

Attachment Styles and their Implication for Adolescents

Sweta Sonthalia and Subrata Dasgupta

University of Calcutta, Kolkata

Adolescence is the age when an individual becomes integrated into the society of adults and a major transition starts taking place physically as well as psychologically. Therefore this stage is very sensitive and an important phase of life which shapes the entire future and it also predicts the quality of life an adolescent will lead. Attachment has become an important issue in clinical evaluation of, and legal decisions about, school-aged children. Bowlby's general framework of attachment formation in parent-child bonding posits that caregivers have predictable, common styles that impact a child's emotion regulation, social relatedness, capacity for self-reflection, and overall neurological development—factors that may extend through adulthood. So the aim of the study is to find out the association between the variables and how much it affects an adolescent behaviour and mental health. The sample consisted of 120 adolescent boys and girls' age ranging from 13-14 years and randomization technique was used to select them. Results were finally analyzed using product moment correlation.

Keywords: Adolescence, Attachment Style, Emotional Regulation, Self Reflection.

Previous research have effectively demonstrated that the sensitivity and responsiveness of the attachment figure, both mother and father, provide a foundation for adolescent attachment security and thus shapes the future life of that adolescent. The quality of adolescence attachment has been shown to have important cognitive, emotional, and behavioural sequel (Goldberg, 1991; Rice, 1990). Adolescence, as the targeted age group, is a period in life where responsibility is typically minimal and unsupervised free time at a maximum. The empirical findings, combined with the supposition, underscore the need to identify attachment factors that continue to influence, maintain, and/or modify an individual's attachment status in later childhood and thus affecting the associated variables like self esteem, emotional intelligence and risk and sensation seeking behaviour.

Bowlby defined attachment as a genetically based behavioral system that

promotes proximity between caregiver and infant (Bowlby, 1977). Bowlby's work were on attachment explores attachment, separation, and loss. Bowlby hypothesized that future security, well-being, and positive relationships in adulthood are often contingent on the secure mother-infant relationship. Furthermore, if maternal deprivation, loss, or separation occurs, the outcome can be devastating for the child.

Ainsworth's (1989) contributions were also significant in moving attachment theory forward. In addition to her contribution to the methodology of attachment, she has been credited with extending the conceptualization of attachment theory and its associated classifications: secure, anxious-ambivalent, avoidant, and disorganized (Ainsworth, 1989; Lopez, 1995).

Attachment theory posits that healthy parent-child relationships serve as a *secure base* from which children can explore their environment (Bowlby, 1988). Securely

attached middle school students have higher rated peer social status (Granot & Maysseles, 2001). During the school years, children change both with respect with whom they spend their time and also the mental abilities that they bring to managing relationships.

Among the newly developing skills are (1) concrete logic (2) they hold more than one perspective in mind. This is crucial for (3) negotiation and compromise and also for (4) deception. Neighbourhood friendships and school expose children to (5) new threats from which they must protect them-selves, including peer rejection, bullying, and being on one's own. (6) They develop new best friend attachments and affiliative peer relationships.

Zuckerman defined sensation seeking as "...the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience" (Zuckerman, 1994). Farley (1986) labeled these individuals as Big T (thrill seekers). They are characterized as having low sensitivity to stimuli and therefore in need of high levels of stimulation to maintain an optimal state of arousal. Zuckerman (1994) described risk as partly a function of the objective situation and partly a function of the individual's appraisal of the situation.

Cohn, MacFarlane, Yanez, and Imai (1995) assessed the extent to which perceptions of decreased risk versus "invulnerability" contributed to adolescent risk-taking behavior. The authors found that adolescents associated less potential harm with a number of health threatening behaviors (e.g., getting drunk, not using seat belts, using substances) than did parents. These are also characterized by impulsivity which can be defined as the failure to resist an impulse, drive, or temptation that is harmful to oneself or others which is manifested by impatience (including the inability to wait for rewards),

carelessness, risk-taking, sensation seeking, an underestimated sense of harm, and extroversion.

