

ASSESSMENT OF HEALTH-RELATED RISKS AMONG ADOLESCENTS LIVING IN SHELTER HOMES OF ISLAMABAD

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ABSTRACT

Shelter homes are a mean of providing accommodation to the disadvantaged people of different age ranges. The aim of the study was to assess the risks associated with the health of adolescents living in shelter homes of Islamabad. The demographic variables which have association with these risks were also evaluated. For this purpose, a cross-sectional survey was carried out at 4 shelter homes of Islamabad. A total of 400 respondents were selected through multistage sampling. A questionnaire consisting of socio-demographic and modified HRA (Health Risk Assessment) Model was used for data collection. Data was analyzed by using SPSS version 26. Pearson Chi-square test was applied to find factors associated with risk behaviors and p value less than 0.05 was considered significant. Results showed that 82% of the study population was male. Majority of the respondents lie between 13-15 years of age group. It was found that nearly 51% of the respondents were on health risk. Gender, age, education level, family structure and no. in siblings have significant association with health risk behaviors (p value<0.05). It can be concluded that adolescents living in shelter homes are prone to develop health risk behaviors with girls at more risk.

Keywords: Adolescents, Health related risks, HRA model, Islamabad, Physical activity, Shelter homes.

INTRODUCTION

Adolescence is the duration of life span from 10 years to 19 and some people consider it up to 24 years. Adolescence is considered as one most important part of life in term of changes whether hormonal, physical or changes in social environment (Blakemore, 2019). It is a period of active growth. Adolescents have many nutritional and psychological needs related to health for their structural, sexual, physiological growth and activity, although many of these needs remain unmet. Shelter homes are the institutions or the organization which provide shelter to the underprivileged people including new born babies to the old aged people. There have been many cases of violence against shelter home adolescents throughout the world, and medical and social agencies have been unable or unwilling to provide effective assistance to victims (Critelli & Willett, 2010).

Previous Studies shows that homeless children or teenagers under shelter homes have greater risk of malnutrition, infectious diseases, higher level of blood lead, pulmonary diseases, and obesity (Gultekin, Bush, Ginier, Cordon, & Dowdell, 2020). Researches have also proved that in many factors, poverty is one of the main factor contributes to the health of homeless children, as they increase sadness, risk of death and the risk of getting homeless (William M. Bannon, et al., 2012). In Pakistan, almost 50% of the population is illiterate which serves as the main cause of domestic violence and child abuse. Studies indicate that educated and upper-class women possess more resources, have a higher social standing, and are more aware of their rights when compared to the general population. 93 percent of urban couples with high education experience domestic violence, typically in the form of verbal abuse and physical abuse (Santos, Mateos-Perez, Cantero, & Gamez-Guadix, 2021).

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There are many private welfare organizations in Pakistan and specifically in Islamabad like Edhi foundation, Al-khidmat and many more, these welfare organizations are providing basic needs and shelters to many underprivileged and physically abused people including Adolescents. Apart from these private organizations, Shelter homes have also been established by the government for disadvantaged adolescents like Dar-ul-Aman, but they continue to be criticized as neither shelters nor homes (Naqvi, Ibrar, & Walsh, 2018). Studies conducted in Pakistan have revealed that few shelters are equipped to provide a safe place and assistance to adolescent girls who have been victims of violence. A majority of shelters are located in large cities such as Lahore, Islamabad, Rawalpindi, Karachi, and Peshawar, where vulnerable adolescent girls are provided with protective custody (Tarar, Ranjha, & Almas, 2021). The sub-jail environment in government shelters treats adolescents like patriarchy. Furthermore, they are unable to provide counseling or childcare. Furthermore, shelter studies have found that residents are more likely to suffer from depression and anxiety due to their personal circumstances, including uncertainty about the future, the fate of their children, divorce, and the social stigma associated with shelters (Marwat, Ronis, & Sanauddin, 2019).

According to the Census Bureau, 553 742 people were homeless on a single night in 2017 in Pakistan. The number of unaccompanied homeless adolescents under the age of 25 was 40,799 as of 2010. The prevalence of homeless adolescents of this age group is estimated to be over 55%, which translates into a particularly high vulnerability to trauma for children of this age group (Shah, et al., 2022). As a result of being homeless or living in an unstably housed situation, they live in shelter homes and are more likely to have experienced trauma during their childhood or adolescence. The results of a study that was conducted in several major cities across the nation indicate that 57% of homeless adolescents have experienced trauma at some point in their lives. In the Diagnostic and Statistical Manual of Mental Disorders-IV, approximately 24% of patients suffering from posttraumatic stress disorder met the criteria for the diagnosis (Panwhar & Fiedler, 2018).

