which was conducted at the school office. A key informant, a village member who led us to two traditional healers, further helped organize a FGD consisting of adult men and women.

Data collection

During the initial visits to the village it did not seem very difficult to find individuals with a mental illness as community members and an individual with a perceived mental illness were within the route of the researchers on the first day. However, subsequent visits and discussions with caretakers of adolescents with a mental illness proved to be difficult and from the perspective of the researchers, elicited very emotional responses. When these difficulties were encountered, participants were given enough time to respond and was then requested to continue the discussion. As the researchers furthered the scope of the participants, a community member was identified as a key informant and provided assistance in gaining access to traditional healers and was valuable in gaining community trust participation in the meetings.

Speaking about mental illnesses, a topic still stigmatized in the rural setting, was not easy. Meetings with the community had to begin with an initial discussion on physical health problems and only then it was possible to lead to questions about mental illnesses. Four in-depth interviews (IDI) were conducted with an adolescent, grandparent, caregivers and traditional healer. Two semi-formal interviews were conducted with the traditional healers, teachers, and a joined semi-formal interview with two adolescent girls. Two FGDs were organized to collect community views about the specific research questions. The Participatory Rural Appraisal (PRA) method of body mapping was utilized during the adolescent focus group to facilitate discussion about symptoms, causes and behavior of adolescents with a mental illness. Participants whose family members or relatives suffered from a perceived mental illness provided illness narratives. In addition, general observation was conducted throughout the study. Multiple methods of data collection (FGD, IDI, semi-formal interview, PRA, and observation) were utilized to ensure triangulation and the validity of responses related to local terms, symptoms, causes and coping strategies of perceived mental illnesses

among adolescents. Tools used in methods included a guideline and checklist. The guideline served as a guide for leading questions during FGDs and interviews. The checklist contained a list of key points to address during data collection methods [Table 1].

Data analysis

Data was transcribed each day after the field visit. At the end of all the field visits, the researchers utilized multiple qualitative analysts in coding data and final codes were merged based on categories such as local terms, causes, symptoms, coping strategies and social interactions for perceived mental illnesses. Responses and categories were organized in a table format, which provided a clear image of the findings and common macro themes. Data analysis was continuous throughout the study period and themes were identified which provided the basis for interpretation. A list of local terms and the English equivalent for each is provided in Appendix A.

Table 1. Overview of data collection methods

Objectives	Field Site	Participant	Method	Tool
What are the perceived mental illnesses among adolescents? What are the perceived causes of mental illness among adolescents?	Village households	Men, women and adolescents	FGD PRA – free list	Guideline
3. How do adolescents with mental illnesses interact with others?	School, Kindergarten	Teachers Students	IDI FGD PRA – body map	Guideline
4. What are the local treatments for mental illnesses among adolescents?	Village of traditional healer	Traditional healer, local people, Imam	Semi-formal interview	Guideline
5. What are adolescents' perceived symptoms of mental illnesses and effects?	Village household	Adolescent with mental illness Adolescents	Semi-formal interview	Checklist

Ethical issues

Verbal informed consent was given in Bangla and was obtained from participants after an explanation of the study purpose and questions associated with it. The purpose of the study was to learn about mental illness from the community's perspective. Participants were informed that they had the right to leave or not answer any questions if they felt uncomfortable. If it was noticed by the researchers that the participants felt uncomfortable at any point, they were given time to answer, without pressure and then to lead the discussion (this happened once with a traditional healer fearful of authorities). Confidentiality was explained and maintained for the participants. Participants were informed that all responses would remain private and that each individual would only be identified in the final papers through the use of pseudonyms.

III. FINDINGS AND DISCUSSION

She was an old woman, the traditional healer. She was willing to speak with us. Many other people gathered around her, and our guide to the village emphasized that she is an important and most respected person in the village. As we sat with her, she spoke about the people who come to seek cures from her for various physical and mental ailments. The villagers started giggling at an approaching young man (13 years old) dressed in torn clothing, pants and shirt. They called him "Adhapagol." As the village members spoke with us, the young man pulled a boy and beat him in the back. The healer said, "He was mute in child hood... kichuni, mrigi disease [healer demonstrates by putting her arms in front of her in a freezing stance]. When he was three years old, he had kichuni; he has no intelligence in his head, always feels angry, walks here and there, and has no sense. The boy is my grandson, he came to me and I tried to treat him with bash (bamboo) but it did not work. I did not get much more power to treat him.

