



## A Study on Depression, Affective Dysregulation and Family Environment in Relation to Suicide Ideation Among Adolescents

### KEYWORDS

Suicide ideation, depression, affective dysregulation, family environment, adolescents

**Ibadat Khan**

Research Scholar, Dept. of Psychology, Panjab University, Chandigarh

**Nayanika Singh**

Research Scholar, Dept. of Psychology, Punjabi University, Patiala

**ABSTRACT** *Suicidal ideation generally precedes more serious suicidal behavior such as attempted and completed suicide. Suicidal behaviors represent a spectrum, ranging from suicidal ideation, to suicidal plan, to suicide attempt, to completed suicide. The presents study is investigating the relationship of depression, affective dysregulation and family environment with suicide ideation. The sample was consisted of 300 adolescents (150 male and 150 female) perusing secondary education from government schools in Chandigarh. Zung Self-Rating Depression Inventory, Affective Dysregulation Inventory (DI-A), Family Environment Scale and Beck Suicide Ideation Scale was administered to assess depression, affective dysregulation and different dimensions of family environment and suicide ideation among the participants. Results of regression analysis showing organization, moral-religious emphasis and depression are significant predictor of suicide ideation among the male adolescents whereas depression, affective dysregulation and moral-religious emphasis are significantly predicting suicide ideation among female adolescents. Surprisingly, moral-religious emphasis is the common predictor of suicide ideation for male adolescents as well as female adolescents. The presents also discussed with some helping strategies to control suicide ideation.*

### INTRODUCTION

Suicidal behaviour is complex. It is an irrational desire to die. Suicide effects are tragic and felt long after the individual has taken his own life. A person who dies by suicide leaves behind a tangled confusion of family members and friend who try to make sense of a senseless and a purposeless act. It is usually second or third cause of death among teenagers, and remains one of the top ten leading causes of death well into middle age. The rationale behind suicide, which is defined as intentional taking of one's own life, can be as simple or as complex as life itself. The primary motivation to suicide is depression which is characterized by mood disturbance, feelings of sadness, despair and discouragement, resulting from personal loss and tragedy.

In India, several risk factors for suicidal behaviour in adolescents have been reported which have not been reported in Western studies. Studies reported failure in examination, anticipated punishment, social conflict, neuro-psychiatric condition, physical illness, family dysfunction, and impending loss of love object as risk factors (Kar, Pursty, Mohapatra et al., 2002). The mortality risk for suicide associated with depression is many times the general population risk (Harris & Barraclough, 1998). More than half of all people who die by suicide meet criteria for current depressive disorder; (Cavanagh & Carson et al., 2003) although the association seems weaker in Asia. About 4% of depressed individuals die by suicide, but the risk is greatest in males and in those who have needed psychiatric hospitalization, especially for suicidality (Coryell & Young, 2005). Clinical predictors of suicide in people with major depressive disorder also include a history of attempted suicide, high levels of hopelessness, and high ratings of suicidal tendencies (Coryell & Young, 2005). Suicide in major depressive disorder is most likely to occur during the first episode, and this seems to be related to alcohol misuse and impulsive-aggressive personality traits. The effect of impulsive-aggressive traits is present in child and adolescent suicide and decreases with age (McGirr, Renaud, & Bureau et al., 2008).

Depression and suicidality are deeply intertwined. Suicidality is a diagnostic symptom for major depression, and depression is the most common mental disorder leading to suicide, although substance abuse and schizophrenia are also major

contributors (WHO, 2001). Major depression affects 3 to 5 percent of children and adolescents. Depression negatively impacts growth and development, school performance, and peer or family relationships and may lead to suicide. A successful theory of depression must explain suicidality, and the bargaining model, building on the work of Giddens (1964), Brown (1986), and Watson and Andrews (2002), does. Suicide permanently removes oneself as a source of valuable benefits for the group. Suicide threats are therefore threats to impose substantial costs on group members and can be viewed as a means to signal cheaply and efficiently to a large social group that it may suffer such costs if assistance or change is not forthcoming.

