

Relationship of Psychological Variables with Depression

A Study on School and College Students

RUPAN DHILLON* AND MEHAK ARORA**

Abstract

Depression is a mood disorder characterised by a range of symptoms that may include loss of pleasure, feelings of worthlessness and suicidal thoughts, as well as physical states that may affect eating, sleeping, other activities. The current study focuses on perceived stress, coping strategies, hardiness and self-efficacy as the important variables as they relate with depression in adolescents. A sample of 500 adolescents belonging to the age group of 14–17 years is taken for the purpose. Various tests employed in this study are: Beck Depression Inventory (Beck et al., 1996), General Self-efficacy Scale (Schwarzer and Jerusalem, 1995), Personal Views Survey (Kobasa, Maddi and Kahn, 1982), Perceived Stress Scale (Cohen et al., 1983) and The Ways of Coping Scale (Folkman and Lazarus, 1988). Factor analysis is applied and the results are interpreted on the basis of their factor loadings to understand the significant relationships.

INTRODUCTION

Adolescence has been defined by Atwater (1992) as 'the period of rapid growth between childhood and adulthood including psychological and social development'. This period

is considered to be difficult and critical since at this stage numerous shifts and changes takes place leading to a radical changes in character transposing the previous interests and experiences of the child. Adolescence

* Senior Assistant Professor, Department of Psychology, Guru Nanak Dev University, Amritsar

** Clinical Psychologist, 27, Court Road, Amritsar

comes from a Latin word '*adolescere*', which means 'to grow up'. It is a transitional stage of physical human development generally occurring during the period from puberty to adulthood. According to Sunmola et al. (2002), 'Adolescence refers to a transition which is characterised by an increase in the personal control, responsibilities and independence.'

According to Pettit and Joiner (2006), 'Depression can be viewed as a persistent and recurring scourge that can involve multiple coexisting conditions, such as anxiety and danger. This condition is clearly an equal opportunity disability that can affect anyone at any economic level, from childhood to old age'.

Depression is a severe illness that affects the individuals according to their personality characteristics. Since adolescence is a stage where different crises and negative events take place, certain cognitive patterns and thought processes need to be developed in the adolescent period itself so that the adulthood surpasses all the stresses of crises. Hardiness helps in dealing and adjusting to the encountered stress effectively of the individual suffering from it. Self-efficacy helps the adolescent to develop confidence in their abilities and beliefs. Also, the adolescents are taught to handle the unstable phase of stress by adopting approach oriented coping instead of avoidance oriented coping which helps an adolescent to face the negative life events.

DETERMINANTS OF DEPRESSION

Hardiness

Hardiness helps an adolescent in dealing with the stressful life events (depression in its severe form). According to Kobasa (1979), hardiness refers to a personality trait which is associated with strong resistance to negative feelings caused by adverse circumstances. Adolescents experience times when they are unhappy. Though the feelings of sadness are transitory but when such feelings are present, they hamper the daily activities of adolescent thereby lowering their hardiness. Adolescents with hardy personality perceive themselves as someone capable of changing events. This in turn leads an adolescent to a situation of dominance which further makes him believe that his efforts can change a stressful situation.

Self-efficacy

According to Bandura (1994), 'A strong sense of self-efficacy will produce 'cognitive motivational, affective and selection process' that affects human functioning. Adversely, a low sense of self-efficacy will cause depression, anxiety and even social isolation.' Self-efficacy is the belief in one's competence to attempt difficult or novel tasks and to cope with adversity arising from specific demanding situations (Cross et al., 2006; Scholz et al., 2002). People with high self-efficacy choose to perform more challenging tasks and they set

higher goals for themselves and stick to them. Actions are pre-shaped in thought and once an action has been taken, highly self-efficacious people invest more effort and persist longer than those with low self-efficacy.

Perceived Stress

According to Willemen et al. (2008), 'Perceived stress means experiencing difficulties in meeting demands within important life domains'. Those with high levels of perceived stress may be more prone to depression and individuals who are already feeling somewhat depressed or anxious may feel even more helpless and hopeless when subjected to greater levels of stress in life.

Coping Strategies

According to Lazarus and Folkman (1984), coping is defined "as the cognitive and behavioural efforts to handle or manage specific external and internal and or demands that are appraised as reducing the resources of a person". The better the coping strategies, better will be the adaptation capacities.

