CHAPTER V
Many suicide prevention programs aim to identify early signs of depression. They encourage depression screening and early intervention. Although depression is clearly an important part of the picture (Zhang, Lester, Zhao, & Zhou, 2013; Husky et al., 2012; Sokero, et al., 2005; Brown, Beck, Steer, & Grisham, 2000; Kessler, Borges, & Walters, 1999; Petronis, Samuels, Moscicki, & Anthony, 1990), suicide ideation among adolescents may have a unique etiology because of developmental transitions that occur in adolescence and young adulthood, including changes in family relationships, peer contexts, and increased opportunities for alcohol and drug use. Moreover, studies suggest that suicidal behaviour run in families independent of psychiatric diagnosis, such as mood disorders (Runeson & Asberg, 2003; Brent et al., 2002). Therefore, prevention programs that focus solely on depression might be missing other important targets for intervention. In the context of these assertions, studies are needed that identify risk and protective factors underlying suicide ideation among adolescents.

The focus of the present study was to examine the role of depression, hopelessness, anxiety, affective dysregulation, cognitive rigidity, and perceived family environment in suicide ideation. This was done to explore the potent predictors of suicide ideation which is an important precursor to later attempted and completed suicide (Gili-Planas, Roca-Bennasar, Ferrer-Perez, & Bernardo-Arroyo, 2001; Lewinsohn, Rohde, & Seeley, 1996; Reinhertz et al., 1995). It is of major public health significance involving high economic and social costs.

The results of the study have been discussed in the context of proposed hypotheses. The obtained results support hypothesis 1 which stated that the distributions of scores on different variables such as suicide ideation, depression, hopelessness, anxiety, affective dysregulation, cognitive rigidity, and family environment are more or less normally distributed and follow a smooth curve.

Hypothesis 2 of the present study expected gender differences on different variables. The t-test revealed gender differences only on affective dysregulation and cognitive rigidity. Thus, hypothesis 2 was partially supported since gender differences were not significant on other variables. The obtained evidence clearly indicates that
more girls than boys in mid-adolescence show more affective dysregulation and cognitive rigidity.

These results concerning gender differences on affective dysregulation and cognitive rigidity could be explained in the context of such observations that affectively dysregulated individuals experience a confluence of negative emotions referring to fear, sadness and anger. It appears to be more true for female adolescents than male adolescents in mid-adolescence because of their inability to regulate emotions appropriately and susceptibility to irritability and negative affect underlying depression (Tarter, Kirisci, Reynolds, & Mezzich, 2004; Mezzich et al., 1997). The successful accomplishment of the developmental tasks of childhood and adolescents require affect regulation, and the ability to regulate their emotions as well as their behaviour into physical and mental health. The failure to regulate emotions (dysregulation) is involved in more than half of the DSM-IV Axis disorders and in the entire Axis II disorders and it has been called the hallmark of psychopathology.

Higher degree of affective dysregulation among female adolescents could be due to pronounced developmental changes regarding social relationships, affective experiences, and prevalence of several forms of psychopathology especially depressive tendencies. Affective dysregulation is the core aspect of most of the psychopathology and that close relationships provide a context of affective development and regulation. Morris et al. (2007) pointed out that “parent-child relationship may undergird as well as undermine the development of adaptive affect regulation.” Possibly, in this context, female adolescents seem to be at a disadvantage. An important next step in this line of research will be to illustrate the possible reasons why females are affective dysregulated who are especially vulnerable to suicidality. One possibility is that these adolescent females might have less participation in social and family rituals or may not have sufficient freedom to express their emotions in society. This might result in internalizing the symptoms of distress which may lead to suicidal thinking. Whereas in the case of boys, they may be likely to become insensitive and socially withdrawn due to inappropriate parenting-style, miscommunications with parents, conflicts and suppression of need and affection inducing disharmony among family members and male adolescents become less organized in their family. Moreover, as they are facing lack of religious and moral values, they experience a state of suicidal cognition as another way to cope with their problems. Further in the present scenario, it could be inferred that as a consequence of
For testing hypotheses 3 to 5, step wise regression analyses were done separately for male and female adolescents to understand the association between the criterion variable (suicide ideation) and predictor variables viz. depression, hopelessness, anxiety, affective dysregulation, cognitive rigidity and ten subscales of family environment referring to cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, organization and control.

