

**GENDER DIFFERENCES IN FACTORS ASSOCIATED WITH
SUICIDAL IDEATION AMONG ADOLESCENTS**

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ABSTRACT

The objectives of study were: to examine the gender differences in suicidal ideation and associated risk factors; and to identify the contributing factors to suicidal ideation for male and female adolescents. The 545 students (208 males and 337 females) with age range of 16 to 19 years, were administered Personal Information Form, Urdu translated versions of Positive and Negative Suicide Ideation Inventory, Aga Khan University Anxiety and Depression Scale, Beck Hopelessness Scale, Rosenberg Self-Esteem Scale, Social Support Questionnaire, and Religious Coping Scale. The t-test indicated gender difference on suicidal ideation and symptoms of anxiety-depression. Binary logistic regression analysis showed that nuclear family system, diagnosis of physical/ mental illness in family members, suicide attempts by friends, symptoms of anxiety-depression, level of satisfaction with social support, and negative religious coping are significantly increasing odd ratios for both gender. Suicide attempt in past, and by family members, and hopelessness emerged as significant contributing factors of suicidal ideation among females. Self-esteem appeared to be factor behind increased odd ratios of suicidal ideation for males. Implications of the study are suggested.

Keywords: Adolescent; Gender; Suicidal ideation, Difference

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INTRODUCTION

Despite emotional and financial costs of suicide, there has been steady rise in the incidence of suicide over the years. Suicidal ideation, a main precursor of suicidal behavior, defined as thoughts about behaviors to end one's life (Nock et al., 2008). The issue of suicidal behavior becomes more serious and crucial in the period of adolescence. Death rates by suicide specifically in adolescence underscore those risk factors that led adolescents towards suicide and calls for mental health professionals to work on preventing strategies based on these risk factors. Rising rate of suicides and suicidal attempts in adolescents placed demands to initiate such researches to investigate the contributing factors behind these life taking steps.

Having history of suicide attempt, a family member and friend who committed suicide increase the likelihood of suicide in adolescents (Bearman, & Moody, 2004; Beautrias, 2003; Gutierrez, Rodriguez, & Garcia, 2001). Co-occurrence of anxiety disorder and depressive disorder cause a greater degree of impairment in everyday life and may put an individual at greater risk for suicide (Dunner, 2001). A large population-based longitudinal study revealed that co-occurrence of anxiety/depressive disorders amplifies the risk of suicidal ideation and suicide attempts (Sareen et al., 2005). A study conducted on youth to examine the correlation of anxiety and suicide in the context of depression and negative affect indicated that anxiety, depression and negative affect predict suicidal ideation in targeted sample (Greene, Chorpita, & Austin, 2009).

From cognitive factors, hopelessness and low level of self-esteem are significant factors that increase the likelihood of suicidal behavior. Hopelessness is not diagnosable but appeared as one of the most strongest and consistent predictor of suicidal ideation and suicide attempt (Pompili et al., 2009; Ran et al., 2005). Bhar, Ghahramanlou-Holloway, Brown and Beck (2008) suggested that individuals' beliefs about their selves and others' predict suicidal ideation beyond the effects of depression and hopelessness. Besides cognitive factors and mental health problems, it is also evidenced that when natural tendency of human's to belong, and support that is offered by close relationships is unmet, suicidal behaviors are more likely to happen (Van Orden et al., 2010). In same vein, every religion provides certain core beliefs that work as shield against negative outcomes of life troubles including suicide. In clinical and non clinical sample of college students, it has been found that religion provide comfort while religious

strain is associated with depression and suicidality (Exline, Yali, & Sanderson, 2000).

Gender difference in suicidal behaviors has been well recognized (Mergl et al., 2015; Van Orden et al., 2010). Gender is considered as compelling factor that cause variations in how an individual have to behave from birth to death. Gender paradox is real phenomenon which is largely determined by cultural expectation in context of suicidal behaviors (Canetto, & Sakinofsky, 1998). Considering it, this study aimed to determine the gender difference in suicidal ideation and associated risk factors and to identify the contributing factors of suicidal ideation for male and female adolescents.