It has been found that 89% of shelter home adolescents and youth aged 16 to 19 had been diagnosed as having a mental illness, compared to 30% of the national homeless population as a whole. More than 80% of shelter youth in several cities met the criteria for at least one psychiatric diagnosis, according to an analysis of shelter homes. There was a 62.5% prevalence of mood disorders among youth in Islamabad, as well as a 48% prevalence of substance abuse disorders among youth (Cassum, Cash, Qidwai, & Vertejee, 2020). Suicidal thoughts were reported by sixty-two percent of the youth, according to the study. When a person is exposed to adversity in his or her early life, he or she may be more likely to develop psychological disorders later in life. (Ganatra, Zafar, Qidwi, & Rozi, 2008).

During the period between 16 and 25, adolescents are considered to be youth if they are in the transition between adolescence and young adulthood, that is, if they are between the ages of 16 and 25 (Khalid, Qadir, Chan, & Schwannauer, 2019). There is a high probability that transition-age shelter home adolescents will experience housing instability and/or homelessness as adults without adequate psychological support if they do not receive any type of support at all (Shah, Hayat, Zaman, & Sabir, 2022). Consequently, mental illness plays an important role in perpetuating the cycle of homelessness as a result of the fact that it inhibits individuals from maintaining stable employment and establishing reliable and healthy relationships with others (Zaman & Sabir, 2013).

It is important to note that shelter homes for youth have only a limited number of treatment options available to them (Tanveer, et al., 2021). One study found that only 32% of homeless youth who met the Brief Symptom Inventory criteria for emotional distress sought mental health treatment as a result of that distress (Cohen, Kamarck, & Mermelstein, 1983).

It was found that most of the researchers focus on the violence in shelter homes that affected the psychological health of the residents. However, little is known about health risk behaviors among residents of shelter homes especially among adolescents. As adolescent age is a vulnerable period in which a person is more at risk of developing unhealthy behaviors. So, the current study was conducted to assess the health related risks among adolescents living in shelter homes of Islamabad and to determine the factors associated with these health risks.

MATERIALS AND METHODS

A quantitative research approach using cross-sectional study design was used for the purpose of current study. Current study was carried out at shelter homes of Islamabad, Pakistan during a period of six months. All Adolescents aged from 10 to 18 years living in shelter homes at least from last six months were included in the study. Both girls and boys were included in the study. Participation was completely

voluntary and those who refuse to participate were excluded. Data was collected using a self-administered questionnaire that included two sections; Section 1 included general information regarding demographic factors while section 2 included modified HRA Model. Questionnaires were translated into Urdu for participants to understand the questions. According to the previous prevalence 50 percent sample size of 384 was taken for the current study.

Data analyzed by using statistical package for social science (SPSS) version 26. Data of qualitative demographic variables entered in SPSS by using the codes that are assigned to each category. While data of quantitative variables entered in numerical form. Quantitative variables are converted into categorical form. Chi Square test has been performed.

Study was conducted after approval from ethical board of Al-Shifa School of Public Health Rawalpindi. Before starting data collection, permission was taken from Bait-ul-Mal, Pakistan. A consent form was filled by the respondents before filling the questionnaire. This consent form was a commitment to them to keep their information confidential. Also they have right to refuse for filling the questionnaire and they can cut off themselves from this study at any step without telling reason. It was committed in that form that no harm will be given to respondent from researcher and respondent's data will not be used for any misconduct.

RESULTS

A total of 400 respondents living at the shelter homes of Islamabad were included in the current study. Results showed that more than half of the respondents were males (n = 326, 82%). Majority of the respondents had secondary level education (n = 225, 56%) and were living in joint family system (n = 203, 51%). A detail summary of sociodemographic characteristics of the respondents is presented in table 1.

