

Irrational Beliefs as Predictors of Depressive Symptoms Among Urban Adolescents of Lahore, Pakistan

Nosheen K. Rahman
Centre for Clinical Psychology
University of the Punjab, Lahore

Masha M. Ahmed
Kinnaird College,
Jail Road, Lahore

The present study was conducted to investigate the role of irrational beliefs in the prediction of depressive symptoms among male and female adolescents of Lahore, Pakistan. A purposive sample of 1000 adolescent males and females with an age range of 13 to 19 years from a non-clinical population was taken from bilingual English medium educational institutions of Lahore. The subjects were administered an Irrational Belief Test to identify the irrational beliefs and Beck Depression Inventory-II to measure the degree of depressive symptoms. In addition, Demographic Questionnaire was given to take background information from them. Self Report Questionnaire was given to take the feed back of the subjects regarding assessment tools. Data were analyzed by using Pearson Product Moment Coefficient of Correlation and Multiple Regression Analyses. The results supported the hypotheses that irrational beliefs are important indicators to predict depressive symptoms among male and female adolescents in Lahore, Pakistan. Preventive educational programs can be designed and introduced in the educational institutions for adolescents highlighting the importance of rational beliefs in maintaining adequate mental health.

Depression is generally a mood state characterized by a sense of inadequacy, a decrease in activity or reactivity, pessimism, and related symptoms (Reber, 1995). It is common knowledge that, at one point or another, everyone feels blue in one's lifetime (National Institute of Mental Health [NIMH], 2000). In the Western countries about 40 to 60 percent of physical diseases in the total population are reported to be due to mental illnesses, out of which 15 to 20 percent are due to depression only ("Depression can be", 2004). Epidemiological estimates of adolescent depression in the West indicate that 25 to 40 percent of the adolescent girls report depressive features, whereas estimates for boys are 15 to 20 percent (Santrock, 1998). A four decade study by George (as cited in Maltz & Sommer, 2000) indicated that those individuals who had the most pessimistic view of life while in their 20's tended to be more likely to die or suffer from serious illness in their 40's or 50's. There is empirical research evidence for the higher rates of depressive symptoms in girls than in boys during adolescence (Marcotte, Laurier, Pierre, & Myra, 2002; Rahman, Dawood, & Saleem, 2000; National Mental Health Association, 2001). Seligman (as cited in Ellis & Bernard, 1985) noted that ratio between male and female depression may be as high as 1:10.

Depression is one of the most frequently occurring illnesses in Pakistan (Ali, 2001). Frequent crying, unexplained nervousness, low self esteem, rigid demands, estrangement of friends and family and lack of energy are few vital signs of depression (Kirkland, 2000). Depression in adolescents has long been conceptualized as a normal or transient phenomenon necessitating no therapeutic intervention (Lefkowitz & Burton, 1978; Lapouse, 1966; Werry & Quay, 1971). This has had the effect of limiting research in this domain of childhood and adolescent psychopathology. In the early '80s, the results of clinical reports and epidemiological studies reflecting high rates of depression and suicide in the adolescent population, and the publication of the DSM-III in which it was recognized that adult criteria could be used to diagnose depressive disorders in children and adolescents, markedly influenced the emergence of research on adolescent depression. These changes in the applicability of the adult diagnostic criteria for depression in adolescents have led to greater acknowledgment of the existence of depression in adolescents as a recognizable disorder while recognizing that developmental factors could influence the phenomenology of that disorder at different ages. The devastating effect of depression during adolescence is also reflected in the fact that the

incidence of a depressive episode during that stage of development is predictive of recurrent depressive episodes later in adolescence or adult life (Harrington, Fudge, Rutter, Pickles, & Hill, 1990; Kovacs et al., 1984). For example, Kandel and Davis (1986) found a consistency between 15 and 24 years old subjects in depressive symptoms. Depression during adolescence was also associated with lower psychosocial functioning in young adulthood. In Pakistan, very little work has been conducted especially in relation to different associated factors predicting depressive symptoms. Pakistan, being a developing country has to face many challenges. There is a need to create awareness about depression and its risk factors in the normal population, so that appropriate and effective preventive measures can be undertaken. Thus the following study was planned to find out the role of irrational beliefs in prediction of depressive symptoms.