Another potential contributory factor for suicide ideation among adolescents is affective dysregulation (Plattner, Karnik, Jo et al., 2007). Affective dysregulation is marked by an inability to regulate emotions appropriately and susceptibility to irritability and negative affect (Mezzich, Tarter, Giancola et al., 2001). This construct has been linked to a number of externalizing behaviors in youth, such as drug and alcohol abuse (Tarter, Kirisci, Habeych et al., 2004), delinquency (Plattner et al., 2007), risky sexual behaviors, and violence (Mezzich, Giancola, Tarter 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. A few prior studies suggest an association between affective dysregulation and suicide risk (Mezzich et al., 1997; Tarter, Kirisci, Reynolds et al., 2004). However, most prior research on affective dysregulation has focused on adolescents.

The perception of family environment has also significant predictor of suicide ideation among adolescents, family disorganization, conflict, and lack of control, cohesion and expressiveness have been observed as common factors in the family backgrounds of children develop suicidal behavior (Asarnow, 1992; Asarnow et al., 1987; Campbell, et al., 1993). Conflict in parent-child relationships and a number of other family-level constructs are associated with suicide ideation (Reinherz, et al. 1995). It is reported that problematic family functioning during childhood predicted suicide ideation in young adulthood. Although it is clear that many aspects of

parent-child relations including conflict play a role in suicide risk, the possible interaction of conflict with parents and depression in college students is poorly understood. The family is generally perceived by society as the unit responsible for providing children with an environment that serves their physical and emotional needs (Goldstein et al., 1973). For the development of personality of individual, multiple factors are responsible, family environment is one of them.

Different family processes have significant relationships with adolescent suicidal ideation. According to different family models, dimensions of family functioning including cohesion, adaptability, and communication are theoretically linked to adolescent psychological wellbeing (Epstein et al., 1993; Beavers et al., 1990; Olson et al., 1989). Some studies show that adolescent suicidal ideation is related to family dysfunction, family discord, poor family environment, family rigidity, family conflicts, and poor adaptability (Spirito et al., 2003). Studies also show that low levels of family cohesion and support as well as high levels of parent-adolescent conflict are positively related to depression and suicidal ideation (Lee et al., 2006; Wong et al., 2002). However, a study by Mitchell and Rosenthal (1992) yielded inconsistent results. They evaluated families of both suicidal and non-suicidal psychiatric inpatient adolescents and found no significant group differences in terms of the mean family rigidity score. Moreover, studies have shown that family structural and growth factors were more important for boys than for girls (Mandara & Murray, 2000), while discrepancies in son-mother perceptions of family functioning were related to lower levels of sons' self-competence (Ohannessian et al., 2000). Keeping this in view, the present study was designed to investigate the relationship of depression, affective dysregulation and family environment with suicide ideation among adolescents and find out the possible significant predictors of suicide ideation among the respective variables.

## OBJECTIVES

- To study the relationship between depression and suicide ideation.
- To study the relationship between affective dysregulation and suicide ideation.
- To study the relationship between different dimensions of family environment and suicide ideation.

## HYPOTHESES

- There will be positive relationship between depression and suicide ideation.
- There will be positive relationship between affective dysregulation and suicide ideation.
- Suicide ideation will be differentially correlate with different dimensions of family environment.

## METHODOLOGY

### Sample

The sample consisted of 400 adolescents including 200 male and 200 female adolescents with age range of 15-17, the later adolescents, from different government schools of Chandigarh were selected randomly. Participation was voluntary and informed consent. There were no clinical history and substance abuse. Ethical consideration was under observation during the data collection.

### Tools

**Zung Self-Rating Depression Inventory (Zung, 1965):** Zung Self-Rating Depression Scale was selected because it intended to quantify depressive symptoms. It is appropriate for use in studies of depressive symptomatology. For each item, respondent indicate the frequency with which they have experienced a specific feature during the preceding month by selecting one of the four alternatives (i.e. a little, some, good part, or most of the time), with numerical value ranging from 1 to 4 for positive statements. The maximum possible ZSRS score is 80, while a score of 20 indicates the complete ab-

sence of depressive symptoms. Higher the score the greater is the symptomatology. The scale seems to be well balanced with equal numbers of positive and negative statements as out of the 20 items used ten are worded symptomatologically positive and other ten are worded symptomatologically negative. The psychometric characteristics of the scale are well established.

