

## Interpersonal and Environmental Factors that Predict Depression in Lower Secondary School Girls

Teoh Hsien-Jin

Department of Psychology School of Health and Natural Sciences  
Sunway University College, No. 5 Jalan Universiti, Bandar Sunway  
46150 Petaling Jaya, Selangor, Malaysia

### ABSTRACT

**Objective:** Numerous studies indicate that interpersonal and environmental factors have a role in creating depressive symptoms in children. The objective of the study was to find out how temperament, negative life events, locus of control and social support predicted children's depression. **Method:** In this study, 243 female secondary school students were surveyed to ascertain how these factors predicted depressive symptoms. **Results:** The results of the analysis yield several conclusions. First, that not all aspects of temperament predict depression, the strongest seems to be mood. Second, that how upset a child is with negative events is a stronger predictor of depression compared with the total number of negative events. Third, locus of control predicts depression and fourth, social support from friends and parents also predicts depression. **Conclusion:** However when all the above factors are taken in to account, locus of control, extent of upsetness with the events and social support from friends are stronger predictors, relative to the other factors.

**Keywords:** Children, depression, temperament, life events, locus of control, social support

---

### INTRODUCTION

The prevalence of mental health problems amongst Malaysian children has recently been estimated at 15%.<sup>[1]</sup> These rates do not differ much from those of most developing countries: 17.7% in Australia and 18.1% in Canada.<sup>[2,3]</sup>

The prevalence of depression is so widespread that it has been called the common cold of psychiatry.<sup>[4]</sup> However, the Malaysian study did not estimate the prevalence of depression amongst Malaysian children. If it were similar to that of other countries, then we would estimate it to be as high as 10% - 20%.<sup>[5]</sup>

Considering that the rates of depression amongst children may be so high, it is crucial that populations where it exists be identified. Some studies have noted that while there are no gender differences amongst 6-12 year olds, the rates are higher amongst adolescent females, compared with males.<sup>[6]</sup> Thus, there exists a need to study the prevalence of depression amongst adolescent females.

Data from the subjects, rather than their parents, needs to be obtained as there is the potential for parents to not recognise depression in their children and instead view this withdrawn behaviour as good behaviour. After all, most parents are quite skilled at

---

\*Corresponding author: [hjteoh@sunway.edu.my](mailto:hjteoh@sunway.edu.my)

recognising outward signs of misbehaviour, but are rather poor at recognising internalised behavioural problems.<sup>[7]</sup> As such, aggressive behaviours in children are viewed as problematic, but withdrawn, quiet behaviours are mistaken as good behaviours.

If it were indeed the case that the prevalence of depression amongst girls is as high as the general population, then there is a need to understand the potential causes of this mental health problem. Some of the potential causes of depression that have been identified in the literature are temperament, the occurrence of negative life-events, social support, and perceived control over environmental events.<sup>[8,9,10]</sup>

Temperament is described as the 'how' of behaviour. It can be conceived as the basic building blocks of our behaviour. Multiple dimensions of temperament have been identified by Windle and Lerner.<sup>[11]</sup> Amongst these dimensions are activity level, rhythmicity (regularity), approach or withdrawal, adaptability, threshold or responsiveness, intensity of reaction, quality of mood, distractibility, attention span and persistence. Studies of the nature of temperament have found clusters of temperament type.<sup>[12]</sup> These include the easy child, characterised as having a positive mood, high rhythmicity, low- or moderate-intensity reactions, high adaptability, and an approach orientation to new situations and stimuli; the difficult child who has a temperamental style that makes for difficult interactions, characterised by low rhythmicity, high-intensity reactions, a withdrawal orientation to new situations and stimuli, slow adaptation, and a negative mood; and the slow-to-warm-up child, characterised as having a low activity level, a withdrawal orientation, slow adaptability, a somewhat negative mood, and relatively low reaction intensities. There is much evidence in the literature to suggest that the quality of the child's temperament determines the mental health.<sup>[13,14]</sup> Children with easy temperaments are less likely to develop mental health problems, as compared with children with difficult temperaments. Those with difficult temperaments have generally been found to be more likely to be anxious, depressed and more aggressive.