Epictetus in the first century A.D. stated: "People are disturbed not by things but by the view which they take of them" (as cited in Ellis & MacLaren, 1998; p.41). Many researches have found a relationship between irrational beliefs (IBs) and depressive symptoms (Persons & Rao, 1985; Oei, Etchells, & Free, 1994; Marcotte, 1996; Kovalski & Horan, 1998; Nielson et al., 1996). According to Ellis (1973), the belief system of a person often governs the attitude and approach of a person. Therefore, a clear and rational thinking makes a person less troubled. Ellis further suggested that irrationality causes various problems and leads to various psychiatric disorders, which make an individual nonfunctional. The theory of REBT focuses firmly on the presence of irrational beliefs and their devastating effects on human behavior. Irrational beliefs are defined as matters of personal significance, which can be stated, in absolute terms such as must, should, ought or have to (Ellis & MacLaren, 1998; Shepherd, 1999) and the process of making absolute demands on reality is called musturbation (Dryden, 1984).

Ellis (as cited in Bernard & Joyce, 1984) indicated three modes of human expression: Cognition, emotion and behavior which are often inseparable, they interact reciprocally influencing one another. Ellis and MacLaren, (1998) defined rational as self-helping and irrational as self-defeating. Wessler and Wessler (as cited in Bernard & Joyce, 1984) synthesized the work of Beck, Ellis and Hauck, and explained that depression involves the ideational components of self pity, self downing, helplessness and hopelessness. Ellis and Harper (1961) outlined a number of dysfunctional cognitive processes and irrational

beliefs that lead to depression which include: Demand for Approval, High Self Expectations, Blame Proneness, Frustration Reaction, Emotional Irresponsibility. Anxious Overconcern; Problem Avoidance, Dependency, Helplessness for Change and Perfectionism. Oei, Etchells and Free (1994) in their study explored the relationship between depression and irrational beliefs among clinical and normal individuals. It was observed that clinical group gave higher endorsement to Helplessness for Change, Anxious Overconcern and Blame Proneness. On the other hand, in the graduate sample three irrational beliefs: Anxious Overconcern; Problem Avoidance and High Self-Expectation were found to be predictive of depression. Marcotte (1996) in her study based on a cognitive behavioral perspective, investigated the presence of different categories of irrational beliefs in relation to depressive symptoms in a sample of 349 adolescents. Results revealed that girls demonstrated higher levels of depression, while boys became less depressed once they entered adolescence stage. Strong positive relationship was found between irrational beliefs and depression. Results demonstrated no fluctuation in global scores on irrationality as a function of age or sex. However, the Frustration Reaction category of irrational beliefs showed a decrease with increasing age. Calvete and Cardenoso (2005) in their study found that adolescent girls manifested higher levels of depressive symptoms as compared to adolescent boys. It was also found that boys became less depressed once they entered adolescence age (that is between 11-14 years). Rates of depression for girls increased in a more stable way from pre to late adolescence. They found depression to be related with low frustration tolerance and tendency to dramatize situations among Canadian adolescents; these gender differences and cognitive biases have also been investigated in the present study.

The relationship between irrational beliefs and depressive symptoms has been studied in different samples of children (Burnett, 1995), adolescents (Hammond & Romney, 1995), adults and clinical population (Persons & Rao, 1985; Poulakis & Wertheim, 1993). These researches supported the significant relationship between irrational beliefs and depression. Whilst, researches by Haley, Fine, Marriage, Moretti, and Freeman (1985) and Marton, Churchard, and Kutcher (1993) using clinical samples, also found that depressed adolescents present significantly high cognitive distortions than non-depressed adolescents. In Marton et al.'s study, remission of depressive episode was associated with a decrease of cognitive distortions such as those

measured on the Dysfunctional Attitude Scale (DAS), but nevertheless remained higher than seen in the normal adolescent group.