Above is a brief narrative from a respected traditional healer who had described and demonstrated seizure-like behavior that was exhibited by her grandson when he was a child. From that meeting, it was apparent that community members, traditional healers and young children had different perceptions of how a person with an illness, other than physical, behaves and how that individual should be treated.

Throughout the field visits, several narratives were described by people who either were mentally ill themselves or knew someone who was. From the field visits, there were five people identified with a form of madness (age range 5-20, 4 males and 1 female). Two individuals were identified as having a type of convulsive disorder. Focus groups facilitated with PRA tools allowed for the identification of local terms for perceived mental illnesses among adolescents, as well as the general perceptions of causes and associated symptoms. Indepth interviews provided a range of terms as well, but were more focused on personal experiences and the social interactions of, and with perceived mentally ill adolescents.

Local terms, symptoms, and causes of perceived mental illness

Local terms for general madness include pagol paglapagladhoker/adhapagol(half-(madman), manoshikrog (mental illness), mad), protibondhi (intellectual disability). For general madness symptoms such as abnormal talking, weakness, aimless wandering and silence were described by the participants. Someone with adhapagol was described to have been bleeding from the mouth and fever as a child. Causes of madness were identified as bhuterasor (evil effect), bhutedhora (devil), Arali (Hindu bhute chitaniya jai), examination tension, jaundice, taking less breast milk as a child, underweight, lack of proper food, no fish or meat products, poverty, food poisoning, premature birth, and inadequate food intake by the mother during pregnancy. A girl from eighth grade said:

My cousin is 'Paglapagladhoker'. He doesn't

respect any people, he bites people. He is always quarreling with the other boys. If the madam tells these boys to read something, he beats madam and goes home. Their family is suffering a lot. I think his problem is due to 'malnutrition'. His mother, during pregnancy, did not take adequate food. The house is not good also. Something goes over the house every night. At night, the boy gets out at midnight every night. He stays with me... Every night, he has bad dreams. "Bhut or petni, Arali". Arali means 'Hindu bhutchitaniya jai'... When a person dies and their body is burned, there is a devil that goes with the person's heart over the house every night. The boy does not tell me about dreams, but sometimes he laughs at night. His family treats him good but the boy is naughty. He does not respect anybody. He beats me with shoes. There is no treatment. The parents do nothing. He went to fakir but the treatment failed. The boy treats me very badly and my sisters too. His father and mother try to cope with the problem, but it is due to poverty and they suffer. I feel that if the boy gets proper treatment from fakir he will be good.

Terms for convulsive disorders were: khichuni/mrigi/mirkiberam (epilepsy), and jenjiberam (convulsions). Symptoms described for mirkiberam, kichuni, and mrigi included: no intelligence, anger, aimless walking, shaking limbs and becoming senseless. Perceived causes of convulsive disorders were identified as not having enough food, less breast milk, muteness in childhood and an evil presence in the pregnant mother's belly. This is illustrated by the story of a girl in tenth grade:

There is a boy close to my age, he attracts mirkiberam. During mirkiberam, he started shaking his limbs and eventually became senseless. Then he was taken to a kobiraj. The kobiraj blew over him and gave him shoes to bite, special shoes. Later he became normal, slowly.

Two female primary school teachers described *chintarog*. They said that as girls approached fifth grade, they would become more conservative and isolated themselves. These girls typically stopped mixing with other girls, and developed one or two close friends whom they shared everything. The perceived causes of *chintarog* were due to menstrual problems and emotional changes.

Jenjiberam (stroke) was identified as a form of mental illness. The symptoms described in the focus group were paralysis and numbness. The causes of *jenjiberam*were perceived in the following way: when someone would sit down, he/she would become stiff and blood circulation would stop.

Bhutedhora (captured by evil spirit) was described as a form of possession for both adult women and adolescent girls. Symptoms of bhutedhora include vomiting, itchy body, silence, aimless walking, fear and crying. The adult woman described bhutedhora as the result of spirit possession and bad air, while the adolescent female described it as the result of quarreling in the household and tension.