When there is crisis and trauma in one's life, one's coping abilities are put to the test. As such, there is consensus in the literature that an increase in negative life events in the child's life result in a greater incidence in mental health problems for that child. An increase in children's stressful life events predicted lower self-concept, lower pro-social academic skills, lower pro-social skills, higher internalising pathology and higher externalising pathology.<sup>[15]</sup> However, the occurrence of a single stressful event does not necessarily bring about mental health problems in children. The occurrence of an additional negative event multiplies by two, rather than adds to, the risk of a child developing mental health problems.<sup>[16]</sup>

Hopelessness is one of the characteristics of depression. It is the expectation that the future will either not improve or will be worse than the child's current situation. Approximately 70% of depressed children have been found to experience hopelessness.<sup>[17]</sup> Cognitive theorists, like Seligman<sup>[4]</sup> have proposed a learned helplessness model of depression. The model proposes that depression results from people's experiences and expectations that their responses do not influence events of their lives. When viewed from the perspective of whether the person sees a causal relationship between his own behaviour and that of the outcome of the situation, we are in effect describing the concept of locus of control. Children who believe that situational outcomes occur by chance or fate have external locus of control,

and those who see these outcomes as a result of his or her own behaviour have internal locus of control.<sup>[18]</sup> Based on these assumptions, it is hypothesised that children who are depressed will demonstrate greater tendencies towards external locus-of-control, as compared with non-depressed children.

Children's social support has been described in two ways. First as the continuing social aggregates that provide individuals with opportunities for feedback about themselves and for validation of their expectations of others.<sup>[19]</sup> Second is the information that leads a person to believe that she or he is cared for and loved, esteemed and valued, or belongs to a network of communication and mutual obligations.<sup>[20]</sup> The literature indicates that lower levels of social support for the child are predictive of mental health problems in children.<sup>[21]</sup> Lower levels of social support from classmates is associated with higher levels of depression, anxiety, attention problems, thought problems, social problems, somatic complaints and lower self-esteem. When more social support is provided by non-family members, such as peers and other adults, the children reported less externalising compared to internalising behaviour problems.<sup>[22]</sup>

In summary, the literature indicates that of the variety of mental health problems that are prevalent amongst children, depression is one of the most common, thus indicating that this is a topic in need of further examination. Furthermore, the incidence is usually higher in females compared to males, specifically amongst adolescent females. To understand potential causes of the disorder, several predictors of depression have also been identified, which are social support, locus of control and negative life events. Thus, the research questions of this study are as follow :

1. What is the prevalence of depression amongst this population of girls ?
2. How do the proposed factors predict depression ?

## METHOD

### *Sample*

The sample consisted of 243 Form 1 female students from a government secondary school. The average age of the students was 13 years. The school is multi-racial (that is, Malays, Chinese, Indians and Eurasians) and is within an urban environment. In the sample, there were 123 (50.6%) Malays, 13 (5.3%) Indians, 100 (41.1%) Chinese and 7 (2.8%) other races. Although data was not collected on the socio-economic status of the subject's parents, it is generally known that parents of subjects came from backgrounds ranging from high to low socio-economic status.

### *Method*

A single survey was used to obtain the information from the subjects. The questionnaires were administered as part of a larger project which involved presenting a social skills programme to the subjects. Permission was obtained from the school headmistress prior to the administration of the questionnaires and it was deemed that there would not be risks involved in the study. Given this situation, complete classes of children were surveyed,

and thus there were no drop-outs. The questionnaires were administered prior to the presentation of the programme. The questionnaires were administered by one Clinical Psychologist, nine Master of Clinical Psychology interns and two Master of Medicine (Psychiatry) interns. In all cases, the questions were read out to the subjects by the questionnaire administrators. The questionnaires were all translated from English into Bahasa Malaysia by a Clinical Psychologist and further scrutinised by a Clinical Psychologist and three other Clinical Psychology interns who were all fluent in Bahasa Malaysia and English.