Self-esteem is a term used to reflect a person's overall evaluation or appraisal of his or her own worth. Self-esteem encompasses beliefs and emotions such as triumph, despair, pride and shame. In the mid 1960s Rosenberg and social-learning theorists defined self-esteem in terms of a stable sense of personal worth or worthiness. Branden in 1969 briefly defined self-esteem as "...the experience of being competent to cope with the basic challenges of life and being worthy of happiness". Mental models of the self represent beliefs about one's lovability and worthiness of care and attention; mental models of others reflect expectations about how emotionally available and responsive others will be toward one's needs (Bartholomew & Horowitz, 1991; Collins, 1996; Collins & Read, 1990). The mental model of self is highly correlated with global self-esteem.

The concept of emotional intelligence is an *umbrella term that captures a broad collection of individual skills and disposition, usually referred to as a soft skill or inter and intra personal skills*, that are outside the traditional areas of specific knowledge, technical and professional skills. There are different views on conceptualizing emotions. The biologically oriented researchers define emotions as close to biological states or electrochemical reactions. Psychologists conceive emotions as conscious experiences. According to the coordinated response system, emotions arise from the simultaneous occurrence of certain biological, experiential and cognitive states.

Salovey and Mayer (1989) have defined emotional intelligence as "the subset of social intelligence that involves the ability to monitor one's owned and other's feelings and emotions, to discriminate among them and to use this information to guide one's thinking

and actions.” Cooper and Sawaf (1997) defined the concept as ability to sense, understand and effectively apply the power and acumen of emotions as source of human energy, information, connection and influence.

Models of Emotional Intelligence:

Researchers have developed a better understanding of the different approaches that have emerged and how they relate to each other.

1. Ability Models: Defined Emotional Intelligence as a conceptually related set of mental abilities to do with emotions and the processing of emotional information that help us effectively make use of emotion related information in ourselves and others. (Mayer & Salovey, 1993).

2. Mixed Models/Trait Models: Defined Emotional Intelligence as an array of socio-emotional traits and skills related to expressing ourselves, understanding others and effectively adapting to our environment such as assertiveness (Bar-on, 1997).

3. Competency Models: This model comprises a set of emotional competencies defined as learned capabilities based on emotional intelligence that lead to superior performance at workplace (Goleman, 2000).

The present investigation focuses on the relationship between attachment style, risk and sensation seeking behaviour, self esteem and emotional intelligence of adolescent boys and girls.

Hypotheses:

The following hypotheses were constructed for the current research work:

1) The Attachment style (Mother Trust, Mother Communication, Mother Alienation, Father Trust, Father Communication, Father Alienation, Peer Trust, Peer Communication and Peer Alienation) is significantly correlated with Self Esteem of adolescent boys and girls.

2) The Attachment style (Mother Trust, Mother Communication, Mother Alienation, Father Trust, Father Communication, Father Alienation, Peer Trust, Peer Communication and Peer Alienation) is significantly correlated with Emotional Intelligence of adolescent boys and girls.

3) The Attachment style (Mother Trust, Mother Communication, Mother Alienation, Father Trust, Father Communication, Father Alienation, Peer Trust, Peer Communication and Peer Alienation) is significantly correlated with Sensation Seeking and Risk Behaviour of adolescent boys and girls.

Method

Sample:

The sample consists of 120 adolescent boys and girls. The mean age is 13.5 years.

Measures:

General Health Questionnaire (GHQ-28) by Goldberg and Hillier (1979): It was designed to be a self administered screening test aimed at detecting short-term changes in mental health among respondents. The scale consists of 4 subscales for somatic symptoms, anxiety and insomnia, social dysfunction and severe depression. Scoring was done by GHQ method (0-0-1-1).

Inventory of Parent and Peer Attachment (IPPA): This scale was developed by Armsden and Greenberg in 2009. The IPPA was developed in order to assess adolescents' perceptions of the positive and negative affective/cognitive dimension of relationships with their parents and close friends. Three broad dimensions are assessed: degree of mutual trust; quality of communication; and extent alienation. The instrument is a self-report questionnaire with a five point likert-scale response format. The test is comprised of 25 items in each of the mother, father, and peer sections, yielding three attachment scores.

Rosenberg Self-Esteem Scale: It was developed by Rosenberg (1965). The scale is a ten item Likert scale with items answered on a four point scale - from "Strongly agree to strongly disagree." A person with a score of between fifteen and twenty on the Rosenberg Scale is considered to have normal self-esteem. A score below fifteen indicates some self-esteem issues are present, and a score below ten is considered to show very low self-esteem.

