

Social Support: Its Linkages with Personality, Depression and Anger

*V.V.Upmanyu
Sujata Minhas and
Fariba Moradi Goloshejerdi*

The main purpose of the study was to refine, replicate and extend the body of Knowledge about the psychological factors that might contribute to the perceived social support among the adolescents. 200 males and 200 females were administered Sarason's Social Support Questionnaire, IPAT Anxiety Scale Questionnaire, Zung's Self-Rating Depression Scale, Rotter's Internal – External Scale, Eysenck Personality Questionnaire and Spielgerger's Anger Expression Inventory. The application of Principal Component Method following Varimax Rotation revealed the detrimental role of psychoticism and depression in the perceived social support for male adolescents only. Interestingly, for female adolescents the perceived social support was found to be independent of personality and affective factor.

Social support is embedded in the ongoing social interactions that are part of the ever changing network of social relationships. The Social support has been defined as “the existence of availability of people on whom we can rely, people who let us know that they care about, value and love us” (Sasason, Levine, Basham, & Sarason, 1983). Thus, social support is an interwoven network of personal relationships that provide companionship, assistance, attachment of the individual.

A close scrutiny of the bulk of the research on social support reveals that it is based on the assumption that social support in the form of the social environment affects people's physical and mental health in an antecedent-consequent liner fashion. More specifically, social support was originally conceptualized as an environmental provision, a resource that resides outside the individual. In this context, most of the studies investigated one of the following hypotheses (Cohen & Wills, 1985):

- i. The direct (main) effect: Social support has a direct positive impact on health. For example, the more direct or emotional help people receive, the less likely symptoms of mental or physical ill-health will appear.
- ii. The indirect (mediating) effect: Social support has a negative impact on stressors at work and thus has a positive impact on health. If, for example, the stressor is quantitative overload

and the individual will receive direct instrumental help when the workload exceeds a certain limit, social support directly reduces the stressor and thus reduces the probability of ill-health. In this case, social support has a stress-preventive effect (Barrera, 1986). Methodologically, the social support-health relationship is mediated by the stressors.

- iii. The moderating (interaction) effect : According to this mechanism, which is also known as the buffering effect, social support moderates the relationship between stressors and strains. There is a strong stressor strain relation when support is low and a weak or no stressor-strains. There is a strong stressor strain relation when support is low and a weak or no stressor-strain relation when support is high. Social support works as a buffer and prevents stressors from developing their impact on strains. It is the moderating effect that has received the most attention in the literature.
- iv. One reason may have been the practical implications : Because stressors can sometimes not be reduced, the negative effect of high stressors can be compensated for by increasing social support.

Recently, an alternative model of social support has been gaining acceptance; this model rejects the narrow view of level of social support as an environmental provision independent of individual differences. In the emerging alternative model, social support is posited as a variable with its own set of determinants and antecedent influences (Sarason & Sarason, 1985 ; Broadhead et al.,1984; Lazarus & Folkman, 1984 ; Heller & Swindle,1983). In this context, the role of personality as a determinant of both appraisals of support and actual support received has attracted increasing attention (Repetti, 1987; Sarason, Sarason, & Shearin, 1986; Hobfoll, 1985; Rook, 1984). Individual's personality may affect his or her actual social environment. The individual's personality affects the extent to which social support resources are available, which in turn, affects the individual's health outcomes.

This shift towards the concept of perceived social support depending upon personality and cognitive make up of the person opens an important avenue for investigation of individual differences that might alter the level of perceived social support available. Thus, the major purpose of the present study was to refine, replicate and extend the body of knowledge about the psychological factors that might relate to participant's perceived availability of social support among adolescents. In particular, we investigated the role of personality factors in perceived social support.

Sample

Participants were 200 males (aged 13-18 years) and 200 females (aged 14-18 years) selected from

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various schools and colleges in Punjab and Himachal Pradesh. The sample was limited to participants who were available to participate in this study, thus limiting the assumption of randomization.