**Affective Dysregulation Inventory (Mezzich, Tarter, Giancola, & Kirisci, 2001):** Affective dysregulation is 28-items subscale of Dysregulation Inventory (DI) developed by Mezzich, Tarter, Giancola, & Kirisci (2001). It measures the emotionally dysregulated behaviour of individual Respondents are asked to indicate how often each statement is true in describing their behavior. Responses are scored from 0 for "never true" to 3 for "always true." Higher scores on the affective dysregulation subscale (DI-A) indicate high emotional reactivity and low control over one's emotional state. Items were summed for the 28 items comprising the affective dysregulation subscale (Cronbach's  $\alpha=.884$ ).

**Family Environment Scale (Moos & Moss, 1994):** Family Environment Scale is a 90 true false items scale including 10 subscales referring to cohesion, expressiveness, conflict, independence, achievement orientation, intellectual-cultural orientation, active-recreational orientation, moral-religious emphasis, organization and control. It measures the different family interactions among the family members. The internal consistency (Cronbach's alpha coefficient) ranges from .61 to .78 for ten subscales.

**Scale for Suicide Ideation (Beck, Kovacs, & Weissman, 1979):** Beck's Scale for Suicide Ideation includes 21 items designed to evaluate the presence and severity of suicidal thoughts. The first 19 items measure the severity of suicidal wishes, attitudes, and plans. Patients rate each item on a scale of 0 to 2, with 2 being most severe. The last two items address the number of previous suicide attempts and the intention to die associated with the last attempt. The SSI has been found useful in quantifying the degree of suicidal ideation a person is experiencing and can serve as a key warning sign in identifying suicide risk. The SSI has demonstrated strong internal consistency with a coefficient alpha of .93 among psychiatric outpatients (Beck et al., 1988). Among psychiatric inpatients, the SSI has demonstrated coefficient alphas of .89 (Beck et al., 1979) and .96 (Beck et al., 1988). Studies on the psychometric properties of the SSI have shown evidence of inter-rater reliability (Beck et al., 1979), convergent validity (Holden & DeLisle, 2005), concurrent, and construct validity (Beck et al., 1988).

## PROCEDURE:

After clarifying the instructions of the concerned tests Affective Dysregulation Inventory, Zung Self-Rating Depression Inventory and Suicide Ideation Scale were administered on selected sample in groups and tests were given one by one. The affective dysregulation inventory was used as a measure of affective dysregulation, Zung self-rating depression scale was scored as a measure of depression and suicide ideation scale was used as a measure of suicidal tendencies among the sample. Regression analysis was applied on the dimensions of affective dysregulation, depression and hopelessness for both males and females respectively. The general testing conditions were satisfactory and the procedure was uniformed all through.

## RESULTS AND DISCUSSION

Suicide can appear to be an impulsive act. But it's a complicated process, and a person may think about it for some time before taking action. Suicide is a tendency of people to get away from the problems that is so crushing by feeling that only death will stop this psychache. Adolescents at higher risk commonly have a history of depression, severe life events, affective disorders, previous suicide attempts, family history of psychiatric disorders (i.e. depression and suicidal

behavior), family disruption, and certain chronic or debilitating physical disorders or psychiatric illness. In the presents study it was hypothesized that there will be significant correlation between suicide ideation and depression and affective dysregulation among the adolescents. Another research hypothesis held the view that family environment will be differentially correlated with different dimensions of family environment. It was an attempt to collaborate cognitive, emotional and familial variables to identify the potential predictor of suicide ideation among the concerned variables as they are interrelated with suicide ideation.