The Sensation Seeking Attention Scale (SSAS): The test developed by Britton (2007). It is a measure of sensation seeking by adolescents. The SSAS is intended to identify adolescents that have a propensity for negative and positive sensation seeking via a self-report rating instrument. Each participant rated his or her likelihood of participation for each item as: 1 = Never, 2 = Sometimes, 3 = Often or 4 = Always. The higher the score the higher will be the involvement of adolescents in sensation seeking behaviours i.e. both negative and positive.

Emotional Intelligence Scale: It was developed by Salovey and Mayer (1990).

This scale assesses emotional intelligence in terms of adaptive abilities: appraisal and expression of emotion, regulation of emotion and utilization of emotions in solving problems. It is a 5 point rating scale on which '1' represented strongly disagree and a '5' represents strongly agree to indicate to what extent each item described them.

Results

As per the mean value, males have higher self esteem as compared to their female counterparts. Emotional intelligence is higher for the females than their male counterparts. Coming to sensation seeking attention scale, males have both negative and positive sensation seeking tendency to a higher degree than females. Females are more attached to their mother, father and peers than their male counterparts. This is so as, females perceived their mothers to be more trustworthy, communicate well with them. Same goes with their father and peers too. Adolescent females also alienate themselves more with their mothers and peers more as compared with males. But adolescent males alienate themselves more with the father figure as compared to the females.

Table 1: Mean and SD of Self Esteem, Emotional Intelligence, Sensation Seeking Attention Scale and Inventory of Parent and Peer Attachment Scores of adolescent Female (N=60), and Male (N=60).

Factors	Female (N=60)		Male (N=60)	
	Mean	S.D.	Mean	S.D.
Self Esteem	17.75	3.611	18.467	2.855
Emotional Intelligence	128.417	9.755	126.967	9.346
Negative SSAS	69.2	12.083	81.45	18.008
Positive SSAS	33.533	5.206	36.35	6.265
Mother Trust	39.683	7.17	37.433	6.376
Mother Communication	35.467	6.875	31.8	6.134
Mother Alienation	15.6	4.812	13.65	5.004
Father Trust	40.017	6.647	37.35	7.419
Father Communication	32.783	7.119	30.067	7.58
Father Alienation	13.917	4.001	13.983	5.438
Peer Trust	39.133	8.863	38.583	6.857
Peer Communication	30.233	8.116	29.967	5.352
Peer Alienation	17.317	3.851	17.3	4.727

As per the result, if adolescent females perceived their mother, father and peers as trustworthy and peers as communicative then it increases their self esteem. On the other hand, if adolescent females perceived their mothers, fathers and peers as alienating it decreased their self esteem. Adolescent males self esteem increased when they perceived their mother and father as trustworthy and communicative. Adolescent males self esteem decreased when they perceived their mother, father and peers as alienating.

When adolescent females perceived their fathers as trustworthy and peers as communicative their emotional intelligence increased. Adolescent male's emotional intelligence has no significant relationship with any of the attachment styles. When adolescent females perceive their peers as trustworthy and communicative their involvement in the negative and positive risk and sensation seeking attention behaviour decreased. When adolescent males perceived their peers as trustworthy their involvement in the negative sensation

Table 2: Product-Moment Correlation Coefficient values of Parent and Peer Attachment Scores of adolescent female (N=60), and male (N=60). Factors Self Esteem Females (N=60) Self Esteem Males (N=60) Emotional Intelligence Females (N=60) Emotional Intelligence Males (N=60)

Factors	Self Esteem		Emotional Intelligence	
	Females (N=60)	Males (N=60)	Females (N=60)	Males (N=60)
Mother Trust	0.2588*	0.5147**	0.0744	-0.0353
Mother Communication	0.1365	0.2396	0.0284	0.2051
Mother Alienation	-0.3648**	-0.2944*	-0.0018	-0.0285
Father Trust	0.4232**	0.3698**	0.3781**	0.0654
Father Communication	0.1073	0.3862**	0.1953	0.079
Father Alienation	-0.3886**	-0.2615*	0.007	-0.1971
Peer Trust	0.5545**	-0.228	0.1546	-0.0835
Peer Communication	0.5032**	-0.0034	0.2680*	0.1955
Peer Alienation	-0.5354**	-0.2868*	-0.0879	-0.0811

*p<0.05; **p<0.01.