#### *Measurement Instruments*

The Dimensions of Temperament Survey-Revised [DOTS-R]<sup>[23]</sup> is a 54-item self-report survey designed to measure temperament. It yields nine sub-scores of temperament which are activity level-general, activity level-sleep, approach/withdrawal, flexibility/rigidity, mood, rhythmicity-sleep, rhythmicity-eating, rhythmicity-daily habits, and task orientation. A four choice response format, 'usually false', 'more false than true', 'more true than false', and 'usually true', is used with each item. Higher scores are generally indicative of a better temperament. Overall reliability for the DOTS-R dimensions with elementary school children ranges from .54 to .81.<sup>[23]</sup>

The Social Support Scale for Children [SSS-C]<sup>[24]</sup> measures perceived support and regard across four domains : parental support, classmate support, teacher support and close friend support. The scale consists of 23 items which children respond to on a four-point scale. The internal consistency for each of the four sub-domains ranges from .72 to .82.<sup>[24]</sup> The scale yields four separate sub-domain mean scores. The higher a score obtained, the greater the indication of perceived support.

Nowicki-Strickland Locus of Control Scale [N-SLCS]<sup>[18]</sup> is a 40-item instrument designed to measure whether or not a child believes that reinforcement comes to him or her by chance or fate (external locus of control) or because of his or her own behaviour (internal locus of control). The responses to each question is either 'yes' or 'no'. Higher scores reflect more external locus of control. The reliabilities of the scale are between .74 - .81 for secondary school children. Over a period of six weeks, test-retest correlations ranged from between .66 - .71.<sup>[18]</sup>

The Negative Life Events Schedule-Children [NLES-C]<sup>[25]</sup> is a 50-item schedule on negative post-parental separation and negative general life events that the child experiences. The scale yields two scores, which are a total negative life events score and also a score indicating how upset children were by the negative events. Higher scores are indicative of greater distress. In general, the test-retest reliability over a period of three months for the scale ranged from .85 to .75 (two weeks).<sup>[25]</sup>

The Centre for Epidemiologic Studies Depression Scale for Children [CES-D]<sup>[26]</sup> is a child self-report measure of depression. It consists of 20 items which have 4-answer choices

ranging from 0 [not at all] to 3 [a lot]. Total scores range from 0 to 60 with higher scores indicating greater symptomatology. Weissman *et al.* [26] found that the CES-D correlated reasonably well with the Children's Depression Inventory [27] ( $r = .44 p < .05$ ).

#### Statistical Procedures

The purpose of the analysis was to observe the prevalence of depression amongst this sample and also to find out how the hypothesised factors predicted depression. The independent variable was a measure of children's self-reported depression and the independent measures were measures of locus of control, social support, negative life events and temperament. To estimate the relationship between the independent and dependent variables, a series of Multiple Linear Regressions was completed. All the measures were measured on a continuous scale whose descriptive data are given in Table 1.

### RESULTS

To estimate the prevalence of depression in this sample, depression scores which were more than 33.54 (that is, 1 SD ; 7.26 above the mean score of 25.28) was considered to be within the clinical range. The results indicated that 14% of the sample scored greater than the clinical cut-off score.

To find out how the hypothesised predictors of depression predicted depression, the analysis of data went through two stages: first all the sub-scales of each measurement instrument were regressed on the measure of depression. Following this, only the sub-scales that were found to significantly relate with depression, were grouped together and