Table No. 1 Sociodemographic Characteristics of Respondents

| Sr. No. | Variables | n (%) |
|----------|-------------------------|----------|
| 1 | Gender | |
| | Male | 326 (82) |
| | Female | 74 (18) |
| 2 | Age | |
| | 10-12 years | 49 (12) |
| | 13-15 years | 233 (58) |
| | 16-18 years | 118 (30) |
| 2 | Education | |
| | Primary | 27 (7) |
| | Middle | 140 (35) |
| | Secondary | 233 (58) |
| 3 | No. of siblings | |
| | None | 45 (11) |
| | 1-2 | 66 (17) |
| | 3-4 | 114 (29) |
| | More than 4 | 175 (44) |
| 4 | No. in siblings | |
| | Elder | 82 (21) |
| | Middle | 159 (40) |
| | Younger | 137 (34) |
| | Not known | 22 (6) |
| 5 | Family structure | |
| | Nuclear | 129 (32) |
| | Joint | 203 (51) |
| | Foster family | 32 (8) |
| | Others | 36 (9) |

In the case of shelter homes or those at risk of homelessness, there is a substantial health disparity. In order to maintain a healthy mental and physical state, it is important to engage in regular physical activity. As per the current study results, 171 out of 400 respondents (43%) reported that they were always engaged in physical activity for more than 30 minutes at least five days a week. This

showed that nearly 43% of respondents were aware of the importance of physical activity. Moreover, 17% (n= 66) of the respondents have responded that they were engaged in physical activity including stretching, aerobic activity, and strength conditioning. Similarly, 32% of the respondents (n= 126) reported that they were involved in physical activity to gain serious benefits while 13% of the respondents (n= 53) reported that they enjoyed sedentary activities as compared to physical activity. A detail of physical activity is given in table 2.

Table No. 2 Physical activity of the study population

| | Never N (%) | Occasionally N (%) | Often N (%) | Very often N (%) | Always N (%) |
|--|----------------|-----------------------|----------------|---------------------|-----------------|
| 1 Engagement in moderate physical activity for at least 20 to 30 minutes at least 5 days a week | 55(14) | 19 (5) | 111(28) | 44(11) | 171(43) |
| 2 Physical activity includes stretching, aerobic activity, and strength conditioning | 66(17) | 58(15) | 89 (22) | 89(22) | 98 (25) |
| 3 Take the health benefits of physical activities and their lasting impact seriously | 32 (8) | 26 (7) | 117(29) | 99(25) | 126(32) |
| 4 Enjoy sedentary activities rather than physical activities | 111(28) | 40(10) | 103(26) | 93(23) | 53 (13) |

A healthy lifestyle begins with teaching children the importance of a healthy diet. By eating a healthy diet and establishing healthy eating habits, young people can promote their health, growth, and intellectual development. As per the study results, only 13% (n= 51) have reported that they were eating at least 2 servings of fruits and vegetables every day (one serving equals one-half cup). Moreover, only 24% (n= 97) have reported that they had avoided eating foods that were high in fat such as whole milk, fried foods, and fatty meats. While 13% (n= 52) respondents reported that they never consumed high fiber diet on daily basis. A summary of eating patterns of the study population is given in table 3.

According to the results, 42 % (n= 167) have responded that they enjoyed activities such as the arts, visiting museums, or attending plays or concerts. Similarly, 49% (n= 197) respondents reported that they seek opportunities to learn new things using different mediums. Moreover, 39% (n = 157) respondents reported that they expressed their anger and frustration that has never caused any harm to the other people. A detailed summary of overall mental, physical and emotional health status of the respondents is given in table 4.

As per the study findings, only 32 % (n= 129) respondents reported that they have visited their physician for routine check-ups, health screenings, and disease prevention. While only 17% (n= 69) respondents visited their dentist every six months for routine checkup. A detailed summary related to the health screening of the respondents is given in table 5.

Table No. 3 Eating patterns of the study population

| | | Never N (%) | Occasionally N (%) | Often N (%) | Very often N (%) | Always N (%) |
|---|--|----------------|-----------------------|----------------|---------------------|-----------------|
| 1 | Eat at least 2 servings of fruits and vegetable every day (one serving equals one-half cup) | 88 (22) | 33 (8) | 143 (36) | 85 (21) | 51 (13) |
| 2 | Avoid eating foods that are high in fat such as whole milk, fried foods, fatty meats, etc. | 90 (23) | 55 (14) | 103 (26) | 55 (14) | 97 (24) |
| 3 | Include foods that are high in fiber in my diet on a daily basis (i.e. whole grain bread and cereals, beans, etc.) | 52 (13) | 22 (6) | 76 (19) | 117 (29) | 133 (33) |