OBJECTIVE OF THE STUDY

So keeping in mind the review of literature and the vast variety of studies done on these variables, this study has used perceived stress, coping strategies, hardiness and self-efficacy as its independent variables to study them as associated with depression during adolescent years. This period is considered as

the most vulnerable period in the life span of an individual, and hence, has been utilised for the purpose.

Hypotheses

1. There will be a significant negative relationship of hardiness with depression in terms of. control, commitment and challenge.
2. There will be a significant negative relationship of self-efficacy with depression.
3. There will be a significant positive relationship of perceived stress with depression.
4. There will be a significant negative relationship of coping strategies i.e. seeking social support, problem solving, accepting responsibility, positive reappraisal and confrontive coping with depression.
5. There will be a significant positive relationship of coping strategies i.e. self-control, distancing and escape avoidance with depression.

METHODOLOGY

In the present study, students of public schools of Amritsar city served as subjects. The tests were administered on a sample of 500 adolescents belonging to the age group of 14–17 years. Care was taken that the schools chosen were more or less homogenous with regards to socio-economic, cultural background and academic milieu. There are 250 females and 250 males in the sample. Mean age of males is 15.63 and standard deviation is 1.44. The mean

age for females is 15.53 and standard deviation is 1.39.

Psychological Tests

The various tests employed in this study are:

1. Beck Depression Inventory (BDI-II)—Beck et al. (1996)
2. General Self-efficacy Scale (GSE)—Schwarzer and Jerusalem (1995)
3. Personal Views Survey (PVS)—Kobasa, Maddi and Kahn (1982)
4. Perceived Stress Scale (PSS)—Cohen et al. (1983)
5. The Ways of Coping Scale—Folkman and Lazarus (1988)

Beck Depression Inventory (BDI) (Beck et al., 1996)

It is one of the most popular and widely used depression inventory which can be used in individuals aged 13 and above. BDI-II is a 21 multiple choice question based inventory that measures various aspects of depression in an individual, like guilt, hopelessness, helplessness, weight loss, etc. The reliability of the test stands at $r=0.93$ while the internal consistency is on higher side i.e. $\alpha = .91$ as suggested by the test maker.

General Self-efficacy Scale (GSE) (Schwarzer and Jerusalem, 1995)

This psychometric scale is a 10-item scale which measures the beliefs individuals hold about themselves. It is one of the most popular scales that assess the capability of an individual when negative events occur in their lives. It clearly throws light on those

aspects of an individual which help in bringing successful thought pattern and positive belief system in the times of stress. This test has a higher internal consistency which measures from 0.75 to 0.94.

Personal Views Survey (PVS) (Kobasa, Maddi and Kahn, 1982)

This is one of the most important scales used to measure psychological hardiness in individuals. The scale measures an individual on the three major dimensions of hardiness i.e. control, commitment and challenge. It is a multiple choice inventory where the individuals are scored on four options i.e. strongly disagree, mildly disagree, mildly agree and strongly agree. The total score on hardiness is obtained by adding up the control, commitment and challenge scores.

Scores ranging from 10 to 18 points indicate a hardy personality. Scores from 0 to 9 indicate moderate hardiness while score below 0 indicates low hardy personality. The reliability of this scale is 0.628 and the validity is 0.543, as calculated by the test maker.

Perceived Stress Scale (PSS) (Cohen et al., 1983)

PSS is the most widely used scale which measures an individual's stressed mind set up, that later gives rise to depression among them. It consists of 10 items and helps to identify the levels of stress an individual is experiencing at the present state. It is a paramount

psychological instrument that helps in measuring how much stress an individual perceives. The reliability of the scale, as given by the test maker, ranges from 0.82–0.85.

The Ways of Coping Scale (Folkman and Lazarus, 1988)

It is a 66 item scale that measures an individual on various coping mechanisms. It designs on various coping processes that can be utilised during the times of stress and strain. This scale consists of eight subscales i.e. Confrontive coping, Distancing, Self-control, Seeking Social Support, Accepting Responsibility, Escape Avoidance, Planful Problem solving, and Positive Reappraisal. Typical reliability across subscale scores ranged from .60 to .75.

RESULTS AND DISCUSSION

Factor analysis

With a view to treat all the variables within the same theoretical system, inter correlations among the tested variables were obtained. However, these correlations are suggestive and do not provide a clear cut information because of a number of uncontrolled factors. For a clear understanding of the inter correlations, factor analysis was used. Factor analysis is a formal model about hypothetical component variables which account for the linear relationship which exists between observed variables. For the purpose of analysing the relationships in a clear way, unrotated factor analysis was used. The factors which had a loading above .35 were taken as significant and have been used to explain the various relationships.

