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Association between Physical Abuse, Physical Neglect and Health Risk Behaviours among Young Adolescents: Results from the National Study

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Abstract

OBJECTIVES: One of the main objectives of this paper is to analyze the associations between physical abuse and neglect and health risk behaviours among young adolescents in the country.

METHOD: A representative sample consisted of total 1277 students (58.6% female and 41.6%), aged 18 and above. About 664 of them are in last (fourth) year of secondary school and 613 respondents are first- and second-year university students. The data were obtained using Adverse Childhood Experiences Study Questionnaires (Family Health History Questionnaire) for collecting information on child maltreatment, household dysfunction and other socio-behavioural factors, applying WHO/CDC-recommended methodology. Statistical significance was set up at $p<0.05$.

RESULTS: Physical abuse (21.1%) and physical neglect (20%) were reported with similar prevalence rates. Disciplining children by spanking or corporal punishment was presented with very high rate of 72.4%.

CONCLUSION: The results demonstrated a relationship between physical abuse and later manifestation of health risk behaviours such as: smoking and early pregnancy. Physical neglect increased the chances for drug abuse, drink-driving, having early sex, having more sexual partners.

Introduction

Child maltreatment has been raised as important public health problem at the WHO Consultation meeting on Child Abuse and Neglect in year 1999 neglect [1]. The *World report on violence and health*, 2002 states that no country or community is immune of violence [2]. With the World Health Assembly Resolution 56.24 (2003), violence has been put on the international agenda as a leading worldwide public health problem [3]. Later in year 2006 United Nations landmark study on violence against children stresses that violence against children cuts across boundaries of geography, race, class, religion and culture, highlighting the long-term consequences of child maltreatment [4].

Public health ecological model and Belsky's ecological model on child abuse and neglect have demonstrated the importance of influence of multi-level risk factors on child abuse and neglect in a broader context: individual (including biological, behavioural, psychological) systems and processes, as well as broader ones such as the environment, society and culture [2, 5-7].

Conceptual definitions of child maltreatment

Child maltreatment is defined as "all forms of physical and/or emotional ill-treatment, sexual abuse, neglect or negligent treatment or commercial or other

exploitation, resulting in actual or potential harm to the child's health, survival, development or dignity in the context of a relationship of responsibility, trust or power" [2, 8, 9].

Distinguished are four types of child maltreatment: emotional and psychological abuse; physical abuse; sexual abuse and neglect.

Physical abuse of a child is defined as the intentional use of physical force against a child that results in –or has a high likelihood of resulting in – harm for the child's health, survival, development or dignity. This includes hitting, beating, kicking, shaking, biting, strangling, scalding, burning, poisoning and suffocating [2, 8, 9].

Sexual abuse is defined as the involvement of a child in sexual activity that he or she does not fully comprehend, is unable to give informed consent to, or for which the child is not developmentally prepared, or else that violates the laws or social taboos of society. Children can be sexually abused by both adults and other children who are – by virtue of their age or stage of development – in a position of responsibility, trust or power over the victim [2, 8, 9].

Neglect includes isolated incidents as well as a pattern of failure over time on the part of a parent or other family member to provide for the development and well-being of the child – where the parent is in a position to do so [2, 8, 9].

The consequences of child abuse and neglect are wide – spreading throughout the lifespan; include both immediate and long-term impact on physical and mental health well-being. Studies have revealed that exposure to any form of child maltreatment in childhood is associated with risk-taking behaviours in later life [2, 8, 9].

Many studies have recognized that child abuse and neglect has strong, enduring effects on cognition and behaviour, leading to disruption in psychological and social functioning and mental health problems, health-risk behaviours, lower life expectancy and higher health-care costs [10-13]. The literature review by Browne and Finkelhor (14) indicated that depression; feelings of isolation and stigma, poor self-esteem, distrust, substance abuse, and sexual maladjustment are the most frequently reported long-term effects of child abuse and neglect. More recent findings point to resent that the consequences include a variety of suicide, panic disorder, dissociative disorders, post-traumatic stress disorder, and health-risk behaviours [15-17].