The results of the present study revealed that depression is correlated positively and moral-religious emphasis correlated negatively with suicide ideation for both male and female adolescents. The association suggests that male and female adolescents high on depression and low on moral-religious emphasis in the family environment tend to be high on suicide ideation. The results also revealed that affective dysregulation correlated positively and organization correlated negatively with suicide ideation, separately for female and male adolescents, respectively. Female adolescents who were high on affective dysregulation also had high suicidal ideation and male adolescents who were low on organization dimension of family environment scale scored high on suicide ideation. It points to the nature of such variables as potent predictors for suicide ideation in mid-adolescence.

Apart from the significant contributions of depression, affective dysregulation, moral-religious emphasis and organization in suicide ideation, the remaining variables viz. hopelessness, anxiety, cognitive rigidity and eight subscales of family environment, namely cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, and control have shown non-significant association with suicide ideation for both male and female adolescents in mid-adolescence.

The obtained positive association between depression and suicidality is corroborated by various earlier researches. Depression has consistently been considered a risk factor in suicide, along with substance abuse, adverse life events, family history, a history of sexual abuse, troubled relationships, and difficulties with sexual identity (Agerbo, Nordentoft, & Mortensen, 2002; Cooper, Appleby, & Amos, 2002; Garlow, 2002; Nemeroff, Comptom, & Berger, 2001). A study by Garlow, Rosenberg and Moore (2008) of suicidal ideation and depression among college
students found that 11% of students endorsed current (past 4 weeks) suicidal ideation. Mackenzie et al. (2011) studied students in campus health care program and reported that depression and suicide are of increasing concern among students. Moreover, they found that suicidal thoughts reflect the severity of hopelessness and despair that directly affects academic performance, relationships with peers, and risk-taking behavior.

The link between psychiatric disorders such as depressive tendencies and suicidal ideation could be explained from different perspectives referring to cognition and affect. A plausible explanation by Williams’ model (2005) derives its impetus from the common view of depression in general population as “a cry for help” which is based on the recognition of the defective cognitive, somatic, and behavioural aspects that may be present in the depressive. The cry of pain model argues that suicidal behaviour is reactive, a response to stressful situation that has three components: defeat, no escape, and no rescue. “A cry for help”, thus, is an important parameter of suicidality. It seems to be an important denominator which tantamount to the association between depression and suicide ideation (Williams, Crane, Barnhofer, & Duggan, 2005, pp 71-90).

Likewise, a combination of three factors is needed for depressive tendencies: (1) stresses (especially defeat/rejection), (2) inability to see a way of escaping, (3) perceived rescue primarily by means of social support as unlikely.

Williams and Pollock (2001) argued that when all of these factors are present, a biologically mediated ‘helplessness script’ is activated. It is proposed that the psychological mechanisms that contribute to this “arrested flight” reaction involve the three parameters, namely attention, memory, and judgment. Suicidal individuals seem to be hypersensitive to stimuli signalling defeat and rejection (attention bias), an important feature of depression-prone individual. Further, depressive and suicidal individuals have been found to have difficulties in retrieving specific memories, which have been suggested to impair their problem-solving capacity. One needs to have access to the database made up of past experiences for hints on how to deal with a new situation. These problem solving difficulties in depression-prone individual are likely to contribute to a feeling of being trapped in face of difficulties, leading thereby to think of committing suicide as a way out. Further, a depressive individual tends to have a feeling that a rescue primarily by means of social support is unlikely. It is caused by difficulties to think of positive things that might happen in the future.
Rather, they anticipate an excess of negative events leading to an arrested flight reaction.

Another plausible explanation derives its impetus from another model (Clark, Watson, & Mineka, 1994) which conceptualizes depression along three broad dimensions: negative affect (distress and worry), positive affect (happiness and contentment), and somatic arousal (sweaty palms and fast heart rate, etc). According to this model, many of the symptoms of the depression seem closely related to high negative affect and a lack of positive affect: a loss of interest in pleasurable activities and even symptoms like lack of appetite and lack of interest in sex. Further, studies of responses to positive pictures and films suggests that depressives show fewer positive facial expressions, report less pleasant emotion, show less motivation and demonstrate less psychophysiological activity in response to positive stimuli than do people without depression (Shestyuk, Deldin, Brand, & Deveney, 2005; Sloan, Strauss, &Wisner, 2001). Research, then, does support the idea that episodes of depressive disorders are characterized by high negative affect (distress and worry) and low positive affect (happiness and contentment). People who tend to experience high negative affect involving less pleasant emotions, and less motivation and less psychophysiological activity in response to positive stimuli, and low positive affect (happiness and contentment) are at elevated risk for developing suicide ideation. More, precisely speaking, there is good evidence that people who tend to experience high negative affect are at elevated risk for developing suicide ideation tendencies.