**Table 1.** Depression and hypothesised predictors in 243 Form 1 female students in an urban Government school

Variables	Mean	SD	Median	Range
Depression	25.28	7.26	24.0	7.0 -49.0
Locus of control	18.14	3.97	18.0	4.0 -30.0
Social support - parents	2.88	0.62	3.0	1.0 - 4.0
Social support - classmates	2.77	0.46	2.83	1.0 - 4.0
Social support - friends	2.88	0.62	2.833	1.0 - 4.0
Social support - teachers	2.75	0.55	2.83	1.0 - 4.0
Total Negative life events	3.03	2.89	3.0	0 -17.0
Upsetness with Negative life events	2.99	1.70	3.67	0 - 5.0
<i>Temperament</i>				
Sleep Activity	11.21	3.11	12.0	4.0 -16.0
Approach Withdrawal	18.45	3.39	19.0	8.0 -27.0
Mood	22.12	3.22	22.0	11.0 -28.0
Rhythmicity - Eating	10.72	3.21	10.0	5.0 -20.0
Rhythmicity - Daily Habits	9.95	2.66	10.0	4.0 -19.0
Rhythmicity - Sleeping	13.14	3.37	6.0	22.0
Distractibility	20.08	3.60	20.0	11.0 -31.0

**Table 2.** Summary of ordinary least squares multiple regression analysis for temperament predicting depression in 243 Form 1 female students in an urban Government school

	B	SE B	$\beta$
Depression			
General Activity	.251786	.136492	.124338
Sleep Activity	-.175821	.157903	-.075374
Approach Withdrawal	.171469	.143765	.080243
Mood	-.335978	.151737	-.149183*
Rhythmicity - Eating	.291346	.168228	.128680
Rhythmicity - Daily Habits	-.180553	.206511	-.066221
Rhythmicity - Sleeping	-.109271	.159770	-.050656
Distractibility	-.182883	.135133	-.090690

Note.  $R^2 = 0.049$  [ $F(8, 234) = 1.521, p > .05$ ]

\*  $p < .05$

**Table 3.** Summary of ordinary least squares multiple regression analysis for negative life events predicting depression in 243 Form 1 female students in an urban Government school

	B	SE B	$\beta$
Depression			
Total Negative life events	-.034043	.048826	-.053004
Upsetness with Negative life events	.805569	.324412	.188769*

Note.  $R^2 = 0.027$  [ $F(2, 240) = 3.394, p < .05$ ]

\*  $p < .05$

then regressed on depression. Through this means, the intention was to discover the relationship of each predictor to depression, relative to one another.

#### *Temperament*

Five percent of the variance in self-reported depression was accounted for by measures of temperament [ $F(8, 234) = 1.521, p > .05$ ] (see Table 2). Only mood significantly predicted depression. Subjects who had a less positive mood were more likely to be depressed.

#### *Negative Life Events*

Three percent of the variance in self-reported depression was accounted for by measures of negative life events [ $F(2, 240) = 3.394, p < .05$ ] (see Table 3). Only the degree to which children were upset by the event significantly predicted depression. Subjects who were more upset with the negative events were more likely to be depressed.

**Table 4.** Summary of ordinary least squares multiple regression analysis for measures of social support predicting depression in 243 Form 1 female students in an urban Government school

	B	SE B	$\beta$
Depression			
Social support from classmates	-1.995006	1.112740	-.127661
Social support from friends	-2.008372	.828360	-.171931*
Social support from parents	-1.622833	.786499	-.138423*
Social support from teachers	.243506	.859598	.018647

Note.  $R^2 = 0.101$  [ $F(4, 238) = 6.757, p < .001$ ]

\*  $p < .05$

**Table 5.** Summary of Ordinary Least Squares Multiple Regression Analysis for Measures of Locus of Control Predicting Depression in 243 Form 1 Female Students in an urban Government school

	B	SE B	$\beta$
Depression			
Locus of control	.506245	.113098	.277048**

Note.  $R^2 = 0.079$  [ $F(1, 241) = 20.036, p < .001$ ]

\*\*  $p < .01$

### *Social Support*

Ten percent of the variance in self-reported depression was accounted for by measures of social support [ $F(4, 238) = 6.757, p < .001$ ] (see Table 4). Only social support from friends and parents significantly predicted depression. Subjects who perceived that they had less support from their friends and parents were more likely to be depressed.

### *Locus of Control*

Eight percent of the variance in self-reported depression was accounted for by measures of locus of control [ $F(1, 241) = 20.036, p < .001$ ] (see Table 5). Subjects who had greater external locus of control were more likely to be depressed.