Tests Used

The following tests were used :

- 1) Social Support Questionnaire (Sarason, Levine, Basham, & Sarason, 1983).
- 2) IPAT Anxiety Scale Questionnaire (Cattell & Scheier, 1963).
- 3) Zung Self-Rating Depression Scale (Zung, 1965).
- 4) Internal-External Scale (Rotter, 1966).
- 5) Eysenck Personality Questionnaire (Eysenck, 1975)
- 6) State-Trait Anger Expression Inventory (Spielberger, 1988)

Social Support Questionnaire (SSQ: Sarason, Levine, Basham, & Sarason, 1983).

Social Support Questionnaire (SSQ) developed by Sarason, Levine, Basham, & Sarason (1983) consists of 27 items. Each of the 27 items asks a question to which a two-part answer is requested. The item asks the subject (a) to list the people to whom they can turn and on whom they/can rely in given sets of circumstances, and (b) indicate how satisfied they are with these supports on a 6-point Likert Scale (very satisfied, fairly satisfied, a little satisfied, a little dissatisfied, fairly dissatisfied, very dissatisfied). The SSQ yields two scores: (a) perceived availability of the number of supportive persons listed (SSQ-N), and satisfaction with available support (SSQ-S). The number (N) score for each item of the SSQ is the number of support persons listed. The social support available to deal with a given problem is rated on a scale ranging from "very satisfied" to "very dissatisfied". This yields a satisfaction (S) score for each item that ranges between 1 and 6. The overall N and S scores are obtained by dividing the sum of N or S scores for all items by 27, the number of items included in the social support questionnaire.

The social support questionnaire has been found to have a number of desirable, psychometric properties. It was found to have (a) stability over a 4-week period of time, and (b) high internal consistency among items.

IPAT Anxiety Scale Questionnaire (Cattell & Scheier, 1963)

The IPAT Anxiety Scale Questionnaire was developed from extensive research and practice as a means of getting clinical anxiety information rapidly, objectively and in a standard manner. It is a brief, non-stressful, clinically - valid questionnaire for measuring anxiety, applicable to all but the lowest educational levels and appropriate for ages of 14 to 15 years or upward throughout the adult range. The scale gives an accurate appraisal of free anxiety level, supplementing clinical diagnosis and

facilitating all kinds of research or mass screening operations where very little diagnostic or assessment time can be spent with each examinee. ASQ provides reliable and valid measures pertaining to anxiety and five different components, namely Factors Q3, C, L, 0 and Q4.

Zung Self-Rating Depression Scale (Zung 1965)

Zung Self-Rating Depression Scale is intended to map complex behavioural changes, cognitive processes and their affective concomitants. The Zung Self-Rating Depression Scale is a 20 item scale measuring the frequency of depressive symptomatology. Out of 20 items included in the scale, 10 are worded symptomatically positive and 10 symptomatically negative. The scale appears well balanced with equal number of positive and negative statements. The items were worded in a positive as well as negative direction in order to break any tendency towards response set.

Despite some concern about discriminant validity of the scale, the review of literature (e.g., Upmanyu, Upmanyu, & Dhingra, 1992; Upmanyu & Reen, 1990, 1991) reveals that Zung Self-Rating Depression Scale has been extensively used by ; researchers as self-rating measures of depressive tendencies. The present study also , made use of Zung's scale for assessing depressive symptoms or tendencies.

Internal-External Scale (Rotter, 1966)

Rotter (1966) developed the Internal - External Scale to measure the generalized expectancies for internal and external control of reinforcement. Rotter's Scale consists of 23 items and 6 additional buffer items in a forced choice format covering a broad variety of situations. A low score implies an internal locus of control and a high score, an external locus. The scale has been extensively used by researchers interested in measuring the I-E construct. Despite concerns shown by factor analytical studies, Rotter (I-E) scale continues to enjoy widespread use for measuring generalized locus of control. Keeping in view its extensive use, this study also made use of Rotter's (I-E) scale for measuring internal-external locus of control.