A perusal of Table 1 reveals that suicide ideation is positively correlated with depression ( $r = .178, p < .01$ ) and affective dysregulation ( $r = .144, p < .01$ ) for male adolescents. The significant positive correlation between these variables suggests that male adolescents who are highly depressed and affectively

dysregulated tend to have more suicide ideation and without appropriate guidance or emotional disturbance they may tend to attempt suicide. On the other hand dimensions of family environment-moral-religious emphasis ( $r = -.261, p < .01$ ) and organization ( $r = -.271, p < .01$ ) are negatively correlated with suicide ideation. This negative correlation between variables suggests that lack of moral and religious values and organization in the family leads to suicide ideation. Among the female adolescents intercorrelation indicates that suicide ideation is positively correlates with depression ( $r = .425, p < .01$ ) and affective dysregulation ( $r = .366, p < .01$ ) as well as male adolescents but female adolescents are strongly correlated among the variables. Whereas conflict ( $r = .168, p < .01$ ) as a dimension of family environment is also positively correlated with suicide ideation which indicates that conflict in the family contribute to disharmony in life and leads to suicidal thoughts among female adolescents.

**Table 1: intercorrelations between different variables among male and female adolescents**

MALE	SI	Dep	AD	C	Exp	Con	Ind	AO	ICO	ARO	MRE	Org	Ctrl
FEMALE													
SI	-	.178	.144	-.145	-.114	-.011	-.003	.016	-.051	-.076	-.261	-.271	.063
Dep	.425	-	.331	-.019	-.016	.029	.018	-.104	.002	.087	.083	.073	.100
AD	.366	.471	-	-.090	-.020	.056	-.016	-.074	.084	.073	.000	-.050	.129
C	-.091	-.114	.055	-	.104	.136	-.003	.176	.035	-.126	.060	.099	.102
Exp	-.072	-.230	-.181	-.004	-	-.103	.017	-.018	.064	.081	.128	-.019	.184
Con	.168	.145	.068	-.141	-.207	-	-.127	-.155	-.112	.002	-.138	-.112	-.113
Ind	-.067	-.169	-.214	-.125	.134	-.026	-	.211	-.056	-.076	.019	.079	-.155
AO	-.043	-.104	-.010	-.055	-.074	-.098	-.214	-	-.169	-.125	-.010	.154	-.053
ICO	-.037	-.029	.005	.129	.006	.070	-.083	-.089	-	.097	.186	-.073	.141
ARO	.012	-.106	-.358	-.019	.380	-.033	.072	-.009	.053	-	.076	-.120	.207
MRE	-.136	.031	.191	.316	-.141	-.187	.027	-.086	.074	-.231	-	.089	.177
Org	-.104	-.284	-.221	.305	.147	-.227	.100	.203	.044	.106	.067	-	-.120
Ctrl	.058	.235	.295	.048	.139	-.012	-.213	.108	.048	.143	.179	-.131	-

$p < .05$  ( $r = .10$ ),  $p < .01$  ( $r = .13$ )

Note: SI=suicide ideation, Dep=depression, AD=affective dysregulation, c=cohesion, Exp= expressiveness, Con= conflicts, Ind= independence, AO= achievements orientation, ICO=intellectual-cultural orientation, ARO= active-recreational orientation, MRE=moral-religious emphasis, Org=organization, Ctrl=control

In order to ascertain the extent to which weighted combination of depression, affective dysregulation and different dimensions of family environment accounts for adolescents on suicide ideation, step wise regression analysis was applied. The stepwise analysis was preferred over standard one to find a subset of those independent variables which are useful in predicting the dependent variable, by eliminating those which do not contribute any additional information to that already predicted by the variables in the equation. The step wise regression was conducted with parameter, p of F- to enter = .05 and p of F- to remove = .10.

Table 2 reveals that organization (Org) is the first variable which entered in the regression equation and it was ( $\beta = -.271, p < 0.06$ ) negatively correlated with suicide ideation for male adolescents. It accounts for 7.4% ( $R^2 = .074$ ) of the variance in suicide ideation. At the second step moral-religious emphasis (MRE) entered the regression equation and it was ( $\beta = -.239, p < .01$ ) also negatively correlated with suicide ideation. In combination of organization, it accounts for 13% ( $R^2 = .130$ ) of the variance in suicide ideation. It indicates that lack of organization and moral-religious emphasis in the family predict more chances of suicide to be occur among the male adolescents. On the other hand depression (Dep) is the third variable which entered in the regression equation and it was ( $\beta = .219, p < 0.05$ ) positively correlated with suicide ideation. It accounts for 17.8% ( $R^2 = .178$ ) of the variance in suicide ideation and with the combination of organization and moral-religious emphasis in the family predict the suicidal ideation strongly among male adolescents.

