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PREDICTORS OF DELIBERATE SELF HARM IN ADOLESCENTS: A CORRELATIONAL STUDY

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ABSTRACT

Objective: *The present study aimed to investigate the predictors (conduct problems, hyperactivity, emotional problems, and poor peer interactions) of non-suicidal deliberate self-harm behaviors in a sample of adolescents.*
Design: *Correlational Study*
Place and Duration of Study: *Lahore, Pakistan*
Subject and Method: *The sample included 250 adolescents from 6th to 10th grade classes with ages between 11 to 18 years (M=13. 19, SD=1. 90) and was equally distributed across both the genders. The participants were examined by using the Self Harm Inventory and the Strength and Difficulties Questionnaire.*
Results and Conclusion: *Findings suggested that the emotional symptoms and the conduct problems significantly predicted DSH behaviors for both boys and girls. The current study concludes that if not managed timely, these psychosocial predictors are likely to induce clinical nature self-injurious behaviors in adolescents. In the long run, these may result in many other diverse outcomes such as poor school performance, maladjustment, suicidal ideation, etc. Therefore, it is suggested that at each developmental phase, particularly during adolescence, the society, the parents, and the teachers need to play their role in a healthy psychological development of adolescents.*

Keyword's*: Deliberate Self Harm, Gender, Adolescents*

INTRODUCTION

Adolescence is a phase of physical, social, and psychological development ranging from 11 to 20 years (Ernst, Pine, & Hardin, 2006) and the most vulnerable time to develop numerous psychological problems (Steinberg, 2005). During this transition, the school-going adolescents experience different changes regarding physical development and social networks (Buehler, Lange & Franck, 2007). In the current paradigm, deliberate self-harm (DSH) is largely becoming a threatening issue within the school settings. Therefore, there is a great need for developing a general understanding to recognize and identify DSH behaviors in the school attending adolescents.

Adolescents' DSH is known to be the most perplexing, challenging, and damaging behavior that parents, administrators, teachers, and school counselors encounter. DSH is defined in a broader context and may lead to other unhealthy behaviors such as burning, consuming pills, and cutting (Kidger, Heron, Lewis, Evans, & Gunnell, 2012). It is also documented that these acts of DSH are perceived to result in the relief of tension or to communicate stress; and in some serious cases, it may trigger acts with the suicidal purpose (Muehlenkamp, & Gutierrez, 2007). It has been noted that within the school setting, approximately 14% -17% of the adolescents (up to the age of 18 years) deliberately bruised, burned, pinched and scratched themselves at least once in their overall school tenure. Among these, there are 5 to 8 % who actively engaged in DSH behaviors (Whitlock, Prussien, & Pietrusza, 2015).

Within the last few years, a plethora of researches has evaluated the adolescent challenges from different psychological (e.g., behavioral, emotional, and social) and psychological health care perspectives (Steinberg, 2005). Among the behavioral problems, DSH is known to be a major problem and is frequently observed in the school-going adolescents. The present study aims to explore the major psychological and social factors associated with DSH in-school adolescents. DSH is a major health problem that leads to several psychological disturbances, and in many scenarios it may likely lead to suicidal ideation or attempts (Fliege, Lee, Grimm, Burghard, & Klapp, 2009).

A past study asserted that DSH including self-biting, cutting, and hitting is the outcome of certain psychological and social disordered behaviors. Results depicted a strong association of the direct self-injurious behavior with risk behaviors and psychopathology (Brunner et al., 2014). DSH found to be a key indicator in suicide as the adolescents scoring high on the measures of DSH were found to be more depressed, impulsive, and anxious. Besides, they also exhibited lower self-esteem and optimism as compared to those scoring low on DSH (O'Connor, & Sheehy, 2000).

The presence of several psycho-social factors has been linked with DSH predicting mild to severe levels of DSH. Besides, socially deviant behaviors such as hyperactivity, conduct problems, dysfunctional relationships with peers, bullying, victimization, and emotional problems have increased the prevalence and ratio of DSH (Winsper, Lereya, Zanarini, & Wolke, 2012). Although a large number of studies explored associations among the aforementioned psychosocial factors and DSH, only a limited number of these have examined predictive link between psychosocial factors and DSH.

Along with the empirical evidence, theoretical guidelines have also been presented to explain the association of numerous psychosocial factors e.g., emotional imbalance (Arseneault, Bowes & Shakoor, 2010), poor social relationships (Hunter, Boyle, & Warden, 2004), and behavioral malfunctioning (Rappaport & Thomas, 2004) with DSH.

The relationship between hyperactivity and DSH in the school settings is unclear except in a few distinctive populations. One specific feature of hyperactivity is impulsivity that has been notably linked with DSH in school-going adolescents of various characteristics. Moreover, hyperactivity can lead to a greater risk of other psychiatric problems such as anti-social behaviors, depressive symptoms, and aggression (Izutsu et al., 2006). In another research, Swanson, Owens and Hinshaw (2014) in a sample of young girls (between 6 and 12 years) found a predictive link between DSH and hyperactivity which was facilitated by impulsivity and other symptoms of externalization.