In a study exploring the developmental aspect of depressogenic thinking, Garber, Weiss, and Shanley studied in 1993, the progression of depressive cognitions in high school students. Results revealed a positive relationship between depression and negative automatic thoughts and dysfunctional attitudes. On the other hand, as scores on depression increased with age, a regression analysis revealed no change over time in the relationship between depressive modes of thinking and symptoms of depression. Also, no change occurred with age in cognitive distortions, suggesting that depressogenic thinking had already been developed.

However, the predictive power of irrational beliefs in relation to depressive symptoms has so far not been investigated among Pakistani population. The present study aims to investigate the relationship between irrational beliefs and depressive symptoms in a non-clinical, adolescent student population of Lahore, Pakistan. It may contribute to the improvement of mental health and psychological well being of adolescents which may facilitate their functioning productively and may help them to contribute more to the betterment of the society.

Hypotheses

1. There will be no relationship between irrational beliefs and depression.
2. There will be no relationship between irrational beliefs and depression in male adolescents.
3. There will be no relationship between irrational beliefs and depression in female adolescents.

Method

Sample

Through purposive sampling data were collected from 1000 adolescent students (Males= 45%; Females= 55%) from 15 different bilingual, English medium schools, colleges and tuition centers of Lahore. The reason to choose these English medium institutions was the language of measuring instruments being used, i.e. English. The age range of the sample was between 13 to 19 years ($M= 16.09$; $SD= 1.75$). All the participants belonged to three different socio-economic classes: Upper class 14.1%, with a monthly income of Rs.50,000 and above;

middle were 58.4%, with a monthly income of Rs.10,000 to 49,000 and lower were 1.4%, with a monthly income of Rs.10,000 or less while 26.1% of the participants did not mention their monthly income. In the main study a sample of 1100 students was taken, however only 1000 questionnaires were completed as 100 questionnaires were either incomplete or the participants were absent, therefore the analysis was run accordingly.

Measures

Demographic Information Questionnaire

Demographic information questionnaire was constructed to get information regarding age, sex, monthly income etc.

Irrational Belief Test (IBT)

The Irrational Belief Test (IBT) was developed by Jones (1969) that measures irrational beliefs in male and female adolescents. It is based on the theory of Rational Emotive Behavior Therapy (REBT) proposed by Ellis (1973). It consists of 100 items which are equally divided into 10 groups and covers 10 dimensions of irrationality: 1) Demand for Approval; 2) High Self Expectation; 3) Blame Proneness; 4) Frustration Reaction; 5) Emotional Irresponsibility; 6) Anxious Overconcern; 7) Problem Avoidance; 8) Dependency; 9) Helplessness for Change and 10) Perfectionism. Each item is rated on a five-point scale from (1) disagree strongly to (5) agree strongly. Jones (1969) reported internal consistency estimates for the individual scales ranging from .66 to .80; a test retest coefficient of reliability of .92 and a concurrent validity coefficient of .61.

Beck Depression Inventory II (BDI-II)

BDI-II is a self report inventory that comprised of 21 items and used to measure levels of depression. Each item is scored on a 4-point scale i.e. from minimal depression (1) to severe depression (4). The test retest reliability of BDI-II is reported to be .93 (Beck, Steer, & Brown, 1996). The alpha coefficient for reliability for out patients is .92 and for the college students is .93. The construct validity between BDI-II and Beck Hopelessness Scale is .68; between BDI-II and the Scale for Suicide Ideation is .37 and the validity between BDI-II and Beck Anxiety Scale is .60 (Beck, Steer, & Brown, 1996).

Procedure

A pilot study was conducted on 50 students:

separately on 25 females and 25 males with an age range of 13 to 16 years ($M = 14$ years) from two English medium and bilingual schools of Lahore in two sittings. Institutional consent was taken from the authorities for students to participate in the study and the purpose of the study was explained to the participants. The aim of the pilot study was to find out the comprehension level of language and concepts used in the English questionnaires and the total time required to administer each instrument. Most of the participants appreciated the concepts and found the questionnaires parsimonious and interesting and no major problems were reported. Same procedure was followed in the main study.

Results

Separate means and standard deviations were computed for each scale and for each sub-scale for the total sample of 1000 male and female adolescents by Using Statistical Package for Social Sciences (George & Mallery, 1999).

Table 1
Means and Standard Deviations of the total and subscale scores of IBT for male and female Adolescents participants ($M=447, F=553$).