Beck’s (1967) cognitive theory of depression could also be a useful explanation for the association between depression and suicide ideation. According to Beck, people develop depression because their thinking is negative. That is, Beck proposed that depression is associated with the negative triad: negative views of the self, the world, and the future. The world, part of the negative triad refers to the person’s own corner of the world- the situation he/she faces. For example the person might think “I cannot possibly cope with all these demands and responsibilities” as opposed to worrying about problems in the broader world outside of their life. According to this model, in childhood, people with depression acquire negative schemata through experiences such as a loss of a parent, the social rejection of peers, or a depressive attitude of a parent. Schemata are different from conscious thoughts. They are an underlying set of beliefs that operate outside of a person’s awareness to shape in the way a person makes sense of his/her awareness. Once activated, negative
schemata are believed to cause cognitive biases or tendencies to process information in certain negative ways (Kendall & Ingram, 1989).

Beck (1967) suggested that people with depression might be overly attentive to negative feedback about themselves and more likely to remember such negative information than other people are. Likewise, they might fail to notice or to remember positive feedback about themselves. People with an underlying ineptness schema might readily notice signs that they are inept and remember feedback that they are inept. Signs that they are competent, though, are not noted or remembered. Overall, people who are depressed make certain cognitive errors to arrive at biased conclusions. Thus, the tendencies to process information in certain negative ways (negative triad) have a common denominator with suicide which has also a negative connotation. Depression and suicide are associated with a tendency to pay more attention to negative stimuli than to positive stimuli (Gotlib & Krasnoperova, 1998).

According to Freud (1917) depression can be described as anger turned against oneself. However, contrary to the idea that depression is a result of anger turned inwards, people with depression express more aggression and anger than do people without depression (Biglan, Hops, & Sherman, 1988).

**Family Environment and Suicide Ideation**

Family plays a key role in healthy development of an individual’s personality. The presence of a positive family environment is a prerequisite for the healthy growth and development of the members from a given family unit. In addition, a positive family environment ensures appropriate fulfillment to the needs and demands of the family members. The negative environment of the family becomes grossly unsupportive for all members. In the long run, these families with negative environment tend to become markedly pathological. In general, pathological families have an unsupportive and unhealthy family environment which works as a detrimental factor in the family’s global functioning (Brinson, 1992). Thus, another potentially contributory factor for suicidal behaviour among adolescents relates to family environment.

Research has shown that when family processes are disturbed, there is increased risk of adolescent suicidal ideation and suicide attempts (Pfeffer, 1989). On a family system level, suicidal adolescents perceive more problems than did nonsuicidal adolescents on several dimensions of family environment. The suicidal
adolescents might perceive their family as having trouble adapting to change, poor at problem-solving, and prone to crisis. They described their families as having insufficient, ineffective, or confusing communication. They described families with power struggle and ineffective method of control. Family members were perceived as emotionally disengaged or family relationships were characterized as enmeshed. Thus, based on current and previous findings, an increased risk of adolescent suicidal behaviour is related to perceived family environment that does not serve to resolve problems and is characterized by poor communication, power struggle, and a lack of emotional attachment (King et al., 1992; Miller, King, Shain, & Naylor, 1992).

Further, they also noted that in families with alcohol addicted individuals, less emphasis were given to independence, cultural and recreational activities and organizational tasks. There is also evidence of an association between a negative family environment and a higher suicide risk among adolescents with bipolar disorder (Goldstein et al., 2009).

It is also well established that youth suicide risk is higher in less stable, abusive or violent household environment (Hetrick, McKenzie, Cox, Simmons, & Merry, 2012; Scherrer et al., 2012; Nrugham, Herrestad, & Mehlum, 2010; Bursztein & Apter, 2008; King & Merchant, 2008). Such family environments contribute to stress, anger and fear, feelings of self blame and lowered self-worth (Delfebbro, Winefield, & Winefield, 2013). Thus, the negative family environment may represent a critical early contribution to the risk for psychiatric illness.

In the context of the importance of positive family environment for the healthy growth and development, the present study used a popular and extensively used tool, i.e. family environment scale (Moos & Moos, 1986) to assess the family environment. The results of the regression analysis used for explaining variance in suicide ideation clearly revealed the negative association of moral-religious emphasis (subscale of personal growth dimension) in the family environment with suicide ideation for both male and female adolescents, and negative association of organization (subscale of system maintenance dimension) with suicide ideation only for male adolescents. Interestingly, the other dimensions of family environment viz. cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, and control emerged to be non-significant in the context of their association with suicide ideation, an important parameter of suicidal behaviour. The findings concerning family
environment correlates of suicide ideation in male and female adolescents (mid-adolescence) lend partial support to Hypothesis 5 which relates to the relationship of family environment dimensions and suicide ideation.