Coping strategies

Seeking help from the *fakir* was common as was using a *tabiz* (amulet) on the affected individual. Other participants identified the *kobiraj*, who would "*bhutmatirvetorpuitamairafela*" (kill the devil by putting it under the soil) for coping with madness. Going to the *kobiraj* involved the use of *kelakuuca* (leaf fruit), *boiragota* (seed of fruit), and *Arjungacherchal* (Arjun tree bark). A group of adolescent girls described that a boy with *paglapagladhoker*had gone to the *fakir* and the treatment had failed. Yet the consensus was that *fakirs*could cure. Seeking treatment from a doctor was mentioned by three out of six participants. Malek, the grandfather of a 14-year-old boy described their coping mechanism:

We went to kobiraj, he is Imam (religious leader) of mosque. We went to several healers for treatment and also had gone to the fakir. We went to four to five local healers, but the boy did not feel better. We went to local healers for one month for the treatment. After 1 month, we went to the doctor at the Science Laboratory in Dhaka, the Lab-aid Hospital. The doctor gave us medicine and the boy improved. The medication is still going on. He is not completely cured, but he had started going to school. The doctor said he has Manoshikrog.

Another family took their 11-year-old daughter - a *protibondhi* who would wander aimlessly and had *hat pa baka* (curved limbs/deformed organs) - to the doctor at the hospital, but the doctors would not admit her to the hospital just because she could recall her family name. The event had happened

much earlier and a family member described this past event as follows:

My aunt is protibondhi (psychiatric patient). We took her to the hospital and they did not receive her because she could tell the names of the family so they said she should not be in the hospital. We tried a lot to go to the hospital, but hospitals did not receive us anymore. From birth her hands and legs were slightly not normal. The arms are hat pa baka.

Strategies for dealing with convulsive disorders consisted of seeking out the *kobiraj*, traditional healer for a *bash* (bamboo treatment), and then seeking help from a doctor or hospital when the traditional treatment had failed. In a semi-formal discussion, a local healer, a 80-year-old woman, described how she would ask her colorful bamboo stick the patient's illness and how to help them. For her grandson with *khichuni*, she said, "I tried to treat him with bamboo, but it did not work. I did not have enough power to treat the boy."

The healer also described when people would come to her to get treatment for a mental patient, "they tell me that they will give everything, cow, hen, chicken, gold and they say, 'please just do something for the child'. Usually within one year they are healed. There is a *mela* (fair) where I go. People bring gifts and gold to me for the recovery of their child. "Another strategy for *mirkiberam* was described as going to the *kobiraj* where they would blow over the person, and give them special shoes to bite and then the patient would become cured slowly.

Coping strategies for *chintarog*, as girls approached adolescent age, include girls having fewer friends but forming close relationships with one or two girl friends whom they would confide in. For *jenjiberam*, placing a small stick on the upper ear would make someone better. If someone had *bhutedhora* then going to the *kobiraj* where a *montro*(spiritual words) is said and *panipora* (holy/spiritual water) used is the coping strategy.

Coping strategies varied among the participants, but the general health seeking behavior involved the *fakir*, *kobiraj*, and a *doctor/hospital* visit. Culture and traditional practices play a role in choice of coping strategies, the use of kelakuuca (leaf fruit), boiragota (seed of fruit), orjungacherchal (orjun tree bark) to treat people with jaundice and mental illness is based on strong

cultural attachments to the tree as it is said to give life.

Social interactions

The research team was speaking with Malek, a 60-year-old man, about his grandson Ranna. At that time, Ranna comes with his mother towards the grandfather. He is a wearing a tabiz [an amulet usually worn on the arm]. Asking the boy what he enjoyed in school, he replied:

I like to study everything and then he was asked what he wanted to be in the future and he said "nothing." [What do you want to be in future?] Nothing. [Do have any friends?] No friends, I don't like friends. Bhalolagena (I don't feel good). [What do you like to do all day?] Study all day. [Do you play?]No, I don't like to play. [How do you spend most of your time]? Sitting. [What you like to eat?] Nothing. [Do you like going to school?] Yes. [Do you have problem with friends?] No. [Do you feel comfortable with your friends?] I don't feel well; don't like to mix with friends. Feel "weak" [points to leg and every part of body]. [Why do you think you feel weak in your legs and body?] I don't want to sit here.