Scales	Male		Female	
	M	S.D	M	S.D
DA	30.17	4.62	30.09	3.88
HSE	31.01	5.64	30.30	5.21
BP	31.11	5.89	32.41	4.37
FR	29.75	5.22	29.13	5.11
EI	30.08	4.64	30.83	3.95
AO	30.91	5.06	32.60	13.5
PA	29.19	5.49	29.75	5.11
D	32.42	4.79	31.73	15.7
HC	30.33	6.16	29.90	4.89
P	31.11	5.92	32.43	5.33
Total IBT Score	305.88	31.92	309.59	24.39

DA = Demand for Approval, HSE = High Self Expectation, BP = Blame Proneness, FR = Frustration Reaction, EI = Emotional Irresponsibility, AO = Anxious Overconcern, PA = Problem Avoidance, D = Dependency, HC = Helplessness for Change, P = Perfectionism.

To determine the relationship between irrational beliefs and depressive symptoms, Pearson Product Moment Correlation Coefficient and Multiple Regression Analyses were carried out for the total sample and for male and female separately. Table 1 shows means and standard deviation on all scales of IBT for male and female samples.

Pearson Product Moment Correlation Coefficient was used to find out the relationship between irrational beliefs and depression using total score as well as each subscale score of IBT, for male, female and the total sample separately. Highly significant positive correlation between nine sub-scales of IBT and BDI-II rejects the null hypothesis and indicates that with increase in each type of irrational beliefs, depression also increases, except for IBT scale of Dependency which was not significantly related to depression. Pearson Product Moment Correlation Coefficient results revealed significant relationship between nine subscales of IBT and depression among adolescents. Results are presented in Table 2.

Table 2
Pearson Product Moment Correlation Coefficient between total score of BDI-II with the total and subscale scores of IBT for 1000 Adolescents (Males=447, Females=553).

Scales	Total	Males	Females
DA	.21**	.27**	.14**
HSE	.40**	.31**	.44**
BP	.21**	.34**	.10**
FR	.40**	.35**	.42**
EI	.21**	.35**	.10**
AO	.10**	.35**	.05
PA	.40**	.39**	.43**
D	.03	.06	-.06
HC	.30**	.30**	.30**
P	.30**	.27**	.30**
Total IBT Score	.50**	.52**	.48**

DA = Demand for Approval, HSE = High Self Expectation, BP = Blame Proneness, FR = Frustration Reaction, EI = Emotional Irresponsibility, AO = Anxious Overconcern, PA = Problem Avoidance, D = Dependency, HC = Helplessness for Change, P = Perfectionism. Note: ** = $p < 0.01$

Irrational beliefs were used to predict depressive symptoms among adolescents. Multiple regression analysis was computed on the total sample (see Table 3) and for males and females (see table 4 and 5) separately.

Table 3
Relationship between total score of BDI-II with the total and sub-scale scores of IBT using multiple regression analysis for the total sample. (N=1000).

Scales	B	SE B	β
DA	.00	.06	.02
HSE	.15	.06	.09**
BP	.01	.06	-.04
FR	.35	.05	.20**
EI	.00	.06	.00
AO	.00	.02	-.01
PA	.30	.05	.16**
D	.00	.02	-.03
HC	.00	.05	.06
P	.00	.05	.00
Total IBT Score	.01	.02	.22**

DA = Demand for Approval, HSE = High Self Expectations, BP = Blame Proneness, FR = Frustration Reaction, EI = Emotional Irresponsibility, AO = Anxious Overconcern, PA = Problem Avoidance, D = Dependency, HC = Helplessness for Change, P = Perfectionism.
Note: R2=.30, ΔR2=.30, B= unstandardized coefficient, SE B= standard error of unstandardized coefficient, β= standardized coefficient beta, ** = p < 0.01.

