General Article

Pattern of coping in deliberate self harm: A study on Indian adolescents

Amrita Chakraborti[1*], Prasenjit Ray[2], Amit Kumar Bhattacharyya[3], Paramita Ray[4], Asim Kumar Mallick[5]

[1]Resident, [2]RMO cum Clinical Tutor, [3]Associate Professor, [4]Assistant Professor, [5]Professor and Head, Department of Psychiatry, Burdwan Medical College, Kolkata – 700107, West Bengal, INDIA.
Email: dr.amritac@gmail.com

Abstract

Objectives: Intentional self harm with non fatal outcome, known as deliberate self harm (DSH), considered a major risk factor of suicide, is common among adolescents. Purpose of the current study is to observe the coping styles in adolescents attempting DSH. **Methods:** In this cross sectional study, adolescents of 10-19 yrs of age, attempting self harm in recent past were assessed using Coping Checklist (CCL-1). Apart from noting the different socio-demographic and clinical variables, the underlying coping mechanisms were meticulously observed in the study population. **Results:** Among the 51 participants, mean age was 16.25 (±2.02) years. Commonest method of DSH was pesticide poisoning (84.3%). Majority (45.1%) did not have any clinical diagnosis, 27.5% had depression. Mean score of CCL-1 was 12 (±9.47), commonest coping style used was emotional coping, among which denial was commonest. Use of positive distraction and social support seeking were higher in older adolescents (p=0.047) and subjects with higher educational level (p=0.002), respectively. **Conclusion:** Limited repertoire of coping techniques and maladaptive coping, as observed in the current study, offers some understanding of the adolescents who attempt deliberate self harm. The prominence of positive distraction and social support seeking in some select subgroups might be reasons for optimism

Key Word: Adolescents, Coping style, Deliberate self harm.

[*]**Address for Correspondence**
Dr. Amrita Chakraborti, Dept of Psychiatry, Burdwan Medical College, Burdwan, West Bengal, Pin 713104 INDIA.
Email: dr.amritac@gmail.com
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INTRODUCTION

Deliberate Self Harm (DSH) or parasuicide is the terminology used for intentional self harm with non fatal outcome which is extremely common in psychiatric clinical practice [1]. Research shows that DSH is common in adolescents and the incidence of suicide is found to be much higher in the group showing self harm behaviour [2, 3]. Primary etiology of DSH is postulated to be deranged emotional regulation in adolescents under stressful situation [4]. The act of DSH often aims at reducing anxiety, expressing distressing emotions, calling for help, reducing dissociative symptoms, testing interpersonal boundaries and preventing aggression towards others. It is apparent from existing literature that affect regulation, especially emotion regulation and coping, plays important role in precipitating and maintaining self-harm behaviour [5]. 'Coping' refers to thoughts and behaviours, used to manage both internal and external demands of situations that are deemed to be stressful, and thereby tax one's ability to respond [6]. Whereas, 'emotion regulation' refers to any effort made to influence or control the timing, intensity, experience, or expression of emotion related to such a stressful situation [7]. Any response to a negative emotion evoking stimulus can be either 'problem-focused' (directed at defining the problem, generating alternative solutions and action) or 'emotion-focused' (aimed at reducing emotional distress). 'Emotion-focused' response can be either approach-oriented (discussing emotions) or

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avoidant (denying emotions or using substances to escape emotions). A dearth of problem-focused coping and abundance of avoidant emotion regulation strategies is found in borderline personality disorder, a prominent feature of which is self-harm behavior [8, 9]. The estimated incidence of DSH in India is 250 per 100,000 population, in contrast to suicide rate of 10.3 per 100,000 which indicates suicidal deaths are preventable if sufficient knowledge and understanding of this maladaptive behavior guides timely intervention [10]. Among the different states of India, West Bengal reported the highest number of suicidal deaths in 2009, second highest in 2010 and again reported highest in 2011 accounting for 11.5%, 11.9% and 12.2%, respectively, of total such deaths in the country [11, 12, 13]. This alarming situation warrants serious investigation into various aspects of self-harm behavior. Under this back drop, the current research was undertaken to observe the pattern of coping in adolescents attempting deliberate self harm.