Eysenck Personality Questionnaire (Eysenck & Eysenck, 1975)

The Eysenck Personality Questionnaire (EPQ) was first published in 1975 and is a relatively short questionnaire designed to measure the basic dimensions of personality as proposed by Eysenck. The questionnaire as currently constituted presents a three dimensional analysis of personality with orthogonal super-factors of extraversion-introversion (E-I), neuroticism (N) and psychoticism (P). In addition, it includes Lie-Scale (21 items) which measures a tendency to fake good and some degree of social naivete (Eysenck & Eysenck, 1975).

The test has been also used in India and found suitable (Upmanyu & Singh, 1984; Upmanyu, Gill, & Singh, 1982; Hundal & Upmanyu, 1981 ; Verma & Wig 1972).

Hindi Version of State-Trait-Anger Expression Inventory (ST AXI) (Spielberger, 1988; Krishna, 1988)

The ST AXI 10: items S-Anger and T -Anger scales were designed to assess the intensity of angry feelings at a particular time (items S I to S 10) and individual differences in the disposition to experience anger (items T11 to T20). The T-anger/T subscale (Items T11, T12, T13, T16) measures a general disposition to experience angry feelings without specific provocation~ the T -Anger/R Sub-scale (items T14, T15, T18, T20) assess the individual's proneness to experience anger when criticized or treated unfairly by others.

Anger expression (AX/EX), based on 24 items provides a general index of the frequency that anger is expressed, regardless, of the direction of the expression and is based on AX/IN, AX/Out an~ AX/Con sub-scales of the AX scale.

Procedure

The tests were administered to subjects in a group of 10-15 subjects who were assured that the information to be collected would remain confidential and presented only in a form in which no person could be identified. The tests were scored strictly in accordance with the' procedures suggested by the authors. Hand scoring was done by using separate keys for respective tests in the study. Social Support Questionnaire was scored for two measures of social support. -SSN and SSQ, The IPAT Anxiety Scale Questionnaire was scored for five anxiety measures concerning Q3, C, L, O, Q4. Zung Self-Rating Depression Scale was used as a measure of depression. Internal-External Scale was scored to measure locus of control. The Eysenck Personality Questionnaire was scored for measures 'pertaining to psychoticism, neuroticism, extraversion and social desirability, while State-Trait Anger Expression Inventory was used to score two measures referring to state and trait anger among subjects.

Analysis

For the purpose of analyzing. data, the bivariate correlations have been the factor analyzed by the Principal Component Method using -unities in the diagonal. Following Kaiser's (1960), 'only those factors were retained for rotation (varimax) which had latent root above 1.

Results

The results of the current study have been, presented under' the following subheads:

- a) Bivariate Correlations
- b) Factors Analysis

a) Bivariate Correlations

Pearson’s product moment correlations were computed for the scores of subjects on 15 variables after ascertaining that the data fulfilled the main requirements underlying the use of Pearson’s correlation (Guilford, 1956). This was done separately for males and females. Since the number of subjects were large and there were many correlations, only correlations significant at .01 level have been discussed (some significant correlations can be expected to have” occurred simply by chance, and thus the probability of type I error is increased by using .05 level). Inter correlations are shown in Tables 1 to 2.

A perusal of bivariate correlations reveal positive correlation between two indices of social support

Table - 1

Inter Co-relation Matrix (Males Sample : N = 200)