Similarly, the presence of conduct problems as a major pathological emerging factor has been frequently reported in the school going teens (Rappaport & Thomas, 2004). Further, it prevails across genders as girls' express aggression differently from boys. Moreover, adolescents with conduct disorder and aggressive behaviors posit a challenge in later life. Violent and criminal

behavior as an expression of conduct problem was examined in a larger Swiss sample (Laporte et al., 2017). It was found that the individuals illustrating more DSH are likely to be more prone of conviction of a crime than their counter parts with no significant DSH. Earlier, it was found that those engage more in DSH are likely to demonstrate more interpersonal violence towards others (Sahlin, Moberg, Hirvikoski, & Jokinen, 2015).

Additionally, poor peer interaction is the problem that can take place due to the influence of the social groups on adolescents. Besides, it may vary across genders as peer rejection is much more difficult for boys rather than girls (Hunter et al., 2004). There are clear evidences that DSH occurs in response to the interpersonal stressors and is strengthened by the social factors such as the poor peer relations, yet, there is insufficient empirical evidence that dysfunctional peer relationship may predict DSH (Victor, Hipwell, Stepp, & Scott, 2019). They also found predictive link of DSH with the negative factors of peer relations (i.e., peer victimization, negative perceptions of peers, self-competence, and poor social self-worth).

Behavioral and emotional problems are the main cause of adolescents engaging in DSH activities (Arseneault et al., 2010). Adolescents who engage in DSH behaviors are among those who have reported problems of internalization including anger, emotional distress, and decreased self-esteem. The earlier research concluded that DSH is related to suicide, maladjustments, and health problems which increase the risk of negative developmental trajectories (Laye-Gindhu & Schonert-Reichl, 2005). This could also be explained in the light of the affect-regulation model of self-injury which suggests that significant emotional disturbances and irregularities facilitate the tendencies of self-injury in general and DSH in specific. Further, people engage in DSH and self-injurious behaviors in emotional distress to regulate emotions in the absence of a better control (Klonsky, 2007). Contrary to the affect-regulation model, Linehan's biosocial model claims that emotional dysregulation or emotional dysfunction is a consequence of the interactive effect of biological and environmental factors which leads to DSH and other self-injurious behaviors. In this interactive model, the vulnerability to the intense emotional dysregulation interacts with the environmental factors which weaken the ways to act constructively (Thompson, 1994).

The above mentioned psychosocial factors disturb adolescents' overall growth and may lead them to DSH. After reviewing the previous literature and

theories addressing the under investigated area of research, the current study was designed to examine the role of the psychosocial factors in adolescents' DSH. It was hypothesized that:

Hyperactivity, conduct problems, poor peer interactions, and emotional problems are likely to be significant positive predictors of DSH.

METHOD

Participants

250 adolescents equally distributed across both genders with ages 11–18 years (*M*=13. 98, *SD*= 1.90) were recruited through a simple random sampling strategy from four schools (2 for girls, 2 for boys) of Lahore city. The sample was approached with the help of the school administration and class teachers.

Measures

In the present study, a self-structured demographic questionnaire assessing personal characteristics of the participants i.e., age, gender, education was used.

Strength and Difficulties Questionnaire (SDQ)

SDQ is developed by Goodman (1997) is a short and comprehensive measure of the psychopathology for 3 to 17-year-olds adolescents depending upon the understanding and literacy level. The scale addresses five domains, i.e., emotional symptoms, conduct problems, hyperactivity-inattention, poor peer interactions, and pro-social. All four domains of SDQ demonstrated satisfactory alpha reliabilities in the current research (e.g., emotional problems=.71, conduct problem= .75, hyperactivity= .74 and poor peer interaction =.72). The present study excluded pro-social behavior measure as a predictor of DSH.

Self-Harm Inventory (SHI)

SHI is developed by Sansone, Wiederman, and Sansone (1998), consists of 41 items investigating self-destructive behaviors of adolescents. This self-report questionnaire explores respondents' histories of DSH behaviors. All the items on SHI reflect pathology and the total score of SHI are simply the sum of

"yes" responses. The overall consistency of DSH was .89. For the present study, it is observed =.85.

Statistical Analysis

Descriptive statistics i.e., mean, standard deviations, frequencies, and percentages were calculated and Pearson Product Moment Correlation and Regression analyses were applied to test the proposed assumptions.

Operational Definitions

Deliberate Self-Harm: DSH is measured in terms of purposefully and intentionally hurting oneself (Sansone et al., 1998).

Psychosocial Factors: The present study assessed psychosocial factors as emotional symptoms, conduct problems, hyperactivity inattention, poor peer interactions (Goodman, 1997).