METHOD

Participants

Participants for present study consisted of 545 adolescents with age ranging from 16-19 years with mean age of 17.18 ($\pm SD=.98$). The respondents were selected both from the private and public colleges, situated in different areas of Karachi .

Table 1
Demographic Characteristics of Participant

Variable	N	%
Gender		
Males	208	38.2
Females	337	61.8
Age		
16years	154	28.3
17years	204	37.4
18years	120	22.0
19years	67	12.3
Mean Age & SD for Overall Participants	17.18(.98)	
Mean Age+ SD for Males	17.74(.93)	
Mean Age+ SD for Females	16.84(.84)	
Education		
Intermediate (Part I)	434	79.6
Intermediate (Part II)	111	20.4
Type of Educational Institute		
Government	373	68.4
Private	172	31.6

Measures

Personal Information Form

Personal and education related information was obtained through items focusing on the participant's age, gender, family setup, grades in which participants are studying and type of educational institute i.e. private and government. Personal information form was also included the question related to ever attempted suicide by participant, their friends and also by family members. Questions related to history of physical and mental illness in family members were also asked in personal information form.

Positive and Negative Suicide Ideation Inventory (PANSI)

Positive and Negative Suicide Ideation Inventory (PANSI: Osman, Gutierrez, Kopper, Barrios, & Chiros, 1998) is a 14-item self-reported instrument. It is comprised of two scales; PANSI- Positive ideation (PANSI-PI; 6 items) and PANSI- Negative suicidal ideation (PANSI-NSI; 8 items) to evaluate both protective and negative risk dimensions simultaneously. The PANSI found a reliable and valid inventory to assess suicidal ideation (Osman et al., 2002). Urdu version of PANSI was used in study which found equally reliable and valid (Yasien & Riaz, 2015). Cronbach's alpha of Pakistani version was .72 and .88 for PANSI-PI and PANSI-NSI, respectively. Coefficients of correlation with Aga Khan University Anxiety and Depression Scale (Ali, Jehan, Reza, & Khan, 1998) and Beck Hopelessness Scale (Ayub, 2009) scale were also found to be significant.

Aga Khan University Anxiety and Depression scale (AKUADS)

Aga Khan University Anxiety and Depression Scale (AKUADS) is an indigenous screening instrument to assess anxiety and depression developed by Ali, Jehan, Reza, and Khan (1998) in Urdu. It has been developed from the complaints of 150 anxious and depressed patients. AKUADS has been validated on 53 patients who visited psychiatry clinic. This scale consists of 25 items, 13 items ask about psychological complaints and 12 items assess somatic complaints.

Beck Hopelessness Scale (BHS)

Beck Hopelessness Scale (BHS: Beck, Weissman, Lester, & Trexler, 1974) is developed to assess hopelessness. The BHS is a 20-item scale, 9 are coded false and 11 true, and responses are scored as 0 or 1. Studies provide evidence of reliability and validity of BHS. In this study, Urdu version of BHS (Ayub, 2009) was used. The reliability coefficient for the translated version was .81.

Rosenberg Self-Esteem Scale (RSES)

Rosenberg Self-Esteem Scale (RSES) was developed by Rosenberg (1965) to measure the global self-esteem. It is comprised of 10 items, higher scores indicates high level of self-esteem. The RSES has good Cronbach's alpha ranging between .77 and .88. In this study Urdu version of the RSES (Sardar, 1998) was used. Cronbach alpha of RSES Urdu version is reported as .68 (Fareed & Akhtar, 2013).