Adolescents, such as Ranna who are said to have a form of madness such as *manoshikrog* were described as not feeling well. They preferred to be alone and were also known for disrespecting and beating other people. They were also teased and beaten by their peers. One participant replied that the family suffers from not being able to treat their child. Also, the behaviors of adults and peers towards adolescents with mental illness differed. An adolescent girl in a focus group described how the village members treated her aunt:

My aunt is protibondhi... she is eleven years old. She is staying at home, and she sometimes gets lost as she wanders here and there. The community people know her and they bring her back to the house if she gets lost.

Two girls from fifth grade described a boy in their class who had*manoshikrog*. They told the researcher how the boys in their school would tease him and beat him:

We try to behave nicely with him but other junior boys like to mistreat him, they beat him and he cries. He sits alone, he cries...

Adolescents with *kichuni*, *mrigi*, *mirkiberam* and general convulsive disorders were teased by both peers and the community members. Overall, adolescents with a perceived mental illness did not have friendships with others. They were often teased and beaten. Interactions with others included quarreling and disrespecting those around.

The study revealed contrasting details on the behavior of others towards adolescents with mental illness. While the school authority may be expected to behave positively towards such young people because the school is presumed to be a safety place for children, it does not control the entire environment surrounding the patient within which these adolescents may be subjected to violence. People with mental illness are often misunderstood as weak, lazy, or dangerous and as such, they are more likely to become victims of violence. Other studies have also found that they are sometimes beaten or left hungry [13].

Seeking help

On health seeking behavior for mental illness of adolescents, it is important to note that careseeking was highly dependent on traditional beliefs and practices. Our study shows an inseparable relationship between culture and people's beliefs as a key factor in determining solutions for a problem. Even the limited data from this study reveal that residents of Bagnibari village embraced use of traditional healing as remedy to mental illness. Like many other developing countries, it may therefore be relevant to involve spiritual and traditional healers in therapy for mental illness since the healers provide explanations for the perceived causes of illnesses in most communities where they exist [13].

Concerning the use of biomedicine, when village members were initially asked about treatment of illnesses other than physical in their community, they replied that such types of illnesses were uncommon in their village because of preventive measures taken from the health center. A man in the village described:

"...Nowadays, because the families are health conscious, and the health center is nearby, we maintain hygiene and there is no quarrel in the household. The parents no longer quarrel in front of children. 60% of the kids are born by Cesarean sections in the medical hospital, 30% are normal births and only 10%

childbirth happen at home. If the mother is mentally okay, then the child will be okay."

From the abovementioned quote, it is evident that medicalization and urbanization are perceived as determining factors of mental illness in adolescents. Having more births in a hospital, and a clean and quarrel-free home, compared to births in the home are perceived as protective factors. However, despite this participant's belief that 90% of kids are born in a hospital, recent national surveys reveal that actually 85% of births in Bangladesh still occurs at home [14]. It appears that a clean environment, free of quarreling and healthy behaviors, can lead to a normal birth and this environment is thought to be in a hospital setting, but the man also indicated if the mother is well, then the child will be too, putting the onus on the mother.

Supernatural beliefs

People embrace beliefs in supernatural power in this village. Our study, like many others, points out the perceived contribution of supernatural beliefs on mental illness. This should push researchers to explore how people make such connections between the people who suffer mental illness and the different ways they perceive their body-mindsoul and their deity. As if the spirit chooses to show itself in that manner [15]. Perceiving this reality can therefore help us to understand and penetrate into the mysterious world of those who suffer from mental illness. It can also help us to understand that what they go through is a deficiency that promotes healing by showing what is missing [15]. As a fact, in some communities, mental illness is perceived as a supernatural possession which may be either celebrated as a supernatural gift or the person may be shunned. In our study more often people with mental illness were shunned and ill-treated because of the perceived cause that they were possessed by evil spirits.