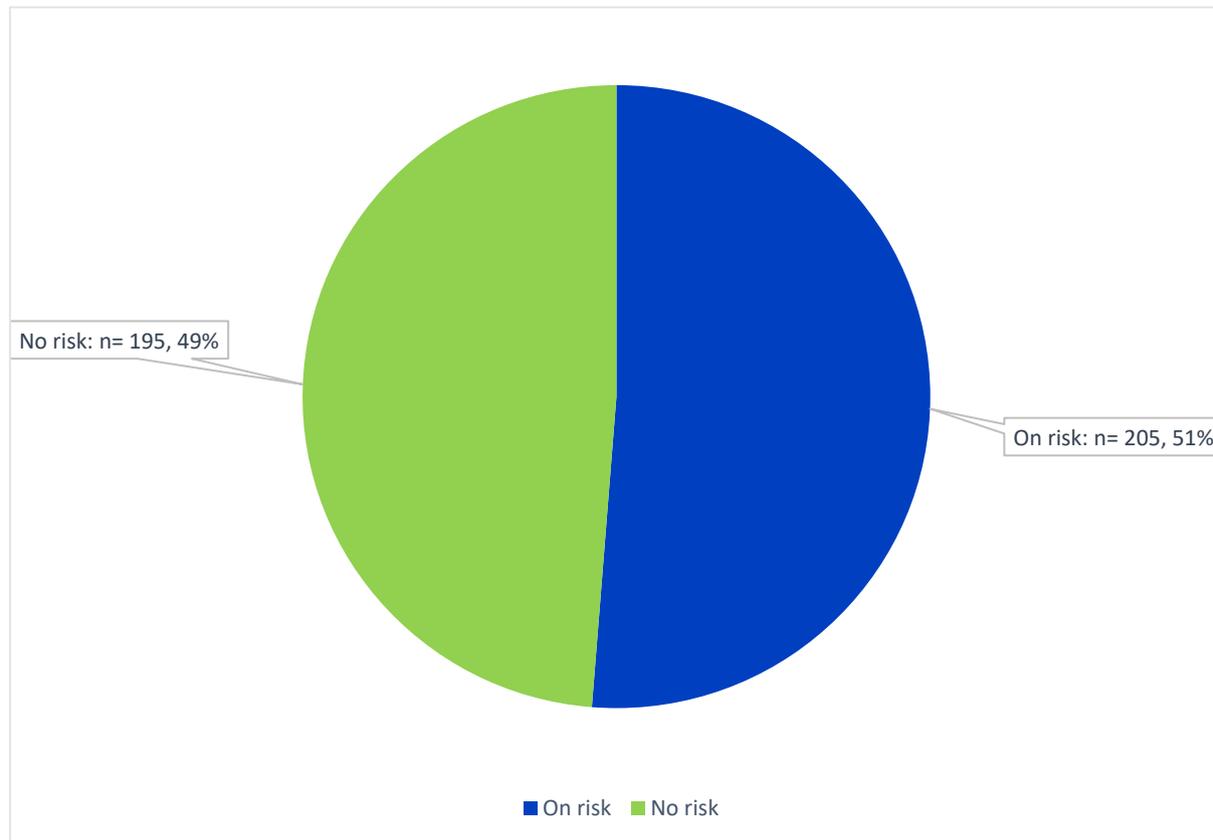
Table No. 4 Overall Health Status of the respondents