Social Support Questionnaire-Short Form (SSQ)

Social Support Questionnaire-Short Form (Sarason, Sarason, Shearin, & Pierce, 1987) was developed to assess number of available people that can support or help in time of need and the degree of satisfaction with support network. Each item consists of two parts to assess availability of support and the degree of satisfaction with support network. Reliability was estimated by conducting study on three separate samples of college students (Sarason, Sarason, Shearin, & Pierce, 1987). Urdu version of SSQ (Fatima, 2009) was used in this study.

Brief Religious Coping Scale (B-RCOPE)

Brief Religious coping is a 14 item scale originally developed by Pargament, Smith, Koenig, and Perez (1998) and later modified by Pargament, Smith, Koenig and Perez (2000). It measures positive religious coping (P-RCOPE) and negative religious coping (RCOPE-N). Respondent rated their response to which extent they use specific methods of religious coping by using four point likert scale, higher scores indicate greater P-RCOPE or RCOPE-N. Original version of B-RCOPE has moderate to high internal consistency by conducting studies on college students and hospital patients (1998). In this study,

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Urdu version of B-RCOPE (Khan & Watson, 2006) was used. They have demonstrated good internal consistency for positive religious coping (.75) and negative religious coping (.60).

Procedure

The researchers obtained approval of data collection from the principals of colleges. Informed consent was signed by respondents. Self-report questionnaires to assess suicidal ideation and other factors were administered in classroom-like settings to control differences due to varied environments. First, the purpose of research was stated by researcher. Participants were also informed about confidentiality and their rights to withdraw at any point. When consent had been obtained, the participants were given the Personal Information Form, Positive and Negative Suicide Ideation Inventory, Aga Khan University Anxiety and Depression Scale, Beck Hopelessness Scale, Rosenberg Self-Esteem Scale, Social Support Questionnaire, and Religious Coping Scale. After completing questionnaire on their desired time period, researchers debriefed them, and answered their questions related to study.

Scoring & Statistical Analysis

After data collection, the answer sheets were scored according to the standard procedures. In order to interpret the data in statistical terminology following statistics were used: Descriptive statistics (mean, frequencies, percentages, standard deviations) were calculated. Binary logistic regressions were also done to identify the associated factors of suicidal ideation. All statistical computation was done through Statistical Package for Social Sciences (SPSS, V-14.0).

RESULTS

Table 2
Mean, Standard Deviation and t-tests

Variables	Mean(SD)	t-test
PANSI-NSI	1.42(.73)	
Males	1.33(.71)	-2.27
Females	1.47(.73)	$p = .002^*$
Aga Khan University Anxiety Depression Scale	19.60(10.74)	
Males	17.21(9.61)	-4.14
Females	21.07(11.15)	$p = .001^*$
Beck Hopelessness Scale	4.80(2.99)	
Males	4.73(2.87)	-.45
Females	4.85(3.08)	$p = .651$
Rosenberg Self-Esteem Scale	20.01(4.70)	
Males	20.15(4.78)	.54
Females	19.93(4.66)	$p = .588$
RCOPE-Positive	22.63(4.34)	
Males	22.55(4.37)	-.34
Females	22.68(4.32)	$p = .731$
RCOPE-Negative	16.37(4.06)	
Males	16.19(3.69)	-.84
Females	16.48(4.28)	$p = .402$
Social Support Questionnaire-Numbers	3.100(2.06)	
Males	3.11(2.21)	.12
Females	3.09(1.95)	$p = .908$
Social Support Questionnaire-Satisfaction	3.388(.69)	
Males	3.33(.73)	-1.324
Females	3.42(.68)	$p = .186$

Note: Positive and Negative Suicide Ideation Inventory, Negative Suicidal Ideation=PANSI; Brief Religious Coping Scale=RCOPE; $*p < .05$