Hereditary factors with motherly blame

Hereditary factors were also identified as a causal theme in mental illnesses. However, these were connected only to the mother of the adolescent. Several comments in the village linked mother to the child. Little is known about the fact that the father's role may have an effect on a child's mental being, and physical responsibilities such as breastfeeding and early child care may also be probable bases for their argument. There seems to be an

existing bias against the mothers where actions taken by the mother in raising the child were identified as contributing factor for mental illnesses. For example, if the mother could not produce breast milk or the child was underfed, especially during weaning. It was evident that child related deformities such as mental illness are linked more to the mothers because of their identified role as primary care givers. Adverse effects at birth are also taken to be the mother's fault regardless of whether she had a hospital birth or was helped by the traditional birth attendant. Therefore, mothers bear all the blame and bear the burden of taking appropriate preventive measures against mental illness.

The relationship between eating behaviors and nutrition intake in childhood was also identified by the community as a factor in mental illness. This increased the blame on mother, but was also related to the effects of poverty in such a way that a poor family might feed the growing child just one type of food for a long period of time and thereby caused mental illness.

IV. CONCLUSION

Mental illness among adolescents is a difficult condition to study. Adolescents may feel a variety of pressures: to do well in school, to be popular with peers, and to gain parental approval. In addition, many adolescents have other special problems. For example, they may worry about a parent being violent or even about marriage (girls). Unfortunately, with such concerns adolescents may develop serious emotional problems that turn into mental illnesses in the course of time if they do not receive help in time. The issue of mental illness is becoming predominant in the rural areas of Bangladesh. The mode of treatment causes great concerns as most of the solutions seem not to be definite, meaning that the condition may resurface again later in life or from time to time. More attention and time should be invested in providing a solution to the poor adolescent patients who suffer the burden of the disease, because chances are high that they may live with the condition forever. However, any form of alternative treatment provided should also be explored. This needs to be culturally sensitive, since most of disease labeling and perceptions on causes seem to be culturally determined to a large extent.

At the time of writing this paper, Bangladesh does not have a national policy that addresses mental health. However, the country does have a mental health act based on the British Lunacy Act of 1845 [16]. The National Institute of Mental Health in Bangladesh serves to oversee public education and awareness campaigns for mental health, yet the findings of this study indicate a lack of organizational presence for mental health throughout the more rural areas such as the villages outside of Savar [17]. Despite there being a mental health hospital in Pabna, Bangladesh, it is not possible for a hospital in just one location to serve the mental health needs of the entire Bangladeshi population. In addition, human resources specific for mental health in Bangladesh are severely lacking with less than one per 100,000 population, and outpatient clinics are not sufficient [17]. Future research on mental health in Bangladesh should focus on the lifestyles of individuals with mental illness and how they cope with everyday situations.

It is recommended that Bangladesh should develop targeted mental health policy that includes public awareness and education among the adolescent as well as the general population, including rural areas. In addition to developing culturally sensitive interventions, adequate training of medical professionals should also be implemented.

Acknowledgements

We would like to thank the people of Bagnibari village who gave their time to speak with us. We would also like to thank the professors and lastly James P Grant School of Public Health, BRAC University, for granting us such a learning opportunity.

REFERENCES

- 1. WHO. *Mental Health*. Retrieved March 13, 2010, from World Health Organization: http://www.who.int/mediacentre/factsheets/fs220/en/. (2007).
- 2. J. Whitlock, K. Schantz. Research Facts and Findings: Mental Illness and Mental Health in Adolescence. Retrieved from www. actforyouth.net (2008)
- 3. WHO. *Investing in Mental Health*. Geneva: World Health Organization. (2003)
- 4. WHO. Bangladesh Mental Health and Substance Abuse. Retrieved March 13, 2010,