Table 1
Factor matrix for male adolescents of age group 14–17 years
(n=250) factors

Variables	1	2	3	4	5	h2
Depression	0.02	-0.56	-0.43	-0.46	0.01	0.72
Self-efficacy	0.41	0.49	-0.16	0.12	0.07	0.47
Control	0.04	0.45	0.59	0.15	0.16	0.61
Commitment	0.22	0.55	0.17	-0.12	0.48	0.63
Challenge	0.04	-0.09	0.50	0.60	-0.43	0.82
Perceived Stress	0.34	0.16	-0.44	-0.48	-0.02	0.58
Confrontive coping	0.64	-0.34	-0.10	0.06	0.22	0.59
Distancing	0.48	-0.26	0.03	0.36	0.55	0.73
Self-control	0.63	-0.26	-0.03	0.02	-0.03	0.47
Seeking Social Support	0.65	0.15	-0.17	-0.19	-0.30	0.61

Accepting Responsibility	0.56	0.06	0.15	0.01	-0.26	0.42
Escape Avoidance	0.28	-0.61	0.08	0.05	0.12	0.55
Planful Problem solving	0.74	0.12	0.00	0.07	-0.08	0.57
Positive reappraisal	0.69	0.19	-0.16	-0.08	-0.20	0.59
% Contribution	23.78	13.15	8.28	7.55	7.43	60.22
Eigen values	3.33	1.84	1.16	1.05	1.04	

In case of male adolescents, 5 factors are obtained. The total variance explained is 60.22%. All the significant factors, i.e. factors having loadings above .35 are explained. The factor analysis for male adolescents is presented in Table 1.

Factor I

Factor I shows 23.78 % of variance. This factor has significant factor loadings on self-efficacy and on certain dimensions of coping. This suggests that there is a positive relationship among the variables of coping and self-efficacy. This enables us to form an idea that this is an integrated factor of coping as all the dimensions of coping are showing significant positive loadings. However, escape avoidance dimension of coping is not significant. Self-efficacy does not share a significant positive relationship with escape avoidance but has a significant relationship with all the other dimensions.

This factor states that self-efficacious individuals will utilise effectively all the coping strategies. Farid and Salibi (2014) concluded that there is a significant relationship

between different levels of self-efficacy and stress coping strategies.

Factor II

The second factor explains 13.15 % of variance. This factor has significant negative factor loadings on depression and escape avoidance. It has positive factor loadings on self-efficacy, control and commitment dimensions of hardiness. This factor shows a very clear inverse relationship between depression and self-efficacy as well as the two components of hardiness. Hardiness is defined as a commitment to life, viewing change as challenge and having control over one's life. Hardiness reduces depressive feelings and prepares the individual to face threatening situations boldly. People who are hardy are believed to have a greater capacity for dealing with the challenges of life. It is believed that individuals who are high on hardiness are less affected by depression and poor health as a result of stressful life situations. A study by Weibe (1991) states that students with hardy personality are capable of having high tolerance for frustration; they have a lower threat appraisal

and less negative affectively. Also, self-efficacy and hardiness relate positively with each other and further can be helpful in reducing depressive feelings. This factor clearly supports our hypotheses that self-efficacy and dimensions of hardiness will relate negatively with depression.

Studies have shown that depressed individuals use maladaptive or less effective coping strategies. Studies by Florian et al. (1995) have suggested that high hardy individuals use more of problem focused coping. But depressed individuals who lack self-efficacy or hardiness will intentionally avoid any sort of stressor. Studies also state that using escape avoidance coping will not bring any permanent relief and hence, can lead to depression as the problems remain unresolved (Dumont and Provost, 1999).

Factor III

This factor explains 8.28 % of variance. This factor shows positive loadings on control and challenge. These two dimensions have a negative relationship with depression and perceived stress. Thus, this factor supports our hypothesis that depression will share a negative relationship with dimensions of hardiness. It also supports our hypothesis that perceived stress will share a positive relationship with depression. We can easily say that male adolescents strengthen themselves by developing control and challenge as their personality characteristic in order to combat

the feelings of depression. Male adolescents who appear well adjusted have hardiness as their personality characteristic. It is believed that individuals with high hardiness are less affected by depression and exhibit no psychological disturbances. Also further on, this factor shows that perceived stress increases depression in male adolescents. There exists a positive relationship among both the variables. This means more an adolescent perceives stress, more will be his feelings of sadness or depression. Willemen, et al. (2008) reviewed that perceives stress had stronger impact on depression under most conditions.