Adverse childhood experiences such as household insufficiencies (specific to lack of basic necessities such as food, shelter, clothing, education, and health) and dysfunctions may also lead to negative health outcomes [18-20]. Reported experiences of multiple forms of physical neglect in childhood, related to food insufficiency and hunger are more likely to show behavioural, emotional academic problems and health-risk behaviours, than children whose families do not report such conditions in life [21].

This paper has focused on exploring the association between psychical abuse and neglect and health-risk behaviours among young students in the country.

The data used in this article is an integral part of the data collected for more comprehensive project "Survey of adverse childhood experiences (ACE) among young people". The study has been conducted 2010. Implementation of the study was enabled with technical and financial support by the World Health Organization in collaboration with the University Clinic of Psychiatry, Medical Faculty in Skopje.

Method

Sample

The sample is consisted of total of 1277 respondents (aged 18 and above), students attending the last year of secondary education in the country (663 students) and students attending in the first- and second-year university in four universities throughout the country (614 students). The sample in both students attending secondary schools and students attending universities were selected according to strata: age, ethnicity and geographical areas encompassing universities. This sample represents 2.5% of the population of secondary school students attending fourth year, and 2% of the university students attending first- and second-year of university studies. The sampling framework included all secondary schools containing fourth year (33 schools). Eleven schools were selected to participate in the study from Skopje, Bitola, Tetovo, Struga, Shtip and Gostivar, according the strata of age, ethnicity and region . The sample consisted of randomly selected classrooms from each school. All students attending school on the day of the testing in the sampled classrooms were eligible to participate in the study. Selected students from all first- and second-year students from nine faculties at the four state university centres (Skopje University, Bitola University, Tetovo University and Shtip University) were included in the study, from four different geographical areas and from several different ethnic groups in the country (Macedonian, Albanian, Turkish and Other), [22]. The study was based on the criterion of animosity and voluntary participation in the study.

Measures

Adverse Childhood Experiences Study Questionnaires used in this study include the Family Health History questionnaire, applying World Health Organization/Centre for Diseases Control recommended methodology. Self-administrated

Family Health History Questionnaire consists of 68 questions examining different types of possible maltreatment (physical abuse and neglect, corporal punishment, psychological/emotional abuse and neglect, sexual abuse), household dysfunction (substance abuse in the family, mental illness, domestic violence, criminal behaviour in household, parental separation or divorce), and health risk factors (smoking, severe obesity, physical inactivity, depression, suicide attempts, alcohol and drug abuse, risky sexual behaviour). All the questions about adverse childhood experiences of students from parents, and/or other family member, and/or neighbours, and/or other adults and/or peers were introduced with the phrase "While you were growing up, during your first 18 years of life,..." Students' questionnaires were filled out anonymously and voluntarily. Study procedures were designed to protect student privacy by allowing voluntary and anonymous participation and possibility to withdraw their participation at any time of the research. The Family Health History Questionnaire was applied using separate versions for male and female respondents provided in Macedonian and Albanian language [8].

Data analysis

Data input and data analysis were done in SPSS-15 programme using the following methods: descriptive statistical methods, correlation, and logistic regression analysis. Statistical significance was set at $p < 0.05$ for all analyses.

Results

Socio-demographic characteristics

The number of students that took part in the study is 1277. About 58.6% are female and 41.6% are male as presented in Table 1. The average age of respondents does not differ significantly between sexes – 19.8 years for female respondents and 20.1 for male respondents.

Table 1: Sex and age of the students.

Sex	N	%	Mean age	±St.Dev
Female	749	58.6	19.83	2.44
Male	528	41.4	20.14	2.77
Total	1277	100	19.95	2.73

The ethnic distribution represents approximately the ethnic structure of the population in the country. The majority are Macedonians (69.2%), then Albanians (24.6 %), followed by other ethnic groups: Turks, Serbs, Vlachs, Roma and other (6.3%), which is in line with the country population distribution of ethnic groups [22].