The results in table 3 revealed that the total scores on IBT showed an overall significance in the prediction of depressive symptoms on BDI-II, which accounted for 30% of the total variance. Although results revealed an overall weak prediction but for total sample three sub-scales, i.e. High Self Expectation; Frustration Reaction and Problem Avoidance of IBT were found to be significant predictors of depressive symptoms. Same three irrational beliefs significantly predicted depressive symptoms in females (see Table 5) which accounted for 31% of the total variance. Whereas, among males four subscales of IBT i.e. Frustration Reaction; Emotional Irresponsibility; Anxious Overconcern and Problem Avoidance were found to be significant.

Table 4
Relationship between total score of BDI-II with the total and sub-scale scores of IBT using Multiple Regression Analysis for male adolescents (N=447).

Scales	B	SE B	β
DA	.01	.09	.05
HSE	-.01	.08	-0.6
BP	.01	.08	.06
FR	.26	.08	.15**
EI	.22	.09	.11**
AO	.21	.08	.12*
PA	.26	.08	.16**
D	-.00	.02	-.04
HC	.00	.71	.03
P	.01	.71	.05
Total IBT Score	.00	.02	.18**

DA = Demand for Approval, HSE = High Self Expectation, BP = Blame Proneness, FR = Frustration Reaction, EI = Emotional Irresponsibility, AO = Anxious Overconcern, PA = Problem Avoidance, D = Dependency, HC = Helplessness for Change, P = Perfectionism. **Note:** R2 = .32, ΔR2 = .31, B = unstandardized coefficient, SE B = standard error of unstandardized coefficient, β= standardized coefficient beta, ** = p < 0.01, * = p < 0.05.

predictors of depressive symptoms (see Table 4). Both, the males and females results show a weak prediction. Results for both the sexes showed a weak prediction.

Discussion

The results of the present study provided empirical support for the relationship between irrational beliefs and depressive symptoms in male as well as female adolescents of Lahore, Pakistan.

The first null hypothesis was rejected as global scores on IBT showed an overall prediction of depressive symptoms. High Self Expectation, Problem Avoidance and Frustration Reaction were significant predictors of depressive symptoms. The results of the present study are in line with researches conducted by Burnett (1995) and Oei, Etechells and Free (1994) in Australia and by Erickson, Horan and Hackett (1991) and Marcotte (1996) in the US who found a relationship between both High Self Expectation and Problem Avoidance with depressive

Table 5
Relationship between total score of BDI-II with the total and subscale scores of IBT using Multiple Regression Analysis for Female Adolescents (N=553).

Scales	B	SE B	β
DA	-.01	.10	-.04
HSE	.25	.10	.15**
BP	-.15	.10	-.07
FR	.27	.10	.16**
EI	-.21	.10	-.09
AO	-.00	.02	-.04
PA	.21	.10	.12**
D	.00	.10	-.03
HC	.01	.08	.04
P	.00	.08	-.03
Total IBT Score	.11	.04	.30*

DA = Demand for Approval, HSE = High Self Expectation, BP = Blame Proneness, FR = Frustration Reaction, EI = Emotional Irresponsibility, AO = Anxious Overconcern, PA = Problem Avoidance, D = Dependency, HC = Helplessness for Change, P = Perfectionism. **Note:** R2 = .31, Δ R2 = .30, B = unstandardized coefficient, SE B = standard error of unstandardized coefficient, β = standardized coefficient beta, ** = $p < 0.01$, * = $p < 0.05$.

symptoms among both male and female adolescents. This relationship according to these researches may be defined as a by product of lack of maturity usually found in the adolescent age. Adolescence is considered as a transitory phase, which, Erickson (as cited in Schacter & Romano, 1993) called identity versus role diffusion; as going through transitions these young minds may avoid problems rather than solving them. Further analyses in the present study, separately for male and female adolescents, revealed no relationship between High Self Expectation and depressive symptoms among male adolescents. On the contrary, strong relationship was found between High Self Expectation and depressive symptoms among female adolescents. This may also be due to the socio-cultural differences as in Asian culture expectation of parents and family is related to children in different spheres of life whereas, females being more emotional and sensitive may tend to hold the irrational belief of High Self Expectation that may lead to depression.

Moreover, these differences may be due to the practice of collectivism in our society as males are considered to be the breadwinners therefore the collectivist families give preference to the male child in certain stances specifically when it comes to education, freedom, independence etc. On the contrary, in the West society is more individualistic which focuses more upon individual benefits. This may also be a factor for the contrasting results.