Factor IV

The fourth factor explains 7.55 % of variance. This factor shows significant factor loadings on depression, challenge and perceived stress. These factor loadings suggest that challenge has a negative relationship with depression and perceived stress, clearly showing that hardiness characteristic enables male adolescents to have reduced depressive feelings and also perceive less stress and negative feelings in situations. Hardy individuals have an internal mastery to challenge situations with confidence. Study by Azar et al. (2013) also supports our finding and states that hardiness is a health promoting factor. Bartone et al. (1984) also indicates that psychological hardiness has an inverse relationship with depression.

Thus challenge is clearly seen as an important dimension of hardiness that is lowering the depressive feelings and alters the perceptions of stress.

A further perusal of this factor shows that distancing has a negative relationship with depression and perceived stress. It has a positive relationship with challenge. This relationship is not very strong but still suggests that male adolescents who utilise more of distancing as a coping strategy, would like to handle a stressful situation by moving away from it. They distance themselves from problematic situations which will enable them to experience less depression and stress. Sometimes, an individual becomes better by just moving away from a situation which he believes he cannot change. Moving away makes him stronger and he is able to handle his stress and depressive feelings.

Factor V

The fifth factor shows 7.43% of variance. It has shown significant factor loadings on two variables of hardiness and one variable of coping. Commitment has a positive

relationship with distancing. Challenge has a negative relationship with distancing. Hence, both the variables are showing different relationship with distancing. Individuals who are high in commitment are very sure about what they are doing. They have a strong meaning and purpose in life. They are not alienated out of fear. Individuals who are high on challenge see each situation as an opportunity for growth rather than a threat. These two are very closely related components of hardiness but in this factor, they have an opposite relationship with distancing. Adolescents who are high on commitment will withdraw from certain situations which they believe they cannot change. They are sure that the situation needs to be put behind and thus, they distance themselves from it. On the other hand, adolescents who are high on challenge will not withdraw from problematic situations. As challenge increase in male adolescents, they will stop withdrawing from situations. This factor shows the importance of challenge as a personality characteristic in male adolescents.

Table 2
Factor Matrix for Female Adolescents of
Age Group 14–17 Years (N=250)

Variables	1	2	3	4	h ²
Depression	0.10	-0.70	0.26	0.00	0.57
Self-efficacy	0.43	0.36	-0.14	-0.08	0.35
Control	-0.10	0.30	0.68	-0.06	0.58
Commitment	0.03	0.65	-0.07	0.07	0.44

Challenge	0.11	0.03	0.22	0.94	0.93
Perceived Stress	0.13	-0.12	0.67	-0.24	0.52
Confrontive coping	0.72	-0.18	-0.21	0.01	0.60
Distancing	0.56	-0.18	-0.07	0.08	0.36
Self-control	0.73	-0.13	0.04	-0.01	0.55
Seeking Social Support	0.65	0.20	0.03	-0.16	0.49
Accepting Responsibility	0.65	-0.00	0.00	0.08	0.42
Escape Avoidance	0.56	-0.47	-0.04	0.00	0.55
Planful Problem solving	0.70	0.26	0.05	-0.12	0.57
Positive reappraisal	0.64	0.33	0.19	0.06	0.56
% Contribution	26.42	12.10	8.24	7.20	53.97
Eigen Values	3.70	1.69	1.15	1.00	

In case of female adolescents, four factors are obtained. The total variance explained is 53.97%. All the significant factors, i.e. factors having loadings above 0.35 are explained. The factor analysis for female adolescents is presented in Table 2.

Factor I

This factor explains 26.42% of variance. The factor has significant positive loadings on all the dimensions of coping i.e. confrontive coping, distancing, self-control, social support, accepting responsibility, escape avoidance, problem solving and positive reappraisal. This makes it an integrated factor of coping.

This factor shows that self-efficacy has a significant positive relationship with the various coping strategies, thus suggesting that female adolescents will effectively use the various coping strategies if they are high on self-efficacy. In a study conducted by Masoudnia (2007), it

has been stated that people with high self-efficacy use problem focused coping strategies, individuals with low self-efficacy use emotion focused coping strategies and avoidance coping strategies.