Results have shown the relevance of moral-religious emphasis in the family environment and suicide ideation. It can be seen that the results of the present study depict negative association between moral-religious emphasis in family environment and suicide ideation for both male and female adolescents. The negative association implies that adolescents belonging to family environment with higher moral-religious emphasis tend to be low on suicide ideation. It conveys an optimistic trend from the viewpoint of religion-mental health connection. Some significant observations are seemed to have positive impact with respect to the association of moral-religious environment in family and mental health. Religious involvement in the family, broadly defined, exhibits a salutary and primary-preventive function in relation to psychological distress and outcomes related to mental health and well-being. The weight of evidence suggests that moral and religious family environment is a generally protective factor for mental illness (Levin, 2010). Protective effect of religiousness seems to be especially salient for both male and female adolescents.

Commitment to a religious belief system may benefit mental health by promoting healthy behaviours conducive to wellness (e.g. avoidance of tobacco, alcohol, drugs, and anti-social behaviour). Fellowship with likeminded congregants embeds one in formal or informal social-religious networks in the family that facilitate receipt of tangible and emotional support. In an atmosphere, governed by moral-religious emphasis in the family environment, private or group prayer or worship may produce salutary emotions: gratitude, humility, grace, forgiveness and love with preventive and therapeutic benefit. Faith or religious certainty may engender positive expectations that instill hope and optimism capable of preventing and ameliorating distress. There seems to be a tendency of religious belief to “give rise to psychodynamics engendering greater peacefulness, self-confidence, and a sense of purpose. These positive effects may serve as sorts of psychic beta blockers or emotional placebos. They help in maintaining good mental health and reducing the probability of psychopathology, including suicidal tendencies.

In line with the above discussion, James in his book *The Varieties of Religious Experiences* (James, 1958), identified two types of religious expression, the “religion of the sick soul” and “the religion of the healthy-minded soul”. The former is a
product of a damaged psyche, expressed as “positive and active anguish, a sort of psychical neuralgia wholly unknown to healthy-life” (p.126). The latter is grounded in “the tendency which looks on all things and sees that they are good” (p.83). Healthy-minded religion is the faith of the literally healthy-minded, whose psyches are implicitly hopeful, optimistic, kind and prone to happiness. As it is concerned with the relevance of present study, it could be understood that suicidal cognition is a product of damaged psyche and awareness in the presence of religious directions in the family can be a protective factor for preventive suicidal thoughts.

After half a century of scholarly disinterest (Beit-Hallahmi, 1989), things began to change in the 1960’s (Allport, 1979). This was due to advent of psychology’s third and fourth schools that encouraged critical examination of issues related to the human spirit (cf. Levin, 2010). Concurrently, the putative mental health consequences of religious involvement became a topic for empirical study, especially within community and geriatric psychiatry and social, developmental, and health psychology.

In the recent study among adolescents, it is found that students consider suicide as constituting a breach of divine morality as influenced by their religious belief and their moral values do not allow taking their lives themselves (Osafo, Knizek, Akotia, & Hjelmeland, 2011). Moral and religious values provide a framework to the adolescent’s psyche to do certain actions in such emotional and dynamic situations in their lives. Previous studies also have reported religion influencing the negative attitude towards suicide (Hjelmeland et al., 2008; Eshun, 2003).

Keeping in view the above assertions, it could be inferred that the idea of a “religion-health connection” has gained traction among clinicians since long. The weight of evidence, on average and across studies, suggests that religion-health connection is not clear. The connection has been reported to fall at the two extremes of the continuum.

Empirical evidence supporting a protective effect of religious involvement in family environment for mental illness and psychological distress supports the obtained negative association between moral-religious family environment and suicide ideation among males and females in mid-adolescence.
Further, organization in the family environment was found to be negatively associated with suicide ideation for male adolescents. Organization which is sub-dimension of system maintenance dimension in the Moos Family Environment Scale refers to clear structure in planning family activities and responsibilities. Thus, male adolescents with higher perception of system maintenance in the family environment tend to be low on scores on suicide ideation. Possibly, clear structure in planning family activities and responsibilities may lead to lower conflict and better opportunities for expression, leading thereby to good mental health. Thus, weight of evidence suggests that perception of better organization in the family environment is a generally protective factor for male adolescents (Ogburn et al., 2010).