**Table 2: summary of stepwise regression analysis for male adolescents**

Variables	R	R <sup>2</sup>	$\beta$	F	Sig
Org	.271	.074	-.271	7.793	.06
MRE	.361	.130	-.239	7.269	.01
Dep	.422	.178	.219	6.915	.05

Table 3 shows that depression (Dep) is the first variable which entered in the regression equation and it was ( $\beta = .425, p < .01$ ) positively correlated with suicide ideation for female adolescents. It accounts for 18.1% ( $R^2 = .181$ ) of the variance in suicide ideation. At the second step affective dysregulation (AD) entered the regression equation and it was ( $\beta = .213, p < .05$ ) also positively correlated with suicide ideation. In combination of depression, it accounts for 25.3% ( $R^2 = .253$ ) of the variance in suicide ideation and with the combination of organization and moral-religious emphasis in the family predict the suicidal ideation strongly among female adolescents.

**Table 3: summary of stepwise regression analysis for female adolescents**

Variables	R	R <sup>2</sup>	$\beta$	F	Sig
Dep	.425	.181	.425	21.60	.01
AD	.465	.216	.213	13.36	.05
MRE	.503	.253	-.195	10.81	.02

The findings of the present study provided some insights in efforts to improve the cognitive and emotional predictors as well as familial factors to reduce suicide ideation among

adolescents. The results of Pearson correlation coefficients revealed that suicide ideation is positively correlated with depression and affective dysregulation and negatively correlated with organization, moral religious emphasis among the adolescents. It is surprisingly found that moral- religious emphasis as dimension of family environment scale is the significant predictor of suicide ideation for female as well male adolescents.

Results of the stepwise regression analysis demonstrated that the liner combination of organization, moral-religious emphasis and depression is the significant model to predict suicide ideation among male adolescents whereas depression, affective dysregulation and moral-religious emphasis regression model is predicting suicide ideation for female adolescents.

With the congruence of above results, it is found that Family discord and negative relationship with parents were associated with an increased suicide risk in depressed adolescents. A family with disharmony and conflicts induce suicidal ideation to adolescents (Consoli et al., 2013). Another recent study showed that the most common proximal risk factor for completed suicide for younger subjects was conflict with family members, partners or friends (Im et al., 2011). It is evident that affective dysregulation is a key factor as a potential risk factor in suicide ideation and suicidal behaviour among adolescents.

#### STRATEGIES TO CONTROL SUICIDE IDEATION

**Talk with someone every day, preferably face to face.** Though you feel like withdrawing, ask trusted friends and acquaintances to spend time with you. Or continue to call a crisis helpline and talk about your feelings.

**Avoid being alone.** Solitude can make suicidal thoughts even worse. Visit a friend, or family member. If you have no one, pick up the phone and call a crisis helpline.

**Avoid alcohol and drugs.** Drugs and alcohol can increase depression, hamper your problem-solving ability, and can make you act impulsively.

**Make a safety plan.** Develop a set of steps that you can follow during a suicidal crisis. It should include contact numbers for your doctor or therapist, as well as friends and family members who will help in an emergency.

**Make a written schedule for yourself every day and stick to it, no matter what.** Keep a regular routine as much as possible, even when your feelings seem out of control.

**Get out in the sun** or into nature for at least 30 minutes a day.

**Exercise as vigorously as is safe for you.** To get the most benefit, aim for 30 minutes of exercise per day. But you can start small. Three 10-minute bursts of activity can have a positive effect on mood.

**Make time for things that bring you joy.** Even if very few things bring you pleasure at the moment, force yourself to do the things you used to enjoy.

**Remember your personal goals.** You may have always wanted to travel to a particular place, read a specific book, own a pet, move to another place, learn a new hobby, volunteer, go back to school, or start a family. Write your personal goals down.

**Avoid doing things that make you feel worse.** Listening to sad music, looking at certain photographs, reading old letters, or visiting a loved one's grave can increase negative feelings.