Factor II

This factor explains 12.10% of variance in the females. It also shows that it has a significant negative factor loading on depression. It has positive loadings on self-efficacy and commitment, which is a dimension of hardiness. It suggests a negative relationship of commitment and self-efficacy with depression. Hardiness and self-efficacy will reduce the feeling of depression in female adolescents. This inverse relationship gets empirical support from previous the finding of Rhodewalt and Zone (1989). Hardiness will improve social and mental health factors. Females who are more self efficacious and high on commitment will be able to

take problems as opportunities in life. Therefore, depressive feelings will reduce.

Depression also shares a positive relationship with escape avoidance. In female adolescents, utilisation of escape avoidance as a coping strategy to deal with situations will increase the feelings of depression. Depressed females use more of avoidance coping strategies. This is supported by a number of studies (Stone and Neale, 1987; Dountran, 2011).

This factor also shows the negative relationship of self-efficacy and commitment with escape avoidance coping. This suggests that hardy and self efficacious adolescents have the capacity to resist negative life events they will use less of avoidance coping strategy. Females who are high on hardiness and self-efficacy they will have positive health and will engage in problem focused coping rather than escape avoidance coping (Soderstrom, et al., 2000).

Factor III

The third factor explains 8.24 % of variance. This factor has shown significant positive loadings on perceived stress as well as control, which is a dimension of hardiness. This factor shows a positive relationship between control and perceived stress in female adolescents. Hardy female adolescents do have a personal sense of mastery and confidence but yet during their adolescent period, they experience a lot of stress. In order to combat the perceived

stress, they increase their control in various situations. They try to make themselves even more strong and resilient in their stressful situations.

Factor IV

The last factor explains 7.20 % of the total variance. This factor highlights the challenge component of hardiness as an individual factor, enabling us to understand the importance of challenge as a personality characteristic in female adolescents. Challenge plays an important role in contributing to hardiness.

In conclusion, for male adolescents, this factor analysis results have given us five factors and these factors have suggested important findings that self-efficacy shares a negative relationship with depression. Depression also has a negative relationship with components of hardiness. Perceived stress shares a positive relationship with depression. Escape avoidance coping strategy shares a positive relationship with depression. Distancing shares a negative relationship with depression. Male adolescents distance themselves from situations that they believe are not changeable. This coping strategy also helps them to lower the feelings of depression. Their characteristics are that high hardy individuals utilise problem focused coping strategies. Challenge has appeared to be an important dimension which contributes to resiliency enabling male adolescents to handle their

problems in a better way rather than withdrawing from them. Self-efficacy shares a positive relationship with coping strategies but does not have a significant relationship with escape avoidance. Self-efficacy and dimensions of hardiness share a negative relationship with escape avoidance coping.

In female adolescents, factor analysis revealed four important factors in female adolescents. It suggests a few important relationships. It suggests a negative relationship of commitment and self-efficacy with depression. Hardiness and self-efficacy will reduce the feelings of depression in female adolescents. Depression also shares a positive relationship with escape avoidance. In female adolescents, utilisation of escape avoidance as a coping strategy to deal with situations will increase the feelings of depression.

Other relationships show that there is a negative relationship of self-efficacy and commitment with escape avoidance coping. Self-efficacy also has a positive relationship with all the dimensions of coping. A positive relationship between control and perceived stress can also be seen in female adolescents. Also challenge can be seen as an important characteristic for females.

The implications of this research are that it can be utilised to ensure that hardiness is a personality study that can combat depression. Parents can support children by helping them build a hardy personality. A counselor can also direct his attention on increased self-efficacy. Strategies to build efficacy in school years can be initiated. Coping skills can also be strengthened right from school years. Parental and school counseling programmes can be beneficial.

REFERENCES

- ATWATER, E. 1992. *Adolescence*. New Jersey, Prentice Hall
- AZAR, C. D. JOHANSSON AND N. MATTSSON. 2013. Meeting Global Temperature Targets: Environmental Research letters.
- BANDURA, A. 1994. Self-efficacy. In, VS, Ramachaudran (Ed.). *Encyclopedia of Human Behaviour*. Academic Press, New York.
- BARTONE, P.T., R.J. URSANO. 1984. The Impact of Military Air Disaster on the Health of Assistance Worker: A Prospective Study. *The Journal of Nervous and Mental Disease*. Vol. 177, pp. 317-328.
- BECK, A. T., R.A. STEER AND G. K. BROWN. 1996. Beck Depression Inventory-II. San Antonio, Vol. 78, No. 2. pp. 490-498.
- COHEN, S., T. KAMARCK AND R. MERMELSTEIN. 1983. A global measure of perceived stress. *Journal of Health and Social Behavior*. Vol. 24, pp. 386-396.
- CROSS, M.J., L.M. MARCH, H.M. LAPSLEY, E. BYRNE AND P.M. BROOKS. 2006. Patient Self-efficacy and Health Locus of Control: Relationship with Health Status and Arthritis-related Expenditure. *Rheumatology*. Vol. 45, pp. 92-96.