MATERIALS AND METHODS

Study setting and Participants

Current study was hospital based, and cross sectional in nature. Adolescents of either sex, aged 10 to 19 years, presenting to the Psychiatry outpatient department (OPD) of the hospital, with history of deliberate self harm within past one month of interview, were included in the study. Whereas, adolescents diagnosed with psychosis or mental retardation, or having serious physical or mental illness making them unable to take part in the interview, were excluded from the study. Subjects and their guardians (as applicable) provided written informed consent after being explained about the study. The study protocol was approved by the Ethics Committee of the concerned medical college and hospital.

Instruments and Assessment

- Socio demographic and clinical data sheet devised for this particular study.
- Coping Checklist-1 (Rao *et al*, 1989) [14] comprises of 70 items describing a broad range of behavioural, emotional and cognitive responses that may be used to handle stress. Items were scored dichotomously as yes/no indicating presence or absence of particular coping behavior. It consists of seven subscales: one for problem focused coping, five for emotion focused coping (denial, distraction positive, distraction negative, religion/faith and acceptance) and one for social support seeking.

Data was collected on four randomly selected weekdays from Psychiatry OPD of the hospital. Adolescents and their guardians attending the OPD on their own, or being referred from other departments (as per existing protocol), fulfilling the inclusion criteria, were approached and explained about the study. Those who provided written informed consent were assessed using Coping Checklist-1 (CCL-1). Information was also collected regarding various socio demographic and clinical aspects.

Statistical analysis

Statistical analysis was done using Statistical Package for Social Sciences (SPSS, 16th version, for Windows). Descriptive statistics was used to analyze socio demographic and clinical parameters. Comparison of coping styles between different sub-groups were done using student t-test, one way ANOVA and chi-square test depending on the type of data. Pearson's correlation was used to assess relationship between different coping styles.

RESULTS

Total number of participants was 54. After excluding one subject for poor understanding of the language and two subjects for leaving during the assessment, finally 51 data (17 males, 34 females) were retained for analysis. Mean age of the participants was 16.25 years, range 12 - 19 years. Out of the total population 34 (66.67%) were female, while 17 (33.33%) male. In both the early adolescent (<14 years) and late adolescent groups (>14 years) females outnumbered males (p=0.05) (Table 1). Among the participants 33 (64.7%) were Hindus, 18 (35.3%) Muslims; 37 (72.5%) were from rural background, 14 (27.5%) from urban; three (5.88%) of the participants had no formal education, six (11.74%) studied till Vth standard ('less educated group'), whereas 42(82.4%) studied beyond Vth standard ('more educated group').

Table 1: Age of the participants

		Male 17 (33.33%)	Female 34 (66.67%)	χ^2 (df)	P
Age (Mean= 16.25 years SD= 2.02)	Early adolescent 11 (21.57%)	1 (9.09%)	10 (90.91%)	3.71 (1)	0.05
	Late adolescent 40 (78.43%)	16 (40%)	24 (60%)		

Among the participants, 43 (84.3%) committed self harm by consuming poison, commonest being organophosphorus; five (9.8%) used overdose of medicines, one participant (1.96%) attempted hanging. History of slashing wrist was found in many of them, though it was not a presenting mode of self harm in the present situation. Only six (11.74%) had family history of self harm, 14 (27.5%) were found to be depressed and fulfilled the criteria for Major depressive disorder, other 14 (27.5%) met criteria for diagnosis other than depression such as Generalised Anxiety Disorder, Substance Abuse and Conversion Disorder, and 23 (45.1%) did not meet criteria for any psychiatric diagnosis.

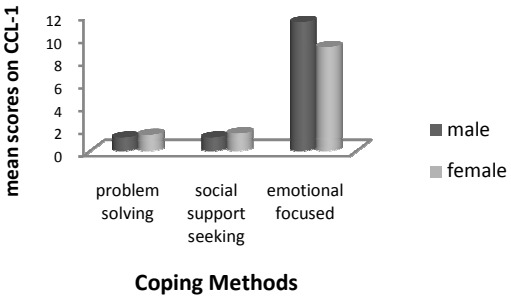

Figure 1: Use of Coping Styles among Participants

Males and females on three broad categories of coping according to CCL-1: problem solving, social support seeking and emotional focussed coping. Both the sexes preferred to use emotional focussed coping, over other two categories.