**Avoid thinking about suicide and other negative thoughts.** Try not to become preoccupied with suicidal thoughts as this can make them even stronger. Don't think and rethink negative thoughts. Find a distraction. Giving yourself a break from suicidal thoughts can help, even if it's for a short time.

**Identify triggers or situations that lead to feelings of despair or generate suicidal thoughts,** such as an anniversary of a loss, alcohol, or stress from relationships. Find ways to avoid these places, people, or situations.

**Take care of yourself.** Eat right, don't skip meals, and get plenty of sleep. Exercise is also important; it releases endorphins, relieves stress, and promotes emotional well-being.

**Build your support network.** Surround yourself with positive influences and people who make you feel good about yourself. The more you're invested in other people and your community, the more you have to lose—which will help you stay positive and on the recovery track.

**Develop new activities and interests.** Find new hobbies, volunteer activities, or work that gives you a sense of meaning and purpose. When you're doing things you find fulfilling, you'll feel better about yourself and feelings of despair are less likely to return.

**Learn to deal with stress in a healthy way.** Find healthy ways to keep your stress levels in check, including exercising, meditating, using sensory strategies to relax, practicing simple breathing exercises, and challenging self-defeating thoughts.

## REFERENCE

- Asarnow, J. R. (1992). Suicidal ideation and attempts during middle childhood: Associations with perceived family stress and depression among child psychiatric inpatients. *Journal of Clinical Child Psychology*, 21, 35-40. | Asarnow, J. R., Carlson, G. A., & Guthrie, D. (1987). Coping strategies, self-perceptions, hopelessness, and perceived family environments in depressed and suicidal children. *Journal of Consulting and Clinical Psychology*, 55, 361-136. | Beavers, W. R., Hampson, R., & Hulgus, Y. (1990). Self-report family inventory. Dallas: Southwest Family Institute. | Beck, A. T., Kovacs, M., & Weissman, A. (1979). Assessment of suicidal intention: The Scale for Suicide Ideation. *Journal of Consulting and Clinical Psychology*, 47, 343-352. | Brown, M. F. (1986). Power, gender, and the social meaning of Aguaruna suicide. *Man: New Series*, 21:311-328. | Campbell, N. B., Milling, L., Laughlin, A., & Bush, E. (1993). The psychosocial climate of families with suicidal preadolescent children. *American Journal of Orthopsychiatry*, 63, 142-145. | Cavanagh, J., Carson, A., Sharpe, M., & Lawrie, S. (2003). Psychological autopsy studies of suicide: a systematic review. *Psychological Medicine*, 33: 395-405. | Consoli, A., Peyre, H., Speranza, M., Hessler, C., Falissard, B., Touchette, E., & Levy A. R. (2013). Suicide behaviour in depressed adolescents: role of perceived relationship in the family. *Child and Adolescent Psychiatry and Mental Health*, 7, 8. doi: 10.1186/1753-2000-7-8. | Coryell, W., & Young, E. (2005). Clinical predictors of suicide in primary major depressive disorder. *Journal of Clinical Psychiatry*, 66: 412-17. | Epstein, N. B. Bishop, D., Ryan, C., Miller, & Keitner, G., (1993). The McMaster Model View of Healthy Family Functioning. In Froma Walsh (Eds.), *Normal Family Processes* (pp. 138-160). The Guilford Press: New York/London. | Giddens, A. (1964). Suicide, attempted suicide, and the suicide threat. *Man*, 64:115-116. | Harris, C., & Barraclough, B. (1998). Excess mortality of mental disorder. *British Journal of Psychiatry*, 173: 11-53. | Im, J. S., Choi, S. H., Hong, D., Seo, H. J., Park, S., & Hong, J. P. (2011). Proximal risk factors and suicide methods among suicide completers from national suicide mortality data 2004-2006 in Korea. *Comprative Psychiatry*, 52(3), 231-237. | Kar N., Pursty G., Mohapatra B., Swain A, & Pattnaik, P. (2002). Suicide attempts in adolescents- affective and