### *All Factors Predicting Depression*

Sixteen percent of the variance in self-reported depression was accounted for by measures of Locus of Control, Temperament, Negative Life Events and Social Support [ $F(5, 237) = 9.264, p < .001$ ] (see Table 6). When contrasted with the other factors, only social support from friends, locus of control and negative life events significantly predicted depression. Subjects, who perceived that they had less support from their friends, had greater external locus of control and were more upset by negative events, were more likely to be depressed.

**Table 6:** Summary of ordinary least squares multiple regression analysis for measures of locus of control, temperament, negative life events and social support predicting depression in 243 Form 1 female students in an urban Government school

	B	SE B	$\beta$
Depression			
Locus of control	.414493	.111700	.226836**
Mood	-.080223	.136810	-.035621
Upsetness with Negative life events	.632154	.255248	.148133*
Social support from friends	-2.386283	.721710	-
.204283**			
Social support from parents	-1.144105	.726739	-.097589

Note.  $R^2 = 0.163$  [ $F(5, 237) = 9.264, p < .001$ ]

\*  $p < .05$

\*\*  $p < .01$

To summarise, the results of the statistical analyses indicate that low moody temperament, upsetting negative events, less locus of control, poor social support from friends and parents predict depression. In total, the factors account for about one-fifth of the factors that might possibly predict depression in these subjects.

## DISCUSSION

This study has brought about several conclusions. First, that not all aspects of temperament predict depression, the strongest seems to be mood. Second, that how upset a child is with negative events is a stronger predictor of depression, as compared with the total number of negative events. Third, locus of control predicts depression and fourth, social support from friends and parents also predicts depression. However, when all the above factors are taken into account, locus of control, extent of upsetness with the events and social support from friends, are stronger predictors, relative to the other factors.

The findings of this study, generally support those of other studies that have demonstrated a relationship between depression and mood, degree of upsetness with events, locus of control, and social support from friends and parents.<sup>[28, 29, 22]</sup> The fact that the degree of upsetness about negative events, rather than the number of negative events *per se*, which is a predictor of depression is in line with Lazarus and Folkman's<sup>[30]</sup> proposition that one's perception of events is the most important predictor of emotions.

When all the various sub-scales that predict depression are grouped together, it is important to note that one general category, which is temperament (that is, mood), does not significantly predict depression. This seems to suggest that despite one's temperament, other factors such as the way negative events are perceived (that is, upsetness with negative life events), how much control one feels one has over events (that is, locus of control) and the support that one has from friends are more important. Thus, two components are generally important, the cognitive component (that is, perceptions) and the behavioural component (that is, companionship).

The cognitive component is especially important, considering that much of depression, as described in Beck's model of depression is about misperceptions.<sup>[31]</sup> This theory is supported by the analysis which shows clearly that if one perceives that one has no control over events and that events are viewed as upsetting, then one is more prone to develop depressive symptoms. Thus, practically, it would imply that one of the ways to alleviate or prevent symptoms of depression from occurring is to in effect change the way one perceives events. This is in fact the philosophy of cognitive therapy.<sup>[32]</sup>

Much of intervention for depression, cannot ignore the fact that there are protective factors that help prevent against depression. The analysis also points out that social support from friends is important. The more support one receives from friends, the less likely one is to develop depressive symptoms. The results lend further support to the work of Lustig, Wolchik and Braver<sup>[29]</sup>, who noted that the existence of 'chums' was an important predictor for future mental health. This being the case, the next step of study to prevent depression, should in effect be on how children make and lose friends. Perhaps it may be to do with their friendship making skills, or perhaps problem-solving behaviours.<sup>[33,34]</sup>

Despite the many conclusions made in this study, there are several limitations. First, it concerns the age of the subjects. In this study, the sample was restricted to 14-year-olds (that is, Form 1) girls. While the research literature indicates that children of this age are at risk of depression in other countries, it is difficult to anticipate if the findings of this study generalise to other adolescent age groups. The issue of life-styles influences also needs to be considered as this sample consists of girls living in an urban environment. Finally, the conclusions that may be drawn about causation are limited as this sample is essentially cross-sectional. To determine the causality of perceptions and social support of depression, a longitudinal study needs to be conducted where the same information is collected on the same sample at a later date.