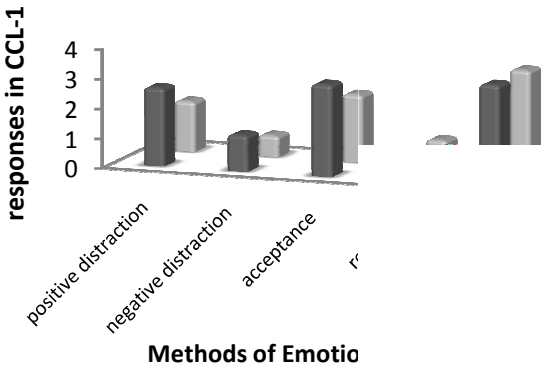

Figure 2: Use of Emotional Coping among Participants

Males and females on five sub types of emotional coping: positive distraction, negative distraction, acceptance, religion, denial. Both the groups used denial most commonly. Mean total score of CCL-1 in our study population: 12 ± 9.47. Most often used items in CCL-1 were item no 61 (keeping feeling to yourself), 32 (avoid being with people, seek complete isolation) and 67 (compare yourself with others and feel that you are worse off). It was observed that emotion focused coping was most commonly used by the study participants, both in males and females (figure 1). Among the various methods of emotion focus coping, denial was most commonly used, followed by acceptance and positive distraction respectively (figure 2). Comparison between different population subgroup revealed significantly higher use of positive distraction and social support seeking by the late adolescent (p=0.047) and more educated groups (p=0.002), respectively. Depressed participants were found to use negative distraction less often in comparison to those with no clinical diagnosis and diagnoses other than depression (Table 2).

Table 2: Comparison of Coping Styles

Variable		Problem Solving M (±SD)	Emotional Coping					Social Support Seeking M (±SD)
			Positive distraction M (±SD)	Negative distraction M (±SD)	Acceptance M (±SD)	Religion M (±SD)	Denial M (±SD)	
Age	Early	0.63(1.80)	1.00(1.18)	0.63(0.92)	1.81(1.32)	0.72(1.00)	3.27(1.95)	1.45(1.12)
	Late	1.52(2.30)	2.30(2.01)	0.97(1.20)	2.77(2.03)	0.97(1.60)	3.51(2.11)	1.40(1.21)
	p	0.24	0.047*	0.39	0.14	0.63	0.72	0.89
Gender	Male	1.18(1.81)	2.65(1.93)	1.24(1.30)	3.12(2.34)	0.88(1.80)	3.47(1.97)	1.18(1.33)
	Female	1.41(2.43)	1.71(1.88)	0.74(1.05)	2.20(1.66)	0.94(1.35)	3.47(2.14)	1.53(1.11)
	p	0.73	0.10	0.15	0.15	0.90	1.00	0.32
Religion	Hindu	1.33(2.09)	2.15(1.94)	0.94(1.22)	2.64(2.12)	0.97(1.59)	3.58(1.87)	1.48(1.18)
	Muslim	1.33(2.52)	1.78(1.96)	0.83(1.04)	2.44(1.58)	0.83(1.34)	3.28(2.42)	1.28(1.23)
	p	1.00	0.52	0.76	0.74	0.76	0.63	0.58
Background	Urban	1.07(2.20)	1.86(1.23)	0.50(0.65)	2.07(1.14)	0.86(1.35)	4.00(1.88)	1.29(1.14)
	Rural	1.43(2.26)	2.08(2.15)	1.05(1.27)	2.76(1.14)	0.95(1.56)	3.27(2.12)	1.46(1.22)
	p	0.61	0.71	0.12	0.26	0.85	0.26	0.64
Education	≤ 5th class	0.22(0.67)	2.00(1.12)	1.00(087)	1.78(0.67)	0.00(0.00)	3.00(1.87)	0.33(0.50)
	> 5th class	1.57(2.37)	1.02(2.08)	0.88(1.21)	2.74(2.07)	1.12(1.58)	3.57(2.11)	1.64(1.16)
	p	0.99	0.97	0.78	0.17	0.40	0.45	0.002*