cognitive predictors of precipitation. Paper presented at the 54th Annual National Conference of the Indian Psychiatric Society. | Lee, T. Y., Wong, P., Chow, W. Y., & McBride-Chang, C. (2006). Predictors of suicide ideation and depression in Hong Kong adolescents: Perceptions of academic and family climates. *Suicide and Life-threatening Behavior*, 36, 82-97. | Mandara, J., & Murray, C. B. (2000). The effects of parental marital status, family income, and family functioning on African American adolescent self-esteem. *Journal of Family Psychology*, 14, 475-449. | McGirr, A., Renaud, J., Bureau, A., et al. (2008). Impulsive-aggressive behaviours and completed suicide across the life cycle: a predisposition for younger age of suicide. *Psychological Medicine*, 38: 407-17. | Mezzich, A. C., Giancola, P. R., Tarter, R. E., Lu, S., Parks, S. M., & Barrett, C. M. (1997). Violence, suicidality, and alcohol/drug use involvement in adolescent females with a psychoactive substance use disorder and controls. *Alcoholism, Clinical and Experimental Research*, 21(7), 1300-1307. | Mezzich, A. C., Tarter, R. E., Giancola, P. R., & Kirisci, L. (2001). The dysregulation inventory: A new scale to assess the risk for substance use disorder. *Journal of Child & Adolescent Substance Abuse*, 10(4), 35-43. | Mitchell, M., & Rosenthal, D. (1992). Suicidal adolescents: Family dynamics and the effects of lethality and helplessness. *Journal of Youth and Adolescence*, 21, 23-33. | Moos, R. & Moos, B. (1994). *Family Environment Scale Manual: Development, Applications, Research - Third Edition*. Palo Alto, CA: Consulting Psychologist Press. | Ohannessian, M. C., Lerner, R. M., Lerner, J. V., & von Eye, A. (2000). Adolescent-parent discrepancies in perceptions of family functioning and early adolescent self-competence. *International Journal of Behavioral Development*, 24, 362-372. | Olson, D. H., McCubbin, H. I., Barnes, H., Larsen, A., Muxen, M., & Wilson, M. (1989). *Families: What makes them work*, (2nd ed.). Newbury Park, CA: Sage Publications. | Plattner, B., Karnik, N., Jo, B., Hall, R. E., Schallauer, A., Carrion, V., et al. (2007). State and trait emotions in delinquent adolescents. *Child Psychiatry and Human Development*, 38(2), 155-169. | Reinherz, H. Z., Giaconia, R. M., Silverman, A. B., Friedman, A., Pakiz, B., Frost, A. K, Cohen, E. (1995). Early psychosocial risks for adolescent suicidal ideation and attempts. *Journal of the American Academy of Child and Adolescent Psychiatry*, 34(5), 599-611. | Spirito, A., Brown, L. R., Overholser, J. C., & Fritz, G. K. (2003). Attempted suicide in adolescence: Current findings and implications for future research and clinical practice. *Clinical Psychology Review*, 9, 335-363. | Tarter, R. E., Kirisci, L., Habeych, M., Reynolds, M., & Vanyukov, M. (2004). Neurobehavior disinhibition in childhood predisposes boys to substance use disorder by young adulthood: Direct and mediated etiologic pathways. *Drug and Alcohol Dependence*, 73(2), 121-132. | Tarter, R. E., Kirisci, L., Reynolds, M., & Mezzich, A. (2004). Neurobehavior disinhibition in childhood predicts suicide potential and substance use disorder by young adulthood. *Drug and Alcohol Dependence*, 76 Suppl, S45-52. | Watson, P. J., & Andrews, P. W. (2002). Toward a revised evolutionary adaptationist analysis of depression: The social navigation hypothesis. *Journal of Affective Disorder*, 72:1-14. | WHO (2001). Cf. Hagen, E. H. (2003). The bargaining model of depression, Genetic and Cultural Evolution of Cooperation. Humboldt University, Germany: The MIT press. | Wong, D. F. K., Sun, S. Y. K., Tse, J., & Wong, F. (2002). Evaluating the outcomes of a cognitive-behavioral group intervention model for persons at risk of developing mental health problems in Hong Kong: A pretest: posttest study. *Research on Social Work Practice*, 12(4), 534-545. | Zung, W. (1965). A self-rating scale for depression. *Archives of General Psychiatry*, 12, 63-70. |