RESULTS

Table 1
Descriptive Characteristics of Sample

Measures	***F***	**%**
Age (years)		
11-13	102	40.8%
14-16	119	47.6%
17-18	29	11.6%
Gender		
Male	125	(50%)
Female	125	(50%)
Class		
6^{th}	48	19.2%
7^{th}	63	25.2%
8^{th}	51	20.4%
9^{th}	49	19.6%
10^{th}	39	15.6%

No. of sibling		
1-3	78	31.2%
4-6	125	50%
7-9	47	18.8%
Father Education		
Primary	7	2.8%
Matric	45	18.0%
Intermediate	41	16.4%
Graduation	54	21.0%
Master	30	12.0%
Not reported cases	73	26.2%
Mother Education		
Primary	26	10.4%
Matric	57	22.8%
Intermediate	27	10.8%
Graduation	19	7.6%
Master	5	2.0%
Not reported	116	46.4%

Table 2

Regression Analyses Predicting Self Harm Behavior from Psychosocial Factor in Adolescents

Predictors		**Dependent Variable**				
		DSH				
		R^2	ΔR^2	*B*	*F*	*P*
Model 1	Conduct Problems	.15	.14	.38	6.61	.000***
Model 2	Conduct Problems	.19	.18	.29	4.63	.000***
	Emotional Symptoms			.23	3.70	.000***
Model 3	Conduct Problems	.19	.18	.26	3.68	.000***
	Emotional Symptoms			.22	3.50	.001**
	Poor peer interactions			.06	.96	.335

Note. ***p<.05, ****p<.001*

DISCUSSION

A frequent exposure to certain crucial factors such as hyperactivity, emotional, and conduct problems, and poor peer interactions increase the risk of DSH in school-going adolescents. Given these empirical observations, the present study reveals the important contributions of these factors in predicting the DSH in adolescents. The findings of this study are discussed in the light of the previous researches and theoretical frameworks.

The hypothesis of the present study was that the psychosocial factors (hyperactivity, emotional problem, conduct problems, and poor peer interactions) are significant predictors of DSH in adolescents. The analysis demonstrated that the conduct problems (model 1) followed by the emotional problems (model 2) have an impact on DSH. This finding is directly supported by Fisher et al. (2012) who narrated that the conduct and emotional problems play significant role in the development of DSH in the school going teens. According to Glassman, Weierich, Hooley, Deliberto, and Nock (2007), adolescents experiencing emotional and conduct problems at an early age (childhood) manifest DSH in adolescence. In the current study, conduct problems emerged as the strongest predictor of DSH in adolescents as compared to the emotional problems which are in line with the past firm recommendation that children's externalized behaviors such as delinquency and aggression may dominate as the possible root cause of DSH in adolescence (Shin, Chung, Lim, Lee, Oh, & Cho, 2009).

Along with the significant results, an insignificant link between hyperactivity and DSH was also observed which adds to the previously reported mixed findings in this context. Moreover, the past studies documented hyperactivity as an indirect facilitator of the several psychiatric conditions and pathological demonstration, for example anti-social behaviors, depressive symptoms, and aggression (Izutsu et al., 2006). The insignificant link of hyperactivity with DSH could be attributed to the diverse definition of this construct. The results showed that the adolescents, who report more hyperactivity, conduct, emotions, and poor peer interactions, manifest more DSH. These results are consistent with a few of the previous studies (Wolke, Woods, Bloomfield & Karstadt, 2000; Allely, 2014) which concluded that within

schools increased behavior problems, peer and conduct problems, and hyperactivity are directly related to DSH. These results may be explained in the light of the social-ecological model which focuses on the need to understand the DSH behavior dynamics and its impact on the individual, family, and the peer groups. Moreover, the structural involvement of DSH is considered as a painful life event for those who are involved in DSH (Swearer, & Hymel, 2015).

Conclusion

The results of the current study are consistent with the findings of the earlier studies. The adolescents experience DSH about emotional problems, conduct problems, and the poor peer interactions in different capacities. Besides, DSH is considered to be some strong psychological problems which may lead to diverse implications on adolescents and may result in other problems such as poor school performance, conduct disorder, and many others. Moreover, DSH is also a major issue with adolescents as it leads to different self-injurious behaviors which, in many adolescents, cause worse scenarios leading them to suicidal behavior or attempt. To minimize these effects of DSH, the steps need to be taken by the parents and teachers at the school level. Teachers at the school level need to introduce the precautionary measures to avoid and prevent DSH and a healthy environment needs to be promoted.

Limitations and Implications

In the present study, a few limitations were observed such as adolescents were assessed at one time which limits the output of the study. The factors which have been involved such as the peer, conduct, and psychosocial problems may vary depending on the time, location, and environment of the participants. If they were observed and assessed at different time intervals, then there could be variations in the results within a given period and time constraints.

Further, to make it more concise and effective, practical approaches, programs and policies need to be implemented at different levels. Parents need to take a step forward and reduce the gap between them and their children. It is necessary so that they can share and express themselves appropriately which may lead to guide adolescents in a positive way and direction. There are many ways to prevent DSH such as community efforts, awareness campaign, teacher training and guidance program, and more importantly the parents' involvement and

guidance. Besides, DSH needs to be catered as early as possible as DSH could be a risk factor in developing borderline personality disorder symptoms later in life.

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