- from World Health Organization: www. who. int. (2010).
- A. Firoz, M. Karim, M. Alam, A. Rahman, M. Zaman. "Prevalence, medical care, awareness and attitude towards mental illness in Bangladesh". *Bangladesh Journal of Psychiatry*, 20 (1), pp 9-36. (2006).
- 6. M. Belfer. "Child and adolescent mental disorders: the magnitude of the problem across the globe" *The journal of child psychology and psychiatry*, pp 1-11. (2008).
- 7. R. Islam., R. Howard. "Psychiatry in Bangladesh". *Psychiatric Bulletin*, **17**,pp. 492-494. (1993).
- 8. N. Khan, S. Ferdous, R. Islam, A. Sultana, M. Durkin, H. McConachie. "Behavior problems in young children in rural Bangladesh". *Journal of tropical pediatrics*, **55** (3),pp. 177-182. (2008).
- 9. M. Mullick, R. Goodman. "The prevalence of psychiatric disorders among 5-10 year olds in rural, urban and slum areas in Bangladesh" *Social Psychiatry and Psychiatric Epidemiology*, **40**, pp. 663-671. (2005).
- 10. N. Selim, P. Satalkar. "Perceptions of mental illness in a Bangladeshi village" *BRAC University Journal*, **1** (1), pp. 47-57. (2008).
- 11. R. Kendell. "The distinction between personality disorder and mental illness" *British Journal of Psychiatry*, **180**, pp. 110-115. (2002).
- 12. Bangladesh Bureau of Statistics: Government of Bangladesh. (2001).
- 13. D. Rao. "Mental illness and psychological distress across cultures" Integrating Mental Health Services into Primary Health Care? Out Patient Department, NGO waiting Room, Bangladesh. (2008).
- 14. National Institute of Population Research and Training (NIPORT), Mitra and Associates, and Macro International. 2008. Bangladesh Demographic and Health Survey 2007: Key Findings. Calverton, Maryland, USA: NIPORT, Mitra and Associates, and Macro International.
- 15. J. Redstone. A Spiritual View of Mental Illness. *Psychosis Journal*. Retrieved March

- 16, 2010: http://lightomega.org/PathwaysofLight.html. (2010).
- 16. J. K. Trivedi, P. Narang, M. Dhyani. "Mental health legislation in South Asia with special reference to India; shortcomings and
- solutions" *Mental Health Review Journal*, **12**(3), pp. 22-29. (2007).
- 17. WHO-AIMS report on mental health system in Bangladesh, WHO and Ministry of Health and Family Welfare, Dhaka, Bangladesh, 2006.