Table3: Product-Moment Correlation Coefficient values between Negative and Positive Risk and Sensation Seeking Attention Scale and Inventory of Parent and Peer Attachment Scores of adolescent female (N=60), and males (N=60).

Factors	Negative SSAS		Positive SSAS	
	Female (N=60)	Male (N=60)	Female (N=60)	Male (N=60)
Mother Trust	-0.2066	-0.1265	-0.0903	-0.0717
Mother Communication	-0.0634	0.0219	0.1071	-0.0612
Mother Alienation	0.2293	0.1712	0.1568	0.2581*
Father Trust	-0.0927	-0.0272	-0.0522	0.0024
Father Communication	0.0612	-0.0006	0.2735*	-0.0212
Father Alienation	0.0638	0.1517	0.121	0.133
Peer Trust	-0.2890*	0.2903*	-0.4332**	0.3191*
Peer Communication	-0.2547*	0.1013	-0.3536**	0.3062*
Peer Alienation	0.1206	0.1079	0.1292	0.2024

*p<0.05; **p<0.01.

seeking attention behaviour increased. Therefore, hypothesis 3 is accepted.

When adolescent females perceived father as communicative, their involvement in the positive sensation seeking attention behaviour increased. When adolescent males perceived their mothers as alienated, and peers as trustworthy and communicative their involvement in the positive sensation seeking attention behaviour increased. Therefore, hypothesis 3 is accepted.

Discussion

As per the results there exists a clear significant positive relationship between self esteem and positive attachment style (mother trust, mother communication, father trust, father communication, peer trust and peer communication) and significant negative relationship between self esteem and negative attachment style (mother alienation, father alienation and peer alienation) for both adolescent males and females. According to researchers, adolescents whose parents are sensitive and responsive can depend on their caregiver's availability and use consistent strategies to elicit nurturance. These children develop *internal working models* of themselves as worthy of love and of others as willing to provide support (Mikulincer and Nachshon, 1991). *Securely* attached children are able to separate from attachment figures with confidence and elicit help and comfort when they feel threatened. Attachment styles that fail to provide security have a detrimental effect on the way children perceive themselves and respond to others. Adolescent with a positive mental model of self (e.g., secure individuals) have relatively higher self-esteem than those with a negative mental model of self (e.g., anxious-ambivalent individuals) (Bylsma, Cozzarelli, & Sumer, 1997; Collins & Read, 1990; Feeney & Noller, 1990; Griffin & Bartholomew, 1994; Mikulincer, 1995).

The results clearly indicate that there exists a positive significant relationship

between adolescent female emotional intelligence and attachments style. When the female perceive her father as trustworthy and her peers as communicative her emotional intelligence increases. This might be so because as it is a known fact that opposite sex attraction starts from adolescence period therefore if female children can trust her father adequately that would easily resolve all the conflicts of the adolescents and thus makes her enable to be emotionally matured. On the other hand, in adolescence peers have a very important place in any adolescents' lives. So when the females are able to communicate and share their experiences with their peers in an adequate manner, they might come to know about the various perspectives which might help them to be emotionally matured.

As per the results, when adolescent females perceived their peers as trustworthy and communicative their involvement in negative sensation seeking attention behaviour decreased. This might be so because as in adolescence peers stands in a very important position and adolescents look upon their peers for their suggestions, advice and also are influenced by their actions. When a female is trusting and communicating well with peers they spend time together and thus build on a trustworthy relationship and this clique or grouping of the adolescent female acts as sensation seeking and they enjoy or get occupied in the group itself which prevents them from joining into any negative sensation seeking behaviour.