The greater part of students come from families with moderate (55.5%) and satisfactory (28.7%) socio-economic status, in which parents have at least secondary school education and they both work, with 90.1% of the fathers in employment, and 62.8% of mothers as shown in Table 2.

Table 2: Parental education and socio-economic status of the students according to sex (N = 1277).

	Female		Male	
	No	%	No	%
Mother's education				
Without education	11	1.5	6	1.1
Elementary school	150	20.0	131	24.8
Secondary school	427	57.0	259	49.1
University education	156	20.8	123	23.3
Other	5	0.7	8	1.5
Does your mother work?				
No	256	34.2	218	41.3
Yes	493	65.8	309	58.5
Father's education				
Without education	2	0.3	4	0.7
Elementary school	61	8.1	61	11.5
Secondary school	473	63.2	302	57.2
University education	201	26.8	153	29.0
Other	8	1.0	7	1.3
Does your father work?				
No	65	8.7	57	10.8
Yes	680	90.8	471	89.2
Socio-economic condition	22	2.9	15	2.8
Social support beneficiary	23	3.1	27	5.1
Poor	204	27.2	162	30.7
Satisfactory	435	58.1	274	51.9
Mean	61	8.1	44	8.3
Wealthy	4	0.6	6	1.2

Physical abuse

Physical abuse was reported in more than one fifth (21%) of all students (9.2% of males and 11.8% of females). Students in the study were exposed to different forms of physical abuse during childhood such that they were pushed, grabbed or had something thrown at them, or had marks or were injured (as per Table 3).

Table 3: Physical abuse among students by sex and total (N = 1277).

Physical abuse	N	%
Female	151	11.8
Male	118	9.2
Total	269	21.1

Boys reported being treated more violently in terms of being hit so hard that they had marks or were injured, and girls experiencing more acts of pushing, grabbing or being hit with something.

Physical neglect

Physical neglect was reported by students for about 20%, and there is relatively equal distribution of reported experience of neglect by males (10.9%) females (9.1%) as presented in Table 4.

Corporal punishment

In our study about 42% of females and 30.4%

Table 4: Physical abuse among students by sex and total (N = 1277).

Physical abuse	N	%
Female	151	11.8
Male	118	9.2
Total	269	21.1

of males had sometimes or often been spanked, which means nearly one third and more of respondents experienced such disciplining practices during their childhood, displayed in Table 5. Corporal punishment as a type of physical abuse, involves hitting (slapping, smacking, spanking) children with the hand or with an implement – whip, stick, belt, and shoe.

In the case of our country, corporal punishment is most likely a common way of disciplining children. Parents apply this method almost equally with boys and girls.

Table 5: Corporal punishment by sex and total (N = 1277).

	Female	Male	Total
Being spanked sometimes or often	537 (42.0%)	388 (30.4%)	925 (72.4%)

Health risk behaviors

Results with regards to the health risk behaviors showed that alcohol use and smoking were the most common health risk behavior consequences. Of the 1277 respondents, 27.6% claimed to be current drinkers, and 3.5% reported having driven a car while drunk as per Table 6.

Table 6: Prevalence of health risk behaviors (N = 1277).

Health risk behaviors	Prevalence
Smoker	343 (26.9%)
Early smoking <15 years	90 (7.1%)
Alcohol use	352 (27.6%)
Drink driving	45 (3.5%)
Drug abuse	67 (5.3%)
Early sex <=16 years	157 (12.3%)
Multiple sexual partners >3	330 (25.8%)
Early pregnancy <=18 years	15 (2%)
Suicide attempts	39 (3.1%)

More than a fourth of the total number of respondents reported being smokers at the time of the survey, with 7.1% having started smoking at the age of 15 or even younger. Similarly, 5.3% of students had used illicit drugs. In terms of risky sexual behavior, 12.3% had engaged in early sex and 25.8% had had sex with three or more partners. Two percent of girls had got pregnant at the age of 18 years or younger, and a third of these pregnancies were considered as unintended first pregnancies. Attempted suicide (3.1%) was life-threatening health-risk behavior (see Table 6).