**Affective Dysregulation and Suicide Ideation**

Affective dysregulation is another potential contributory predictor for suicide ideation (Plattner et al., 2007). Affective dysregulation was assessed by using the subscale from the Dysregulation Inventory (DI). The DI measures several temperament characteristics associated with increased risk for developing substance use disorders (Mezzich, Tarter, Giancola, & Kirisci, 2001).

The present study stated the hypothesis that affective dysregulation indicative of high emotional reactivity and low control over one’s emotional state would be a risk factor of suicide ideation for both males and females in mid-adolescence. The regression coefficients of the variable of interest (affective dysregulation) emerged to be non-significant for male adolescents, suggesting thereby non-support of the proposed hypothesis linking affective dysregulation and suicide ideation in male adolescents. In general, it appears that items relating to an inability to control one’s anger or depressed mood are observed much more frequently in females with suicide ideation.

Indeed, a recent study reported that inability to regulate emotion reactivity was associated with high risk of a recent suicide attempt in adolescents (Dour, Cha, & Nock, 2011). Another study found that a perceived inability to effective emotion regulation strategies was associated with concurrent suicidal cognitions, independently the symptoms of depression, with hopelessness statistically mediating this relation (Rajappa, Gallagher, & Miranda, 2012)
Sex difference in the predictive power of affective dysregulation in favour of female adolescents may be explained by the fact that affectively dysregulated individuals experience a confluence of negative emotions (i.e. fear, sadness and anger) in a way that causes them to react in an overly aggressive manner. This may be truer for female adolescents than male adolescents because of inability to regulate emotions appropriately and being susceptible to irritability and negative affect (distress and worry). The reason of the affective dysregulation might be failure of coping mechanisms which are applied to cope with internalized symptoms of stress, worries, lack of support and demanding situations in family. Moreover, lack of self-acceptance, suppressed anger and dissatisfaction with life also produces affective dysregulation. It may be a reason for females to be vulnerable to suicidality. It is reported in a recent research that female adolescents are more prone to have suicide ideation due to inability to effectively manage their emotions with special reference to national survey (Khurana & Romer, 2012).

Interestingly, depression was also found a significant predictor of suicide ideation for both female and male adolescents. Whereas suicidality is commonly associated with internalizing symptoms such as depression, affective dysregulation is usually marked by externalizing symptoms such as aggression and anger. Therefore the findings that both high depressive symptoms and dysregulation are both associated with suicide ideation among female adolescents may reflect heterogeneity in the mechanisms that lead to suicide ideation in female adolescents at the stage of mid-adolescence.

The few prior studies also suggest an association between affective dysregulation and suicide risk (Tarter, Kirisci, Reynolds, & Mezzich, 2004; Mezzich et al., 1997). Affective dysregulation has also been linked to a number of externalizing behaviours in youth, such as drug and alcohol abuse (Tarter et al., 2004), delinquency (Plattner et al., 2007), and risky sexual behaviours and violence (Mezzich et al., 1997). According to Plattner et al. (2007), in stressful situations, affectively dysregulated individuals experience a confluence of negative emotions (i.e. fear, sadness and anger) in a way that causes them to react in an overly aggressive manner, including higher intensity of suicide ideation.
CONCLUSION

To conclude, suicidal thoughts and behaviour during adolescence present unique challenges to both researchers and clinicians. The transition between early adolescence and late adolescence is typically characterized by high levels of stress associated with adjusting to a new social environment and increased academic demands.

This study has identified several potential targets for suicide prevention initiatives directed at adolescents. Many of the predictors of suicide ideation identified here, especially depression is a positive correlate, whereas organization and moral-religious emphasis as part of family environment have emerged as negative correlates for male adolescents. Further, depression and affective dysregulation correlated positively and moral-religious emphasis correlated negatively with suicide ideation for female adolescents. This trend represents possible areas for intervention. Additional research is needed to determine whether these risk factors can be effectively modified to reduce suicide ideation. The present findings draw attention to the complex interrelationships of depression, affective dysregulation and two dimensions of family environment (organization, moral-religious emphasis) with suicide ideation, and highlight a number of possible intervention targets for the earliest stage of suicidal behaviour i.e. suicide ideation.

If replicated, these findings of the present investigation may point to promising new strategies for suicide prevention. Rather than focusing primarily on mid-adolescence, campus suicide prevention initiatives could include programs aimed at enhancing student’s self-confidence, increasing student’s awareness about the possible signs of suicide ideations, and educating parents about effective ways of supporting students who might be at risk for suicidal behaviour. Prior research indicates that college students are largely unaware of campus services (if any) for suicide prevention and are interested in both didactic information about suicide and individual treatment.
CHAPTER VI