S.No.	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	SSN (Quantitative)	-	.35	-.09	.06	.04	.02	.03	-.21	-.02	.10	-.02	-.11	-.02	.01	.09
2	IPAT Anxiety	SSN (Qualitative)	-	-.16	-.13	.00	-.06	-.09	-.07	-.25	.01	-.12	-.33	.11	-.16	-.01
3		Factor Q ₃		-	-.08	.04	.30	.11	.23	.22	.02	.22	.13	-.17	.17	.20
4		Factor C			-	.19	.13	.22	.15	.08	.04	.29	.20	-.15	.24	.08
5		Factor L				-	.22	.17	-.04	-.14	-.02	.17	.07	-.20	.00	.15
6		Factor O					-	.26	.15	.02	-.02	.26	.19	-.20	.15	.16
7		Factor Q ₄						-	.13	.15	.17	.29	.27	-.29	.21	.07
8	Depression							-	.08	-.06	.33	.38	-.22	.25	.19	
9	Locus of Control								-	-.17	.16	.19	-.24	.14	.05	
10	EPQ	Extraversion								-	-.10	.05	.07	.13	-.07	
11		Neuroticism										-	.40	-.47	.36	.32
12		Psychoticism											-	-.36	.36	.17
13		Social Desirability												-	-.28	-.32
14		Trait Anger													-	.36
15	State Anger															-

Decimals omitted

Values of Correlation significant at .01 level = .181

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Table 2

Inter co-relation Matrix (Females Sample : N = 200)

S.No.	Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	SSN (Quantitative)	-	.28	-.14	-.14	.13	.04	.04	-.12	-.14	.17	-.12	-.24	.01	.14	-.02
2	SSN (Qualitative)		-	-.15	.00	.03	-.09	-.03	-.26	-.06	.08	-.16	-.13	.19	-.12	-.14
3	Factor Q ₃			-	.18	.01	.14	.19	.24	.27	-.08	.26	.14	-.24	.16	.08
4	Factor C				-	-.05	.14	.27	.16	.17	.07	.21	.19	-.20	.21	.06
5	Factor L					-	.20	.01	-.05	-.01	.02	.00	-.22	-.06	.10	.09
6	Factor O						-	.28	.26	.09	-.09	.26	.02	-.17	.12	.19
7	Factor Q ₄							-	.24	.27	-.11	.26	.13	-.16	.18	.13
8	Depression								-	.34	-.16	.43	.33	-.13	.28	.11
9	Locus of Control									-	-.18	.18	.10	-.01	.11	.06
10	Extraversion										-	-.01	.06	-.03	.05	.11
11	Neuroticism											-	.26	-.26	.15	.20
12	Psychoticism												-	-.21	.17	.19
13	Social Desirability													-	-.23	-.27
14	Trait Anger														-	.34
15	State Anger															-

Decimals omitted

Values of Correlation significant at .01 level = .181

derived from Sarason's Social Support Questionnaire (males: $r=.35, p<.01$. females: $r=.28, p<.01$). The bivariate correlations also reveal differential pattern of correlations of social support with different variables for males and females. For male adolescents, the perceived social support (qualitative) was found to be correlated significantly with psychoticism ($r=-.33, p<.01$) and perceived social support (quantitative) was observed to be correlated significantly with depression ($r = -.30, p<.01$). Furthermore, locus of control also appeared to be correlated significantly with perceived social support (qualitative : $r=-.25, p<.01$). In contrast, for female adolescents perceived social support was noted to be correlated significantly only with depression and psychoticism, the correlations being $-.24 (p<.01)$ and $-.26$

($p < .01$), respectively. The remaining correlations involving social support have emerged to be non-significant.

Information yielded by the pattern of bivariate correlations as mentioned above is more or less only suggestive and diffuse because in case of bivariate correlations unknown overlap tends to eclipse the genuine relationships existing between different measures. In order to have a clearly structured and precise nature of genuine relationships existing between different measures, the existing overlap needs to be partialled out. This was done by applying factor analysis to the set of bivariate correlations obtained in the current study.

b) Factor Analysis

The results of the current study are shown in Table III and IV. It can be seen from the factor loadings that for male adolescents, six factors were extracted which accounted for 63.77 per cent of the total variance. For female adolescents, five factors -accounting for 55.03 per cent of the total variance were extracted.