Family history	Positive	1.83(3.12)	2.67(2.58)	1.33(1.74)	2.17(1.64)	0.67(1.21)	4.33(3.27)	1.67(1.75)
	Negative	1.26(2.11)	1.95(1.85)	0.84(1.07)	2.62(1.85)	0.96(1.54)	3.36(1.87)	1.38(1.11)
	p	0.56	0.39	0.33	0.59	0.66	0.28	0.58
Diagnosis	No diagnosis	1.32(2.19)	2.09(1.76)	0.74(0.96)	2.43(2.00)	0.83(1.27)	3.22(1.95)	1.57(1.04)
	Depression	1.86(2.91)	2.07(2.53)	0.57(1.09)	1.29(2.09)	1.29(2.09)	3.93(3.46)	1.36(1.39)
	Others	1.00(1.41)	1.86(1.66)	1.50(1.34)	0.71(1.14)	0.71(1.14)	3.93(1.87)	1.21(1.25)
	p	0.57	0.94	0.07	0.72	0.56	0.60	0.68

Interaction between different coping methods reveals strong positive correlation between the different adaptive coping methods (problem solving- positive distraction: r = 0.752, problem solving- acceptance: r = 0.756), and poor correlation between adaptive and maladaptive ways (e.g.: denial, negative distraction) of coping (pearson's r <0.5) (Table 3).

Table 3: Correlation between Different Coping Styles

Coping style	Problem solving	Distraction positive	Distraction negative	Acceptance	Religion	Denial	Social support
Problem solving	1						
Distraction positive	.752**	1					
Distraction negative	.465**	.431**	1				
Acceptance	.756**	.784**	.358**	1			
Religion	.634**	.679**	.193	.660**	1		
Denial	.545**	.539**	.440**	.539**	.479**	1	
Social support	.546**	.493**	.293*	.507**	.436**	.459**	1

**p <0.001

DISCUSSION

In our study population females presented more commonly than males with deliberate self harm, and they presented earlier than males as congruent with other studies [10, 15]. Affective illness is the commonest co-morbidity found in the study subjects, while poisoning, particularly with organophosphorus, is the commonest mode of self harm. Both these findings matches that of earlier authors [16, 17]. Preferential use of organophosphorus (pesticides) could be explained by their easy availability as majority of our subjects came from families dependent on agriculture. This is similar to findings in one previous study from this country [18]. The use of CCL-1 in exclusive adolescent population lacks evidence. But from two studies by Rao *et al*.[14] and Narayanan and Rao [19], which had used this scale in Indian population it became apparent that 'Denial' as a coping method was an indicator of psychological distress and item no 61 and 67 were responded commonly by neurotics than normal. These findings appear remarkably similar with the observations of the current study. The lack of responses to items indicating 'Problem solving' coping was in stark contrast with the aforementioned study. This difference may be attributed to low cognitive maturity level and lack of experience in enduring problem in adolescent population of our study population (mean age = 16.25 years) against that of Rao *et al* study [14] in which participants were predominantly adults (mean age= 27.59 years). The study population reflects the demographic profile of the region it was conducted in terms of religion, language and habitat. However, the population represents a part of eastern region of this country speaking one particular language. In a vast country like India where the population consists of multiple cultures and speaks different languages, it is important to conduct a larger study representing a wider population base, to explore the findings of the current study.

CONCLUSION

Adolescents who attempt self harm do that in a desperate attempt to down regulate unpleasant emotional experience. Peak incidence of DSH at 18 years of age, preferential use of denial and other maladaptive emotion focused coping as observed in the current study might give some idea about the vulnerabilities of adolescents attempting DSH. The finding of prominence of social support seeking in more educated group and use of positive distraction in older adolescents might be of some help in reaching out to those in planning further intervention. Failure to ventilate emotion under stressful condition is another obvious characteristic of the study subjects which might be addressed. Finally, attempting DSH in absence of psychiatric diagnosis in majority of the population and limited repertoire of coping methods

need to be explored in future studies in order to plan effective intervention in adolescents with history of DSH.

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