In addition, Frustration Reaction was found to be a predictor of depressive symptoms both in males and females. Results of earlier studies conducted in the US by Marcotte (1996), Oei et al. (1994) in Australia and Calvete and Cardenoso (2005) in Canada supported the above findings. It may be defined in the context of transition in adolescence as the adolescent undergoes many physiological and psychological changes. These hormonal and emotional changes are manifested in an adolescent's unstable mood and exaggerated reactions to the environmental events that increase frustration reaction.

The second null hypothesis was rejected as three sub-scales of IBT: Frustration Reaction, Emotional Irresponsibility and Anxious Overconcern were found to be significant predictors of depressive symptoms among male adolescents. Further, third null hypothesis was also rejected as three sub-scales of IBT i.e. High Self Expectation, Frustration Reaction and Problem Avoidance were found to be significant predictors of depressive symptoms among female adolescents. However, most of these IBs did not predict depressive symptoms when male and female scores were combined. There are seven sub-scales of IBT: 1) Demand for Approval 2) Blame Proneness 3) Dependency 4) Anxious Overconcern 5) Perfectionism 6) Emotional Irresponsibility 7) Helplessness for Change which are not predictive of depressive symptoms among adolescents in Pakistan. In contrast, Koestner et al. (1990), Erickson et al. (1991), Oei et al. (1994), Burnett (1995) and Marcotte (1996) found strong relationship between these subscales and depressive symptoms among adolescents in the US and Australia. These differences may be due to the socio-cultural factors as in Pakistan, extended family system is practiced. The practicing rule in the extended families include that children are not given the opportunity to make decisions on their own but are directed to do things by the elders. In the West individualistic approach is practiced whereas in East collectivism is more prevalent, which can also be a reason for the non-significant results.

Conclusion

The results of the present study partially support the theory as Ellis purports that irrational beliefs are the cause of psychological disorders and findings revealed that IBs: Demand for Approval; High Self Expectation; Blame Proneness; Frustration Reaction; Emotional Irresponsibility; Anxious Overconcern; Problem Avoidance; Dependency; Helplessness for Change and Perfectionism are related to depressive symptoms. Further if these irrational beliefs are questioned and later changed then it may help in the reduction of the depressive symptoms especially among adolescents. The rational and realistic wants developed by unconditioned self-acceptance and unconditional acceptance of others, influence the development of positive mental health. In addition teaching rational living techniques does help to develop better coping style. Educational programs need to be designed focusing especially on increasing the level of frustration tolerance and rational thinking which will minimize the probability of depressive symptoms among adolescents.

Limitations and Suggestions

The present research included 1000 adolescents and focused mainly on subjects from upper (14.1%), middle (58.4%) socio economic classes and very few subjects (1.4%) belonged to lower socio economic class as 26.1 percent of participants did not report their income. Future investigations need to include subjects from the lower socioeconomic class in a larger proportion for a balanced and better representation. Furthermore, a bilingual sample was taken, with English as a medium of instruction in their educational institutions. No subject was included from Urdu medium of instruction because the assessment tools which were used to assess them were available only in English language. Therefore, it highlights the need to develop our own indigenous tools, which should be culture free and in Urdu language. Furthermore, other reasons to develop and maintain the symptoms of depression need to be focused as present study focused on depression and irrational beliefs. For future investigations cross sectional research can be conducted with all age groups residing in rural/urban communities. Moreover, other demographic variables such as employment, marital status, drugs, self esteem and religion can also be taken into account, which would further explore a comprehensive picture of factors predicting depression among Pakistani adolescent.

In future, similar research needs to be conducted on a more representative and proportionate sample from lower-middle and lower class. Tools used in the present study were available in English language only, and as English medium schools are mostly expensive that may be out of reach for a low middle class person, results of the study cannot be generalized because only English medium schools were included. Very low percentage of children from low SES were reported. Furthermore, the medium of instruction, socioeconomic status and social comparisons do effect the belief system of the individuals. Therefore, it is suggested that the future studies may include low socioeconomic class and may translate and adapt the measuring tools in Urdu language which may help in the generalizations of the findings. It is also suggested that illiterate or less educated subjects should also be included as the Population Census reports the literacy rate of Pakistani population is 44% (Rahman, 2004).