APPENDIX

A. Terminology

Adha pagol/Pagla pagla dhokerMentally disturbed but not as severe as a pagolManoshik rogueMental patientProtibondhiPsychiatric patientKichuni/Mrigi disease/MirkiberamEpilepsyJanjiberamConvulsionsMathaghoraDisease inside the head associated with mental illnessChintarog/chintamyrogWorry illness/depressionNazarlagaEvil eyeTotkaparaicheMental disease from touching waste products of the healerTotkaparaicheWaste substance thrown from local healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burner there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Pagol	Mad man/women. It is the most commonly used term for the	
Manoshik rogueMental patientProtibondhiPsychiatric patientKichuni/Mrigi disease/MirkiberamEpilepsyJenjiberamConvulsionsMathaghoraDisease inside the head associated with mental illnessChintarog/chintamyrogWorry illness/depressionNazarlagaEvil eyeTotkaparaicheMental disease from touching waste products of the healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burnethere is a devil that goes with the person's heart over the housevery night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo		deranged and the mentally ill.	
Protibondhi Psychiatric patient Kichuni/Mrigi disease/Mirkiberam Epilepsy Jenjiberam Convulsions Mathaghora Disease inside the head associated with mental illness Chintarog/chintamyrog Worry illness/depression Nazarlaga Evil eye Totkaparaiche Mental disease from touching waste products of the healer Indicate a disease from touching waste products of the healer Waste substance thrown from local healer Alga batash, Khoraidhora Bad air Buttedhora/Jine-dora/Bhuteasor Devil attack Jor Fever Shordi Colds Pocha, bashi Rotten food Hat pa baka Deformity of bones Peter vetormoilaKhaishilo Swallowing of amniotic fluid Hugna-chora Malnourished Dhud-chora Spirit stealing breast milk; lack of breast milk Masik Menstrual changes Mora mora Acute respiratory infection Bhute/petni, Arali Devil Hindu bhut, chitaniya jai The belief that when a person dies and their body is burner there is a devil that goes with the person's heart over the hous every ni			
Kichuni/Mrigi disease/MirkiberamEpilepsyJenjiberamConvulsionsMathaghoraDisease inside the head associated with mental illnessChintarog/chintamyrogWorry illness/depressionNazarlagaEvil eyeTotkaparaicheMental disease from touching waste products of the healerTotkaparaicheWaste substance thrown from local healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burnethere is a devil that goes with the person's heart over the housevery night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo		*	
JenjiberamConvulsionsMathaghoraDisease inside the head associated with mental illnessChintarog/chintamyrogWorry illness/depressionNazarlagaEvil eyeTotkaparaicheMental disease from touching waste products of the healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Protibondhi	Psychiatric patient	
MathaghoraDisease inside the head associated with mental illnessChintarog/chintamyrogWorry illness/depressionNazarlagaEvil eyeTotkaparaicheMental disease from touching waste products of the healerTotkaparaicheWaste substance thrown from local healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burner there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo			
Chintarog/chintamyrogWorry illness/depressionNazarlagaEvil eyeTotkaparaicheMental disease from touching waste products of the healerTotkaparaicheWaste substance thrown from local healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burner there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Jenjiberam	Convulsions	
NazarlagaEvil eyeTotkaparaicheMental disease from touching waste products of the healerTotkaparaicheWaste substance thrown from local healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Mathaghora		
TotkaparaicheMental disease from touching waste products of the healerTotkaparaicheWaste substance thrown from local healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Chintarog/chintamyrog	Worry illness/depression	
TotkaparaicheWaste substance thrown from local healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burner there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Nazarlaga	Evil eye	
TotkaparaicheWaste substance thrown from local healerAlga batash, KhoraidhoraBad airBhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burner there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Totkaparaiche	Mental disease from touching waste products of the healer	
Bhutedhora/Jine-dora/BhuteasorDevil attackJorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Totkaparaiche		
JorFeverShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Alga batash, Khoraidhora	Bad air	
ShordiColdsPocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Bhutedhora/Jine-dora/Bhuteasor	Devil attack	
Pocha, bashiRotten foodHat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Jor	Fever	
Hat pa bakaDeformity of bonesPeter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Shordi	Colds	
Peter vetormoilaKhaishiloSwallowing of amniotic fluidHugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Pocha, bashi	Rotten food	
Hugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Hat pa baka	Deformity of bones	
Hugna-choraMalnourishedDhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Peter vetormoilaKhaishilo	Swallowing of amniotic fluid	
Dhud-choraSpirit stealing breast milk; lack of breast milkMasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Hugna-chora		
MasikMenstrual changesMora moraAcute respiratory infectionBhute/petni, AraliDevilHindu bhut, chitaniya jaiThe belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night.KobirajLocal/traditional healerTabizAmuletBashEnchanted bamboo	Dhud-chora	Spirit stealing breast milk; lack of breast milk	
Mora mora Acute respiratory infection Bhute/petni, Arali Devil Hindu bhut, chitaniya jai The belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the house every night. Kobiraj Local/traditional healer Tabiz Amulet Bash Enchanted bamboo	Masik		
Hindu bhut, chitaniya jai The belief that when a person dies and their body is burned there is a devil that goes with the person's heart over the housevery night. Kobiraj Local/traditional healer Tabiz Amulet Bash Enchanted bamboo	Mora mora		
there is a devil that goes with the person's heart over the house every night. Kobiraj Local/traditional healer Tabiz Amulet Bash Enchanted bamboo	Bhute/petni, Arali	Devil	
TabizAmuletBashEnchanted bamboo			
Bash Enchanted bamboo	· ·	Local/traditional healer	
	Bash	Enchanted bamboo	
Panipora Enchanted water	Panipora	Enchanted water	
Montro Reciting prescribed mystic word	Montro		
Soitan matir vetor puita fela Killing devil by putting devil under soil	Soitan matir vetor puita fela	Killing devil by putting devil under soil	
Imam/Fokir Religious leaders	Imam/Fokir	Religious leaders	
Majar Religious place	Majar		
Tulshipatarrosh Extract from a herb (tulshi)			
Kelakuuca One type of leaf & fruit			
Boiragota Seed of fruit	Boiragota		
Orjungacherchal Bark of the orjun tree		Bark of the <i>orjun</i> tree	