The results demonstrated a relationship between physical abuse/neglect and later manifestation of health risk behaviors among young people. Physical abuse increased the likelihood of being smoker for about 1.5 times (OR = 1.445, 95%

CI=1.08–1.993), increased the likelihood of an early pregnancy for 8.3 times (OR=8.313, 95% CI=0.745–92.781), and almost doubled the chances of attempted suicide (OR=1.760, 95% CI= 0.872–3.549) as presented in Table 7.

Table 7: Prevalence and adjusted relative odds of health risk behaviours by physical abuse and neglect.

	Smoker	Early smoking <15 years	Drink driving	Drug abuse	Early sex <=16 years	Multiple sexual partners >3	Early pregnancy <=18 years ∞
Prevalence	343 (26.9%)	90 (7.1%)	45 (3.5%)	67 (5.3%)	157 (12.3%)	330 (25.8%)	15 (2%)
Physical abuse	1.445 (1.08–1.993)**	1.371 (0.729–2.578)	1.042 (0.483–2.248)	1.475 (0.845–2.578)	0.939 (0.643–1.371)	1.252 (0.849–1.846)	8.313 (0.745–92.781)*
Physical neglect	0.895 (0.652–1.228)	1.004 (0.503–2.003)	2.007 (1.020–5.01)**	1.004 (0.503–2.003)**	1.735 (1.219–2.470)**	1.420 (0.974–2.071) **	2.647 (0.237–29.602)

N=1277; Odds ratios adjusted for age, sex, SES; ∞ Among 749 women; *p<0.05; **p<0.01.

Physical neglect increased the chances for drug abuse for about 1 time more (OR = 1.004, 95% CI = 0.503–2.00) and almost doubled the likelihood of drink-driving (OR = 2.007, 95% CI = 1.020–5.01). Physical neglect increased the likelihood for about 1.7 times more for having early sex (OR = 1.735, 95% CI = 1.219–2.470) and increased 1.4 times more the likelihood for having more sexual partners (OR = 1.420, 95% CI = 0.974–2.071). Overall, these results showed that being exposed to physical abuse/neglect during childhood is likely to result in a number of risky behaviors in adolescence and young adulthood (as per Table 7).

Discussion

The results of this study indicate that physical abuse is among the most common types of abuse. Both girls and boys were exposed to threats, as well as actual physical abuse, which do not differ significantly. However, there are surveys that show that girls (between 8 and 14 years) are more frequently victims of physical abuse in the context of family violence (51.1%), as reported to the official services for social work in the country [23, 24]. In Global Global Schools-based Student Health Survey (GSHS) 2007/2008 in the country, 18.7% of students reported being physically harmed one or more times during the previous 12 months, and male students were physically harmed significantly more often than female students [24]. Surveys from around the world also suggest that physical abuse of children in the home is widespread in all regions. In a survey of students aged 11 to 18 in Iran, 38.5% reported experiences of physical violence at home which had caused physical injury ranging from mild to severe [25].

Our study showed that physical neglect was experienced both by males (10.9%) and females (9.1%) in terms of wearing dirty clothes and not having sufficient food. However, it is difficult in resource-poor countries, such as ours, to draw a line between poverty and neglect. The last GSHS study showed that 1.9% of students were hungry most of the time because there was not enough food in their home, with significantly more male students affected

than female students [24]. On the other hand, research of sex difference in neglect in some countries, such as India and Nepal, suggests that girls suffer relatively more neglect than boys throughout early childhood – they are given food of inferior quality and less often given health care [26].