Many questions arise from this study, perhaps the most important is whether simply altering the perceptions of children about negative events would in fact help alleviate depression. There is some evidence that programmes that focus on altering children's beliefs about themselves results in a reduction in depression.<sup>[35,36]</sup> Thus, testing these programmes on Malaysian populations may be one way of testing the applicability of the above findings and thus the above programmes. The other question involves the importance of social support from friends. Perhaps programmes that target depression in children could incorporate components that focus on friendship building. Currently, social skills programmes have been developed with friendship acquisition in mind.<sup>[37,38]</sup> The importance of friendship could further be tested out in programmes that incorporate friendship acquisition components and those that do not. Finally, none of the factors that predict depression work in isolation, they all interact with one another to bring about outcomes. Thus a model that shows how the factors affect one another and predict depression would further add to our understanding as to how the processes at play work.

#### REFERENCES

- [1] Toh CL, Ding LM, Peng R *et al.* Psychiatric Morbidity in Children and Adolescents. Public Health Institute, Ministry of Health, Malaysia, 1997.

- [2] Zubrick SR, Silburn SR, Garton A *et al.* Western Australian Child Health Survey : Developing Health and Well-being in the Nineties. Perth, Western Australia : Australian Bureau of Statistics and the Institute for Child Health Research, 1995.
- [3] Offord DR, Boyle MH, Szatmari P *et al.* Ontario Child Health Study. II. Six-month prevalence of disorder and rates of service utilization. *Arch Gen Psychiatry* 1987; 44 : 832-836.
- [4] Seligman MEP. Helplessness. Freeman, San Francisco, 1975.
- [5] Puig-Antich J, Gittelman R. Depression in childhood and adolescence. In ES Paykel (ed). *Handbook of affective disorders* New York : Guilford Press, 1982 : 379-392.
- [6] Kashani JH, McGee RO, Clarkson SE *et al.* Depression in a sample of 9-year-old children. *Arch Gen Psychiatry* 1983; 40 : 1217-1223.
- [7] Pedro-Carroll JL, Cowen EL, Hightower AD, Guare JC. Preventive intervention with latency-aged children of divorce : a replication study. *Am J Community Psychol* 1986; 14 : 277-290.
- [8] Windle M. Temperament and social support in adolescence: interrelations with depressive symptoms and delinquent behaviours. *J Youth and Adolesc* 1992; 21 : 1-21.
- [9] Johnson JH, McCutcheon SM. Assessing life stress in older children and adolescents : preliminary findings with the life events checklist. In: IG Sarason & C D Spielberger (eds). *Stress and anxiety* Washington, DC : Hemisphere, 1980; Vol.7 : 111-125.
- [10] Kupersmidt JB, Coie JD, Dodge KA. The role of poor peer relationships in the development of disorder. In: AsherSR & Coie JD (eds). *Peer rejection in childhood*. Cambridge, MA : Cambridge University Press, 1990.
- [11] Windle M, Lerner RM. Reassessing the dimensions of temperamental individuality across the life span : the revised dimensions of temperament survey. *J Adolesc Res* 1986; 1 : 213-230.
- [12] Lerner RM. The Ipsative approach. In: RM Lerner (ed). *Concepts and theories of human development*. New York, NY: Random House, Chapter 10, 2nd Ed, 1986.
- [13] Hetherington EM. Coping with family transitions : winners, losers and survivors. *Child Dev* 1989; 60 : 1-14.
- [14] Rutter M. Parent-child separation: psychological effects on the children. *J Child Psychol Psychiatry* 1971; 12 : 233-260.
- [15] Sandler I, Wolchik S, Braver S, Fogas B. Stability and quality of life events and psychological symptomatology in children of divorce. *Am J Community Psychol* 1991; 19 : 501-520.
- [16] Rutter M. Protective factors in children's responses to stress and disadvantage. In: MW Kent & JE Rolf (eds). *Primary prevention of psychopathology. Social competence in children*. Hanover, NH : University Press of New England, Vol III, 1979.