- DUONGTRAN, P. 2011. Coping Resources among Southeast Asian-American Adolescents. *Journal of Human Behavior in the Social Environment*. Vol. 21, No. 2. pp.196–208.
- DUMONT, M. AND M. A. PROVOST.1999. Resilience in Adolescents: Protective Role of Social Support, Coping Strategies, Self-esteem, and Social Activities on Experience of Stress and Depression. *Journal of Youth and Adolescence*, Vol. 28, No. 3. pp. 343–363.
- FARID H. AND Z.H. SALIBI. 2014. Investigating the Relation Between Perceived Self-efficacy and Emotional Intelligence with Stress Coping Styles among Female Gifted Students in On *Cultural and Sociological Research*. Vol. No.1. pp. 129–154.
- FLORIAN, V., M. MIKULINER AND O. TAUBMAN. 1995. Does Hardiness Contribute to Mental Health During a Stressful Real-life Situation? The Roles of Appraisal and Coping. *Journal of Personality and Social Psychologies*. Vol. 68. pp. 687–695.
- FOLKMAN, S. AND R.S. LAZARUS. 1988. “The Relationship Between Coping and Emotion: Implications for Theory and Research,” *Social Science & Medicine*, Vol. 26, No. 3. pp. 309–317.
- KOBASA, S.C. 1979. Stressful Life Events, Personality, and Health, An Inquiry into Hardiness. *Journal of Personality and Social Psychology*. Vol. 37, No.1. pp. 1–11.
- KOBASA, S.C., S.R. MADDI AND S. KAHN.1982. Hardiness and Health: A Prospective Study. *Journal of Personality and Social Psychology*. Vol.42, pp. 168–177.
- LAZARUS, R.S. AND S. FOLKMAN. 1984. *Stress, Appraisal and Coping*. New York, Springer.
- MASOUDNIA, A. 2007. Self-efficacy, Perceived Stress and Coping Strategies in Stressful Situations. *Journal of Psychiatry and clinical Psychology of Iran*. Vol. 13, No.4. pp. 557–567.
- PETTIT, J.W. AND T.E. JOINER. 2006. *Chronic depression. Interpersonal Sources, Therapeutic Solutions*, Washington DC, America Psychological Association.
- RHODEWALT, F. AND J.B. ZONE. 1989. Appraisal of life change, depression, and illness in Hardy and Nonhardy Women. *Journal of Personality and Social Psychology*. Vol. 56 pp. 81–88.
- SCHWARZER, R. AND M. JERUSALEM. 1995. Generalized Self-efficacy Scale. In J. Weinman, S. Wright, and M. Johnston, *Measures in health psychology: A user’s portfolio. Causal and control beliefs* pp. 35–37. Windsor, UK: NFER-NELSON.
- SODERSTROM, M., C. DOLBIER, J. LEIFERMAN AND M. STEINHARDT. 2000. The Relationship of Hardiness, Coping Strategies, and Perceived Stress to Symptoms of Illness. *Journal of Behavioral Medicine*. Vol. 23, No. 3. pp. 311–328.
- STONE, A. A. AND J. M. NEALE.1987. New Measure of Daily Coping: Development and Preliminary Results. *Journal of Personality and Social Psychology*. Vol. 46, No. 4. pp. 892–906.
- SUNMOLA, ADEGBENGA, MORENIKE DIPEOLU, SUNDAY BABALOLA, AND ADEBAYO OTU. 2003. Reproductive, Sexual and Contraceptive Behaviour of Adolescents in Niger State, Nigeria. *African Journal of Reproductive Health*. Vol.6. pp. 82–92.
- WEIBE, D.J. 1991. Hardiness and Stress Moderation: A Test of Proposed Mechanisms. *Journal of Personality and Social Psychology*. Vol. 60, No.1. pp. 89–99.
- WILLEMEN, A.M., F.A. GOOSSENS, H.M. KOOT AND C. SCHUONGEL. 2008. Physiological Reactivity to Stress and Parental Support, Comparison of Clinical and Non-clinical Adolescents. *Journal of Clinical Psychology Psychotherapy*. Vol. 15, No. 5. pp. 340–351.