Table 3
Factors Associated with Suicidal Ideation among Males and Females

Variables	Males OR(95%CI)	Females OR(95%CI)	p-values
Family System Nuclear	2.32 (1.06-5.08)	2.19 (1.23-3.91)	.005*
Diagnosis of any disease in Family Member	3.95 (1.77-8.83)	3.05 (1.8-5.24)	.001*
Previous Suicide Attempt	8.55 (1.37-53.34)	25.60 (1.79-113.294)	.001*
Suicide Attempt in Family Members	2.4 (.584-9.75)	6.7 (2.80-15.99)	.001*
Suicide Attempt in Friends	2.54 (.90-7.18)	2.7 (1.34-5.38)	.006*
Aga Khan Anxiety Depression Scale Present	7.7 (3.15-18.77)	6.15 (3.4-11.02)	.001*
Hopelessness			
Mild	.84 (.37-1.93)	2.5 (1.40-4.35)	.001*
Moderate/Severe	3.8 (1.28-11.188)	6.54 (3.08-13.93)	.001*
Self-Esteem	.93 (.86-1.01)	.84 (.79-.89)	.001*
Social Support			
SS-Number of Persons	.9 (.71-1.05)	.90 (.79-1.03)	.105
SS- Satisfaction Level	.74 (.45-1.22)	.6 (.43-.84)	.003*
Religious Coping Negative- RCOPE	1.19 (1.08-1.34)	1.3 (1.18-1.36)	.001*

Note: Odd Ratios=OR; * $p < .05$

DISCUSSION

The objectives of present study were to examine the differences in level of suicidal ideation and associated factors by gender as well as to identify the significant contributing factors of suicidal ideation for male and female adolescents. Female adolescents in this sample found to experience higher level of suicidal ideation and symptoms of anxiety and depression. Previous studies also corroborated that females are at greater risk to have suicidal ideation and to experience internalizing symptoms such as depression and anxiety compared to males (An, Ahn, & Bhang, 2010; Juang, Syed, & Cookston, 2012; McLaughlin, Hilt, & Nolen-Hoeksema, 2007).

The study has also identified that psychosocial factors including nuclear family system, diagnosis of physical or mental illness in family members, suicide attempts by friends, symptoms of anxiety-depression, level of satisfaction with social support, and religious coping are significantly increasing odd ratios for both genders. These findings are consistent with previous studies that highlighted the role of familial variables (Randall, Doku, & Peltzer, 2014), friends (Prinstein, Boergers, Spirito, Little, & Grapentine, 2000), co-occurrence of anxiety and depression (Dunner, 2001) and religion (Trevino, Balboni, Zollfrank, Balboni, & Prigerson, 2014) in suicidal ideation.

Analysis of study indicated that previous suicide attempts by respondents increase the likelihood of suicidal ideation in females more robustly compared to males. American Association of Suicidology (2006) also indicated that females are more likely to engage in non-lethal suicide attempts relatively to males. More, suicide attempt by family members increase the odds of suicidal ideation substantially among females relatively to males. It can be inferred that females spend more time at home and embedded with relative ties than males. Bird and Harris (1990) reported that female adolescents felt more stress from their family role than did male adolescents. More social ties outside the home may provide opportunities to emotional expressions might ascertain resistance against suicidal ideation. Regarding psychological factors, hopelessness is significantly increasing the odd ratios for females while self-esteem is contributing factor of suicidal ideation in males. Mpiana, Marincowitz, Ragavan and Malete (2004) also identified feelings of worthlessness led males to think about suicide as way out to rest in peace.

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Current study has certain limitation. Suicidal ideation present in past two weeks was assessed which is not equivalent to life-time suicidal ideation. Study was conducted on 16 to 19 years old student which limit its generalizability to other age group and clinical population. Self-report measures were used in study that may not reveal actual information due to social desirability and considering suicidal behavior as stigma.

Conclusion

In conclusion, results of this study suggest that females are at a higher risk of being suicidal compared to males. Previous suicidal attempt, suicide attempt by family members, hopelessness are the most important contributing factor of thinking suicide as way out for females. For males, it is important to identify the level of self-esteem when assessing and developing suicide prevention program

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