Table No. 3

Varimax Rotated Factor Loadings (Males Sample : N = 200)									
Sr. No.	Variables	I	II	III	IV	V	VI	h^2	
1	SSN	0.1	-.02	-.83	-.09	.14	.13	.73	
2.	SSQ	-.01	.09	-.64	.46	-.11	-.19	.68	
3.	Anxiety Measures Q ₃	.27	-.33	.24	-.23	-.65	.10	.72	
4.		C	.25	-.21	-.04	-.06	.67	.10	.57
5.		L	.00	-.75	-.04	.20	.20	-.00	.64
6.		O	.21	-.68	.05	-.05	-.19	-.00	.55
7.		Q ₄	.23	-.43	.01	-.31	.30	-.26	.49
8.		Depression	.66	.11	.48	.22	-.03	-.17	.67
9.	Locus of Control	.14	.12	.03	-.84	-.07	-.14	.76	
10.	Extraversion	.01	.04	-.03	.12	.02	.89	.81	
11.	Neuroticism	.68	-.26	.04	-.10	.14	-.13	.58	
12.	Psychoticism	.56	-.08	.45	-.21	.25	.12	.58	
13.	Social Desirability	-.57	.24	.08	.28	-.07	.12	.49	
14.	Trait Anger	.66	.00	-.00	-.18	.08	.35	.60	
15.	State Anger	.63	-.12	-.25	.03	-.23	.01	.53	
Cumulative Per cent Contribution		17.71	28.24	38.49	47.64	55.96	63.77		

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Table No. 4

Varimax Rotated Factor Loadings (Females Sample : N = 200)							
Sr. No.	Variables	I	II	III	IV	V	h ²
1.	SSN	.25	-.20	.07	.69	.25	.65
2.	SSQ	-.24	.06	.09	.73	-.04	.06
3.	Anxiety Measures	.02	.50	-.23	-.25	.10	.37
4.		.01	.77	-.03	.12	-.15	.63
5.		.09	.00	.07	.03	.75	.58
6.		.22	.27	-.28	-.04	.51	.46
7.		.13	.47	-.45	.21	.11	.50
8.	Depression	.39	.10	-.65	-.20	-.13	.64
9.	Locus of Control	-.00	.19	-.68	.01	-.07	.50
10.	Extraversion	.28	.14	.57	.27	-.18	.52
11.	Neuroticism	.32	.42	-.29	-.21	-.00	.40
12.	Psychoticism	.38	.25	-.10	-.22	-.56	.58
13.	Social Desirability	-.38	-.50	-.20	.28	-.17	.54
14.	Trait Anger	.72	.07	-.16	.14	.01	.57
15.	State Anger	.70	.06	.08	-.12	.09	.52
Cumulative Per cent Contribution		12.14	24.25	36.02	45.9	55.03	

Male Adolescents

Factor I has brought together depression, as measured by Zung's Self-Rating Depression Scale, neuroticism, psychoticism, social desirability as measured by Eysenck Personality Questionnaire and two measure of anger, namely, trait anger and state anger. Factor II has clearly brought together different primaries which form second-order factor of anxiety. Factor III is most rewarding from the viewpoint of the focal theme of the present study which is concerned with the relationship of perceived social support with different dimensions of psychiatric disturbance. Although the obtained relationship between two indices of social support used in this study (qualitative and quantitative) contradicts the independent nature of these two indices of social support as claimed by the authors of the test, perceived social support is negatively associated with psychoticism and depression. The negative association suggests that the higher amount of psychoticism and depression have detrimental effect on perception of social support by male adolescents.

Factor IV has grouped together two measures referring to locus of control and perceived satisfaction in social support. It suggests that adolescents high on externality tend to perceive less satisfaction in the available social support. Alternatively, adolescents high on internality tend to perceive more satisfaction in perceived social support. Factor V has grouped together two anxiety components, namely, Factor Q3 and Factor C.

Factor VI has shown marked loading on only extraversion as measured by E-Scale of Eysenck Personality Questionnaire.