- [17] Carlson GA, Cantwell DP. A Survey of depressive symptom in a child and adolescent psychiatric population : interview data. *J Am Acad Child Psychiatry* 1979; 18 : 587-599.
- [18] Nowicki S, Strickland BR. A locus of control scale for children. *J Consult Clin Psychol* 1973; 40 : 148-154.
- [19] Caplan G. Support systems and community mental health : lectures on concept development. New York : Behavioural Publications, 1974.
- [20] Cobb S. Social support as a moderator of life stress. *Psychosom Med*, 1976; 38 : 300-314.
- [21] Bouchard C, Drapeau S. The psychological adjustment of children from separated families: the role of selected social support variables. *J Prim Prev* 1991; 11 : 259-276.
- [22] Wolchik SA, Reuhlman LS, Braver SL, Sandler IN. Social support of children of divorce: direct and stress buffering effects. *Am J Community Psychol* 1989; 17 : 485-501.
- [23] Thomas A, Chess S. Temperament and development. New York, NY : Brunner/Mazel, 1977.
- [24] Harter S. Manual for the social support scale for children. Denver, CO : University of Denver, 1985.
- [25] Sandler IN, Wolchik SA, Braver SL. The stressors of children's post-divorce environments. In : Wolchik AA & Karoly P (eds). *Children of divorce : empirical perspectives on adjustment*. New York, NY : Gardner Press, 1988; 111-143.
- [26] Weissman MM, Orvaschel H, Padian N. Children's symptoms and social functioning self-report scales. *The J Nerv Men Dis* 1980; 168 : 736-740.
- [27] Kovacs M, Beck AT. An empirical clinical approach towards a definition of childhood depression. In : Schulterbrandt JG & Raskin A (eds). *Depression in children : diagnosis, treatment, and conceptual models*. New York, NY : Raven Press : 1977: 1-25.
- [28] Teoh HJ. Family structure and family function in the prediction of child mental health. Unpublished Doctoral Dissertation. University of Western Australia: Perth, Australia, 1997.
- [29] Lustig JL, Wolchik SA, Braver SL. Social support in chumship and adjustment in children of divorce. *Am J Community Psychol* 1992; 20 : 393-399.
- [30] Lazarus RS, Folkman S. *Stress, appraisal and coping*. New York : Springer, 1984.
- [31] Beck AT. *Cognitive therapy and emotional disorders*. NY : Penguin, 1976.
- [32] Beck JS. *Cognitive therapy : basics and beyond*. NY : Guilford, 1995.
- [33] Brumback RA, Dietz-Schmidt SG, Weinberg WA. Depression in children referred to an educational diagnostic center : diagnosis and treatment and analysis of criteria and literature review. *Dis Nerv Syst* 1977; 38 : 529-535.

- [34] Hymel S, Bowker A, Woody E. Aggressive versus withdrawn unpopular children : variations in peer and self-perceptions in multiple domains. *Child Dev* 1993; 64 : 879-896.
- [35] Jaycox L H, Reivich KJ, Gillham J, Seligman MEP. Prevention of depressive symptoms in school children. *Beh Res Ther* 1994; 32 : 801-816.
- [36] Stark KD. Childhood depression - school-based intervention. New York, NY: Guilford Press, 1990.
- [37] Allen KE, Benning PM, Drummond T. Integration of normal and handicapped children in a behaviour modification preschool : a case study. Paper presented at the Third Annual Conference on Behaviour Analysis in Education. Laurence, KS, 1972, May.
- [38] Schneider BH. Didactic methods for enhancing children's peer relations : a quantitative review. *Clin Psychol Rev* 1992; 12 : 363-382.