| | | Never N (%) | Occasionall y N (%) | Often N (%) | Very often N (%) |
|----|---|----------------|---------------------------|----------------|------------------------|
| 1 | Enjoy activities such as the arts, visiting museums, or attending plays or concerts | 42(11) | 31 (8) | 92 (23) | 68 (17) |
| 2 | Seek opportunities such as to learn new things through different mediums such as television, books, newspaper, the internet, etc. | 32 (8) | 16 (4) | 63 (16) | 92 (23) |
| 3 | Express my feelings of anger and frustration in ways that are not harmful to me or others | 34 (9) | 26 (7) | 83 (21) | 103 (26) |
| 4 | Before making decisions, I gather facts and consider all viable options | 24 (6) | 18 (5) | 87 (22) | 84 (21) |
| 5 | Feel like my life has a purpose | 10 (3) | 16 (4) | 43 (11) | 54 (14) |
| 6 | Actions are guided by my own beliefs rather than the beliefs of others | 26 (7) | 19 (5) | 53 (13) | 134 (34) |
| 7 | Tolerant of the values and beliefs of others | 42 (11) | 32 (8) | 40 (10) | 114 (29) |
| 8 | Realize when I make mistakes, and I understand the consequences they have on me and others | 16 (4) | 12 (3) | 60 (15) | 91 (23) |
| 9 | Express my feelings of anger and frustration in ways that are not harmful to me or others | 34 (9) | 26 (7) | 83 (21) | 103 (26) |
| 10 | Set reasonable objectives for me and strive to accomplish them | 14 (4) | 24 (6) | 49 (12) | 145 (36) |
| 11 | Feel that I have friends that I can confide in to assist in managing stress | 40 (10) | 10 (3) | 45 (11) | 91 (23) |

Table No. 5 Health Screening of the Respondents

| | | Never N (%) | Occasionally N (%) | Often N (%) | Very often N (%) | Always N (%) |
|----------|--|----------------|-----------------------|----------------|------------------------|-----------------|
| 1 | See my physician for routine check-ups, health screenings, and disease prevention | 68 (17) | 42 (11) | 104 (26) | 57 (14) | 129 (32) |
| 2 | Visit my dentist every six months for regular checkups | 168 (42) | 35 (9) | 62 (16) | 66 (16) | 69 (17) |
| 3 | Relationships and behaviors are maintained in a manner that is healthy for me and for others | 16 (4) | 32 (8) | 55 (14) | 123 (31) | 174 (44) |

Figure 1: Health risk among respondents



It can be observed that population at risk (n= 205, 51%) was slightly more than those who were not at risk (n= 195, 49%).

Association of health risk with socio-demographic characteristics was determined using Pearson Chi Square Test of Independence after confirming the assumptions of the test. All p-values below 0.05 were considered statistically significant. Results of the Chi square test revealed that the gender (p value= 0.0001), education (P value = 0.019), age (p value= 0.0001), no. in siblings (p value = 0.028) and family structure (p value= 0.020) showed statistically significant association with health risk among respondents. It was observed that more females were on risk as compared to males (74% as

compared to 46%). Similarly, respondents from secondary education showed more risk as compared to other educational levels while higher secondary level presented equal chances of having risk or not having risk. Moreover, elder child presented higher risk as compared to middle and younger child (52%, 48%, 49% respectively). Children in age group 13-15 years presented higher levels of risk as compared to other age groups. A summary of chi square results is given in table 6.

Table No. 6 Association between Socio-demographic characters and Health Risk among respondents

| Sr. No. | Variables | Health risk | | X ² (df) | P value |
|-------------|-------------------------|------------------|------------------|---------------------|----------------|
| | | No risk n (%) | On risk n (%) | | |
| 1 | Gender | | | | |
| | Male | 176 (54) | 150 (46) | 18.66 (1) | 0.0001* |
| Female | 19 (26) | 54 (74) | | | |
| 2 | Education | | | | |
| | Primary | 14 (52) | 13 (48) | 7.92 (2) | 0.019* |
| | Middle | 81 (58) | 59 (42) | | |
| Secondary | 100 (43) | 133 (57) | | | |
| 3 | Hobby | | | | |
| | Ground games | 134 (51) | 130 (49) | 3.12 (3) | 0.374 |
| | Table games | 9 (33) | 18 (67) | | |
| | Reading | 26 (46) | 30 (54) | | |
| | Others | 26 (49) | 27 (51) | | |
| | | | | | |
| 4 | No. of siblings | | | | |
| | None | 18 (40) | 27 (60) | 5.17 (3) | 0.160 |
| | 1-2 | 31 (47) | 35 (53) | | |
| | 3-4 | 50 (44) | 64 (56) | | |
| | More than 4 | 96 (55) | 79 (45) | | |
| | | | | | |
| 5 | No. in siblings | | | | |
| | Elder | 39 (48) | 43 (52) | 9.08 (3) | 0.028* |
| | Middle | 82 (52) | 77 (48) | | |
| | Younger | 70 (51) | 67 (49) | | |
| Not known | 4 (18) | 18 (82) | | | |
| 6 | Family structure | | | | |
| | Nuclear | 58 (45) | 71 (55) | 9.78 (3) | 0.020* |
| | Joint | 109 (54) | 94 (46) | | |
| | Foster family | 18 (56) | 14 (44) | | |
| Others | 10 (28) | 26 (72) | | | |
| 7 | Age | | | | |
| | 10-12 years | 36 (74) | 13 (26) | 14.71 (2) | 0.001* |
| | 13-15 years | 101 (43) | 132 (57) | | |
| 16-18 years | 58 (51) | 60 (49) | | | |