Female Adolescents

Factor I has grouped together depression, neuroticism, psychoticism, social desirability, state anger and trait anger. Factor II has grouped together three components of Cattell's second-order factor of anxiety, N-Scale of Eysenck Personality Questionnaire and social desirability as measured by Eysenck Personality Questionnaire. Factor III has grouped together depression, locus of control, Factor Q₄ of IPAT Anxiety Scale Questionnaire and E-Scale of Eysenck Personality Questionnaire. Factor IV has grouped together two indices of social support referring to the availability of social support and subsequent satisfaction with its availability. It implies that female adolescents fail to discriminate between the qualitative and quantitative aspects of social support. Factor V is a factor of paranoid insecurity having association with psychoticism and guilt as measured by Anxiety Scale Questionnaire.

Discussion

The present study was designed to examine perceived social support in relation to depression, anger, anxiety, psychoticism, neuroticism and locus of control. The findings of this investigation clearly established the role of some of the personality factors in perceived social support. The findings are consistent with previous research showing that perceived social support is negatively associated with depression and psychoticism (atleast in case of male adolescents). It implies that male adolescents who are high on psychoticism and depression perceived a lack of social support.

Depression which includes fluctuation of mood and lack of interest in interpersonal relations may erode social support and contribute to a perceived lack of support availability. Psychoticism refers to a person who is tough minded, hostile to loved ones and devoid of reality. As such, a person high on psychoticism will not bother about the availability of social support. In addition, both experience of depression and possession of psychotic tendencies may adversely affect social cognitions in such a way as to reduce the desire for support or willingness to seek support.

With regard to locus of control, the finding also supports the researches available in the literature on locus of control and perceived social support. Results clearly show that male adolescents high on externality tend to perceive less satisfaction in the available social support. Alternatively, adolescents high on internality tend to perceive more satisfaction in perceived social support. People with internal locus of control feel that their own actions are responsible for what happens to them thus exhibiting

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preventive behaviour and showing greater resistance to psychological dysfunctions and efforts to improve functioning.

Social support (quantitative) and social support (qualitative) have grouped together on one factor in female adolescents having no relationship with any other variable which shows that female adolescents failed to discriminate between the quantitative and qualitative aspects of social support. The emotional state of females determines their perception. The feelings of love, understanding, affection are inculcated in them in such a way that they are unable to perceive and evaluate things rationally. When it comes to head or heart, their heart rules their head. On the other hand, males, though they also feel, make use of their cognitions. They think and evaluate things more rationally.

Factor 'C' (.77) of Cattell's second-order factor of anxiety is positively correlated with other factors of anxiety and showed some overlap with N-Scale of Eysenck Personality Questionnaire. This is in accordance with the earlier information available in the literature which reveals considerable overlap between Cattell's second-order anxiety factor and Eysenck's N-Scale of Eysenck Personality Questionnaire. To quote Naylor (1972): "Cattell's second-order factor of anxiety clearly bears a distinctive, conceptual relation to Eysenck's N-factor." This significant overlap is found in female adolescents only whereas the results of male adolescents are in contradiction with the information already existing in the literature. Further, the positive correlation between Factor 'L' and Factor 'O' Le. paranoid insecurity and guilt proneness is found in both male and female adolescents which means that they have the feelings of unworthiness and guilt and exhibits impulsive behaviour, pattern of unstable and intense interpersonal relationships. The social difficulties caused by such type of behaviour could lead to isolation, anxiety, depression and decrease or no availability of social support.

Though the previous researches on extraversion showed that it is positively correlated with perceived social support, the present study revealed lack of association between extraversion and perceived social support. One of the central characteristic of extraversion is affiliation i.e. enjoying and valuing close interpersonal bonds, being warm and affectionate (Depue and Collins, 1999). People with this trait are able to communicate their needs and request assistance from their social network. They behave in such a way that draws other to them and that motivates others to behave in a more positive/supportive manner. In the light of the above argument, it is difficult to explain why extraversion is not related to perceived social support. One of the reasons may be that people with this trait are venturesome. Desire for change is there in them. For them, the number of social contacts is high and social relations are easily accessible so they lack depth in their relationships. They expect that others should also reciprocate in the same manner the way they help and behave with others. When their expectations are not fulfilled or they don't receive the same, they stop expecting things from others in future which results in the non-perception of social support. It is equally significant to emphasize that anger - in and anger - out are non-significant predictors of perceived social support both for males and females adolescents. As Indians are very emotional, they believe in forgetting or repressing things. Anger expression or suppression does not affect their perception of the social support.