Awareness programs can be introduced in the regular curriculum of educational institutions with emphasis on experiential learning and tutorial groups. More personalized teaching with smaller class size should be practiced. Educational institutions may also provide counseling services and focus more on the enhancement of rational thinking of the pupils. Furthermore, family involvement should be emphasized and parents must emulate what they profess in order to reduce cognitive dissonance.

However, further research needs to be conducted in Pakistan to explore more variables, which may be instigating irrational beliefs among adolescents.

References

- Ali, W. (2001). Gender and depression. *Journal of the College of Physicians and Surgeons, Pakistan*, 11, 246-252.
- Beck, A. T., Steer, R. A., & Brown, G. K. (1996). *Beck depression inventory-II* (2nd ed.). USA: The Psychological Corporation.
- Bernard, M. E., & Joyce, M. R. (1984). *Rational emotive therapy with children and adolescents*. New York: John Wiley Press.
- Burnett, P. C. (1995). Irrational beliefs and self esteem: Predictors of depressive symptoms among children. *Journal of Rational Emotive Behavior Therapy*, 13, 193-201.

- Calvete, E., & Cardenoso, O. (2005). Gender differences in cognitive vulnerability to depression and behavior problems in adolescents. *Journal of Abnormal Child Psychology*, 33(2), 179-192.
- Depression can be avoided by following teachings of Islam. (2004, March 1st). *The News*, p.2.
- Dryden, W. (1984). *Rational emotive therapy: Fundamental and innovations*. Australia: Croom Helm Ltd.
- Ellis, A. (1973). *Humanistic psychotherapy*. New York: Mc Graw Hill Book Company.
- Ellis, A., & Bernard, M. E. (1985). *Clinical applications of rational emotive therapy*. New York: Plenum Publishing Corporation.
- Ellis, A., & Harper, R. A. (1961). *A new guide to rational living*. USA: Englewood Cliffs N. J. Prentice Hall.
- Ellis, A., & MacLaren, C. (1998). *Rational emotive behavior therapy: A therapist's guide* (p.41). USA: Impact Publishers, Inc.
- Erickson, C. D., Horan, J. J., & Hackett, G. (1991). *On thinking and feeling bad: Do client problems derive from a common irrationality or specific irrational beliefs?* Retrieved March 28, 2002, from <http://seamonkey.ed.asu.edu/~horan/d-ce-apa.htm>
- George, D., & Mallery, T. (1999). *SPSS for windows step by step: A simple guide and reference* (10th ed.). London: Microsoft, Inc.
- Haley, G. M. T., Fine, S., Marriage, K., Moretti, M. M., & Freeman, R. J. (1985). Cognitive bias and depression in psychiatrically disturbed children and adolescents. *Journal of Consulting and Clinical Psychology*, 53, 535-537.
- Hammond, W. A. & Romney, D. M. (1995). Cognitive factors contributing to adolescent depression. *Journal of Youth and Adolescence*, 24, 667-887.
- Harrington, R., Fudge, H. Rutter, M., Pickles, A., & Hill, J. (1990). Adult outcomes of childhood and adolescent depression. *Archives of General Psychiatry*, 47, 465-473.
- Jones, R. C. (1969). A factored measure of Ellis's irrational belief system with personality and maladjustment correlates [Abstract]. *Dissertation Abstracts International*, 69, 6443.
- Kandel, D. B., & Davis, M. (1986). Adult sequelae of adolescent depressive symptoms. *Archives of General Psychiatry*, 43, 255-262.
- Kirkland, E. (2000). Understanding important signs of depression. *Business Journal*, 22, 1-2.
- Koestner, R., Zuckerman, M., & Olsson, J. (1990). Attributional style, comparison focus of praise, and intrinsic motivation. *Journal of Research in Personality*, 24, 87-100.
- Kovacs, M., Feinberg, T. L., Crouse-Novak, M. C., Paulauskas, S. L., Pollock, M., & Finkelstein, R. (1984). Depressive disorders in childhood. *Archives of General Psychiatry*, 41, 643-649.
- Kovalski, T. M., & Horan, J. J. (1998). The effect of internet based cognitive restructuring on the irrational career beliefs of the adolescent girls. Retrieved January 18, 2002, from <http://monkey.ed.asu.edu/~horan/d-tk-apa98.htm>
- Lapouse, R. (1966). The epidemiology of behavior disorders in children. *American Journal of Diseases of Children*, 111, 594-599.
- Lefkowitz, M. M., & Burton, N. (1978). Childhood depression: A critique of the concept. *Psychological Bulletin*, 85, 716-726.
- Maltz, M., & Sommer, B. (2000). *Psychocybernetics* (p.13). New York: MJF Books.
- Marcotte, D. (1996). Irrational beliefs and depression in adolescence. *Adolescence*, 31, 935-954. Retrieved September 6, 2001 from PerAbs database.
- Marcotte, M., Laurier, F., Pierre, P., & Myra, P. (2002). Gender difference in depressive symptoms during adolescence: the role of gendertyped characteristics, Self esteem, body image, stressful life events and pubertal status. *Journal of Emotional and Behavioral Disorders*, 10, 29.
- Marton, P., Churchard, M., & Kutcher, S. (1993). Cognitive distortion in depressed adolescents. *Journal of Psychiatry and Neurosciences*, 18, 103-107.