*p value<0.05, **p value<0.01, ***p value<0.001, C. I= 95%

DISCUSSION

Current study was carried out at different shelter homes of Islamabad, Pakistan. The main purpose of this study was to assess health related risk behaviors among adolescents residing in shelter homes and determine the factors associated with it. It was found that in current study population nearly half of the respondents reported health related risks (n= 205, 51%). These risk behaviors involved insufficient physical activity, lack of healthy food, over all poor health status and insufficient facilities of health screening service availability. Different studies reported different proportion of risk behaviors among adolescents. A study conducted in US found that health related risk due to cigarette smoking among

adolescents range between 3.2%-15.3% (Demissie et al., 2017). The difference in findings could be explained by difference in contextual factors of the respondents, difference in age groups included and different study settings. The current study was carried out in shelter homes, so there was a high risk of risk behaviors among adolescents that could affect their health.

In current study, it was noted that gender of respondents was significantly associated with risk behaviors (p value <0.05). It could be noted from the results that females were more prone to develop health risk behaviors as compared to boys (74% vs 46%). A previous study conducted in US, found that risk behaviors were more prevalent among girls (Ivey-Stephenson et al., 2020). Similarly, another study conducted in 2015 also reported higher levels of health risk due to sedentary lifestyle among girls (Al Subhi, Bose & Al Ani, 2015). This could be due to the fact that females are provided with less privilege as compared to boys. In shelter homes, girls are even more at risk due to their emotional trauma, violence and lack of availability of healthy activities. This makes them more vulnerable for health risks.

It was observed in the present study that adolescents in secondary school level were more on risk as compared to primary and middle school level (57%, 48% and 42% respectively). These findings also showed statistical significance with health risks (p value <0.05). Similarly, it was found in the current study that no. in siblings is also significantly associated with health risk behaviors (p value <0.05). It was observed that those who did not know about their order among their siblings were more at risk than others. However, previous literature showed contrary results. A study conducted in UK found that middle child is more prone to develop risky behaviors (Pasqualini et al., 2021). Similarly, another study conducted in Germany found that there is no association between birth order and risk behavior development (Lejarraga et al., 2019). The current findings can be explained by the fact that this study was exclusively carried out at shelter homes. Children residing at shelter homes experience a different environment as compared to those at home. Moreover, lack of social support and lack of proper facilities make these children vulnerable to different risk behaviors.

Children living in nuclear families reported higher risk as compared to others (p value <0.05). It can be explained by the fact that children living in joint family systems can experience greater social support. This could decrease the risk of unhealthy behaviors among them.

Current study found that age of the adolescents was also significantly associated with health related risk behaviors (p value <0.05). It could be noted that children 13-15 years were more prone to develop risk behaviors followed by children 16-18 years (57%, 49% respectively). Children aged 10-12 years showed minimum proportion of health risk behaviors (26%). This could be explained by the fact that as children grow in age, their social interaction increases and they try to follow the footprints of their peers. As children living in shelter homes mostly lack a positive social circle, so it is more likely to develop risky behaviors later in life.

CONCLUSION

The findings of the study demonstrated that nearly half of the adolescents residing shelter homes were facing health risks. Less than half of the respondents reported engagement in physical activity and intake of healthy food. Moreover, routine visits to the physicians and health screening were also poorly reported. Various factors were associated with health related risk behaviors among adolescents. It was found that adolescents with female gender, age 13-15 years, secondary level education, nuclear family system and an unknown birth order were more prone to develop risky behaviors. Actions should be taken to improve the situation of adolescents in shelter homes so that they can be a part of productive human capital for the country.

RECOMMENDATIONS

It is recommended that government should take serious actions regarding welfare of people residing shelter homes. Adolescents, in particular, need more attention. There should be encouragement of healthy activities that promote mental health as well as physical health of the adolescents in shelter homes. This will in turn help to develop beneficial human capital for the development of the country.

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