Finally, it is significant to emphasize that social support has been operationalized in different manners in the recent past. The present study made use of the global measure of social support. It would be worthwhile if the future research in this area can take cognizance of social support in different relations separately. The answer to this question definitely awaits future research which incorporates in its domain the global as well as specific indices of social support available to the adolescents. In other words, the conceptualization (and probably the operationalization as used in this study) of social support can be meaningfully improved.

References

- Barrera, M. (1986). Distinctions between social support concepts, measures, and model. *American Journal of Community Psychology*, 14, 413-445.
- Broadhead, W.E., Kaplan, B.M., James, S.A., Wagner, E.H., Schenbach, V.L Grinson, R., Heyden, S., Tibblin, G. & Gehlach, S.A.(1984). The epidemiologic evidence for a relationship between social support and health. *American Journal of Epidemiology*, 117, 521-537
- Cattell, R.B. & Scheier, I.H.(1963). *Handbook for the IP A T Anxiety Scale Questionnaire*. Illinois: Institute for Personality and Ability Testing.
- Cohen, S., & Wills, T.A.(1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98, 310-357.
- Depue, R.A. & Collins, P.F.(1999). Neurobiology of the structure of personality. .I Dopamine, facilitation of incentive motivation and extraversion. *Behavioural and Brain Sciences*, 22, 491-569
- Eysenck, H.J. & Eysenck, S.B.G. (1975). *Manual of the Eysenck Personality Questionnaire (Junior and Adult)*. Great Britain: Hodder and Stoughton.
- Heller, K., & Swindle, R.Y. (1983). Social networks, perceived social support, and coping with' stress. In R.D.Felner, L.A.Jason, J.Moritsugu, & S.S.Farber (Eds.), *Preventive psychology: Research and practice in community intervention* (pp. 87103). New York: Pergamon Press.
- Hobfoll, S.E.(1985). Personal and stress resources and the ecology of stress resistance., In P.Shaun (Ed.), *Review of Personality and Social Psychology* (Vol.6, pp.265-290). Beverly Hills, C.A: Sage.
- Kaiser, H.F.(1960). Comments on communalities and the number of factors. Read at an informal conference, "The communality problem in factor analysis." St. Louis Washington University.
- Lazarus, R., & Folkman, S.(1984). *Stress, appraisals and coping*. New York: Springer.
- Naylor, F.D.(1972). *Personality and educational achievement*. New York: John Wiley and Sons, Australia.
- Repetti, R.(1987). Individual and common components of the social environment at work and psychological well-being. *Journal of Personality and Social Psychology*, 52, 710-720.
- Rook, K.(1984). Research on social support, loneliness and social. isolation. In Ph. Shaver(Ed.) *Review of Personality and Social Psychology*, Vol.5, Beverly Hills, CA: Sage.
- Rotter, J.B.(1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs:General & Applied*, 80(1,Whole No.609).
- Sarason, I., & Sarason, B.(Eds.) (1985). *Social support: Theory, research and applications*. The Hague, Netherlands: Nijhoff.
- Sarason, I.G., Levien, H.M., Basham, R.B.. & Sarason, B.R.(1983). Assessing social support: The Social Support Questionnaire. *Journal of Personality and Social Psychology*, 44(1), 127-139.
- Sarason, I.G, Sarason, B.R., & Shearin, E.N.(1986). Social support as an individual difference variable: Its stability, origins, and relational aspects. *Journal of Personality and Social Psychology*, 50, 845-855.
- Spielberger, C.D.(1988). *State-Trait Anger Expression Inventory (Research edition)*. Professional Manual. Florida Psychological Assessment Resources, Inc.
- Zung, W.W.K.(1965). A Self-Rating Depression Scale. *Archives of General Psychiatry*, 12,63-70.