- Nielson, D. M., Horan, J. J., Keen, B., Peter, C. C., Ceperich, S. D., & Ostlund, D. (1996). An attempt to improve self esteem by modifying specific irrational beliefs. *Journal of Cognitive Psychotherapy*, 10, 137-149.
- National Institute of Mental Health. (2000). *Psychotherapies: Psychoanalysis, humanistic therapies, behavior therapies, cognitive therapies*. Retrieved July 11, 2001, from <http://inst.santafe.cc.fl.us/~mwehr/studygm/mod9.htm# cognitive therapiesexample, rational-emotive>
- National Mental Health Association. (2001). *Depression*. Retrieved April 22, 2002, from <http://www.nmha.org/infoctr/factsheets/23.cfm>
- Oei, T. P. S., Etchells, A. C., & Free, M. L. (1994). The relationship between irrational beliefs and depressed mood in clinically depressed out patients. *Psychologia International Journal of Psychology*, 37, 219-226.
- Persons, J. B., & Rao, P. A. (1985). Longitudinal study of cognitions, life events and depression in psychiatric in-patients. *Journal of Abnormal Psychology*, 94, 51-63.
- Poulakis, Z., & Wertheim, E. H. (1993). Relationships among dysfunctional cognitions, depressive symptoms, and bulimic tendencies. *Cognitive Therapy and Research*, 17, 549-559.
- Rahman, N. K., Dawood, S., & Saleem, S. (2000). *Perception of self image by Pakistani adolescence*. Unpublished Manuscript. Centre for Clinical Psychology, University of the Punjab, Lahore, Pakistan.
- Rahman, N. K. (2004). Psychology in Pakistan. In M. J. Stevens, & D. Wedding (Eds.). *Handbook of international psychology*. New York: Taylor & Francis Books, Inc.
- Reber, A. S. (Ed.). (1995). *Penguin dictionary of psychology* (2nd ed.). New York: Penguin Books.
- Santrock, J. W. (1998). *Adolescence* (7th ed.). Boston: Mc Graw Hill.
- Schacter, J. E., & Romano, B. A. (1993). Theories of development and etiology. In H. S. Koplewicz, & E. Klass (Eds.). *Depression in children and adolescence*. (p.9-15) London: Harwood Academic Publishers.
- Shepherd, P. (1999). *Rational thinking*. Retrieved May 22, 2001, from <http://www.Trans4mind.com/transformation/transform2.11.htm>
- Turner, L. A. (1998). *The relationship of attributional beliefs to self-esteem*. Retrieved July 2, 2001, from http://www.findarticles.com/m2248/n130_v33/21072049/p1/article.jhtml
- Werry, J. S., & Quay, H. C. (1971). The prevalence of behavior symptoms in younger elementary school children. *American Journal of Orthopsychiatry*, 41, 136-143.