The study findings present that almost two thirds (72.4%) of students experienced corporal punishment as a method of disciplining children. The international multicentre comparative study on prevalence of child abuse in five SEE countries (Lithuania, Latvia, Estonia, Moldova and Macedonia) showed that the prevalence of corporal punishment in the Macedonia was the lowest compared to the other four countries. The authors concluded that although corporal punishment of children is widespread in the country, the relatively low percentage of prevalence was due to the fact that children are brought up in a culture which recognizes corporal punishment as a legitimate way of disciplining children, developing tolerance towards it [27]. During the Campaign *Childhood without violence* in 2006, and replicated in 2009 (in seven eastern European countries including Macedonia), a sample of adult citizens were questioned concerning about their attitudes toward parental use of corporal punishment of children; and about their perceptions of the scale of such behaviour among parents. According to the results of the interviews, 14% of interviewees (in 2006) and later only 1.5% (in 2009) felt corporal punishment was justified if it was in accordance with the belief system of the parent (almost 10 times fewer in 2009 than in 2006). In 2006 38% and in 2009 33% thought that it was justified in some situations, and 44% (in 2006) and 65% (in 2009) thought that it should never be used [28].

Globally, alcohol use causes 3% of deaths (1.8 million) annually, which is equal to 4% of the global disease burden [29]. Young people who drink are more likely to use tobacco and other drugs and engage in risky sexual behavior than those who do not drink [30, 31]. Alcohol use is a serious risk behavior which can impair adolescents' psychological and physical health and development and influence their relationships with peers, school and family [32]. Our study shows that alcohol use is widespread among students and its prevalence rate is almost 28% by both sexes, and they start drinking at the age of 14–15. Prevalence of alcohol use by students in the GSHS 2007/2008 in the country was 39.4%, which is even higher than in our study and male students significantly more often than female students reported current alcohol use [24].

Our study showed that in general, almost half of students had had sexual intercourse, but significantly more males (70%) than females (30%) were sexually active, starting their sexual life two years earlier, at the age of 16, and engaging in risky sexual behaviors significantly more often than females. A similar finding was reported in a recent study on adolescent sexual behavior showing that male adolescents were far more sexually active than female adolescents of the same age [33]. The ratio was almost 3:1 for males. The GSHS 2007/2008 study also showed that a significantly larger number of male students (19.5%) than female students (4.1%) had had sexual intercourse, more often having first sexual intercourse before the age of 13 [24].

Suicide is the third leading cause of death among adolescents [34]. Each year, about 4 million adolescents worldwide attempt suicide, which is more common for females than for males [2]. Our study confirmed this finding, that females significantly more often attempt suicide, significantly more often have more than one attempt, and the attempt(s) more often resulted in injury, which indicates that the attempt was very serious. In the GSHS 2007/2008, the same pattern of suicidal behavior was found [24]. During adolescence, girls who are under stress are more likely to suffer from emotional and psychosomatic problems, following the pattern of internalizing psychopathological manifestations (such as anxiety, depression, somatization) which might lead to suicidal behavior, but boys under stress have more behavioral and conduct problems, following the pattern of externalization [35,36]. The immediacy of the developmental stress and potential abuse and household dysfunction are experiences not easily elaborated by children and adolescents, as a result of which at certain points suicide may appear to be the only solution. The impact of pain and anxiety caused by physical abuse or witnessing domestic violence are experiences that children suffer in silence and suicide attempt is perceived as the only way out or an appeal for help. In our study a strong graded relationship was reported between the experiences of physical abuse and neglect in childhood and self-reports of health risk behaviors in adolescence (such as cigarette smoking, alcoholism, drug abuse, obesity, attempted suicide and sexual promiscuity in later life), [36-38].

The limitations of the study responses were based on self-reports, that imply of likelihood of respondents giving socially desirable answers. A potential weakness of studies with retrospective reporting of childhood experiences is the possibility of recall bias, such as the likelihood that more recent and severe experiences are being reported.

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