On the other hand, when adolescent males perceived their peers as trustworthy their involvement in negative sensation seeking attention behaviour increased. This fact combines with the findings by Lotz and Lee (1999) that sensation seeking and risk behaviour with peers peaks during adolescence, and that includes poor school performance and involvement in crime (Raine, 1997). Misinterpretation of risk may

be another factor associated with risk-taking behavior. Based on social learning theory (Bandura, 1977), environmental cues may not be salient enough for some adolescents. Therefore, injury among teenagers occurs secondary to a misperception of risk (Tversky & Kahneman, 1981). This misperception may be deliberate to some extent, reflect a lack of awareness of risk associated with certain behaviors, and/or be associated with a lack of experience with certain behaviour.

When adolescent females perceived their fathers as communicative their involvement in positive sensation seeking attention behaviour increased. Researchers have generally sought to analyse attachment styles in relation to positive behavioural outcomes such as school achievement (Glasgow et al. 1997; Steinberg et al. 1992), peer group membership (Durbin et al. 1993). In today's society where competition has raised to a great extent, parents of adolescents may communicate well with them in order to motivate them and therefore help them in each and every way to achieve success in school. When adolescent females perceived their peers as trustworthy and communicative their involvement in positive sensation seeking attention behaviour decreased. This might be so because in competition trust and communication are not present and competition inculcates negativity in any relationship. Trust and communication on the other hand are components of a good and healthy relationship.

When adolescent males perceived their mother's as alienated their involvement in positive sensation seeking attention behaviour increased. This is so because males can easily indulge themselves in activities like "Jump from high places, jump from one activity to another, going out when getting bored" when mother is not around and as mothers are perceived as providers of care, nurturance and also disciplined the adolescent males won't get enough scope of

exploring these activities when mother is present. Therefore, if mother is perceived as alienated they can easily involve themselves in these positive sensations seeking attention behaviour.

When adolescent males perceived their peers as trustworthy and communicative their involvement in positive sensation seeking attention behaviour increased. There are a number of these sensation seeking individuals who are able and willing to utilize existing positive and even constructive activities to satisfy their "need for speed." This need is excessively present in the adolescents and thus to satisfy their needs and to know the unknown and apparently interesting facts adolescent males with their peers involve in positive sensation seeking attention behaviour.

Conclusion

The conclusion which can be drawn from this research work is that positive attachment style is very important to increase self esteem of adolescent boys and girls. Positive father attachment style is also very important to increase emotional intelligence of adolescent girls. Negative sensation seeking and risk behaviour decreases if adolescent females perceive positive peer attachment but in the case of adolescent positive peer attachment increases negative sensation seeking and risk behaviour. Positive sensation seeking and risk behaviour increases if adolescent female perceives positive father attachment style, but decreases if positive peer attachment style is perceived. Adolescent males involve more in positive sensation seeking and risk behaviour when they perceive negative mother attachment but positive peer attachment.

References

- Ainsworth, M. (1989). Attachments beyond infancy. *American Psychologist*, 44, 709-716.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall

- Bartholomew, K., & Horowitz, L.M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology*, 61, 226-244.
- Bar-on, R & Parker, J.D. (2000). *Handbook of Emotional Intelligence: Theory, Development, Assessment and Application at home, school and in workplace*. San Francisco. C.A. Jossey Bass, 92-118.
- Bohlin, G., Hagekull, B., Rydell, A. M. (2000) Attachment and Social Functioning: A Longitudinal Study from Infancy to Middle Childhood, *Social Development*, 9, 24-39.
- Bowlby, J. (1977). The making and breaking of affectional bonds. I: Aetiology and psychopathology in the light of attachment theory, II: Some principles of psychotherapy. *British Journal of Psychiatry*, 130, 201-10 and 421-31.
- Bowlby, J. (1988). *A Secure Base: Clinical Applications of Attachment Theory*. London: Routledge.
- Branden, N. (1969). *The psychology of self-esteem*. New York: Bantam.
- Bylsma, W. H., Cozzarelli, C., & Sumer, N. (1997). Relation between adult attachment styles and global self-esteem. *Basic and Applied Social Psychology*, 19, 1-16.
- Cohn, L., Macfarlane, S., Yanez, C & Imai, W. (1995). Risk perception: Differences between adolescents and adults. *Health Psychology*, 14, 217-222.
- Collins, N. L., & Read, S. J. (1990). Adult attachment, working models, and relationship quality in dating couples. *Journal of Personality and Social Psychology*, 58, 644-663.
- Collins, N. L. (1996). Working models of attachment: Implications for explanation, emotion, and behavior. *Journal of Personality and Social Psychology*, 57, 810-832.
- Cooper, R.K & Sawaaf, A (1997). *Executive EQ*. New York: Grosset/Putnam.
- Ducharme, J., Doyle, A. B. & Markiewicz, D. (2002). Attachment Security with Mother and Father: Associations with Adolescents. Reports of Interpersonal Behavior with Parents and Peers', *Journal of Personal and Social Relationships*, 19, 203-31.
- Durbin, D. L., Darling, N., Steinberg, L. & Brown, B. B. (1993). Parenting style and peer group membership among European-American adolescents. *Journal of Research on Adolescence*, 3, 87-100.
- Erickson, M., Sroufe, L & Englund, B. (1985) 'The Relationship Between Quality of Attachment and Behavior Problems in Preschool in a High-Risk Sample', *Monographs of the Society for Research in Child Development*, 50, 147-66.
- Farley, F. (1986). The big T in personality: Thrill seeking often produces the best achievers but it also can create the worst criminals. *Psychology Today*, 20, 44.
- Feeney, J. A., & Noller, P. (1990). Attachment style as a predictor of adult romantic relationships. *Journal of Personality and Social Psychology*, 58, 281-291.
- Glasgow, K. L., Dornbusch, S. M., Troyer, L., Steinberg, L., et al. (1997). Parenting styles, adolescents' attributions, and educational outcomes in nine heterogeneous high schools. *Child Development*, 68, 507-29.
- Goldberg, S. (1991). Recent developments in attachment theory and research. *Canadian Journal of Psychiatry*, 36, 393-400.
- Goleman, D. (2000). *Emotional Intelligence, Why it can matter more*. New York: Bantam Books.
- Granot, D. & Mayseless, O. (2001) 'Attachment Security and Adjustment to School in Middle Childhood', *International Journal of Behavioral Development*, 25, 530-41.
- Griffin, D. W., & Bartholomew, K. (1994). The metaphysics of measurement: The case of adult attachment. In K. Bartholomew & D. Perlman (Eds.), *Advances in personal relationships*. Vol. 5: Attachment processes in adulthood (pp. 17-52). London: Kingsley.
- LaFreniere, P. J. & Sroufe, L. A. (1985). Profiles of Peer Competence in Preschool: Interrelations Between Measures, Influence of Social Ecology, and Relation to Attachment History, *Developmental Psychology*, 21, 56-69.
- Lopez, F. (1995). Contemporary attachment theory: An introduction with implications for counseling psychology. *The Counseling*

- Psychologist*, 23, 395-415.
- Lotz, R., & Lee, L. (1999). Sociability, school experience and delinquency. *Youth and Society*, 31, 5.
- Mayer, J.D., & Salovey, P. (1993). The intelligence of emotional intelligence. *Intelligence*, 17, 433-442.
- Mikulincer, M. & Nachshon, O. (1991). Attachment Styles and Patterns of Self-Disclosure, *Journal of Personality and Social Psychology*, 61, 321-31.
- Mikulincer, M. (1995). Attachment style and the mental representation of the self. *Journal of Personality and Social Psychology*, 69, 1203-1215.
- Raine, A. (1997). Antisocial behavior and psychophysiology. In D. M. Stoff, & J. D. Maser (Eds.), *Handbook of antisocial behavior* (pp. 289-304). New York: Wiley.
- Renken, B., Englund, B., Marvinney, D., Mangelsdorf, S. & Stroufe, L. A. (1989). Early Childhood Antecedents of Aggression and Passive Withdrawal in Early Elementary School, *Journal of Personality*, 57, 257-82.
- Rice, K.G. (1990). Attachment in adolescence: A narrative and meta-analytic review. *Journal of Youth and Adolescence*, 19, 511-538.
- Rosenberg, M. (1965). *Society and the adolescent self-image*. Princeton, NJ: Princeton University Press.
- Salovey, P., & Mayer, J. D. (1989-1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9, 185-211.
- Steinberg, L., Lamborn, S. D., Dornbusch, S. M. & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development*, 63, 1266-81.
- Tversky, A., & Kahneman, D. (1981). The framing of decisions and the psychology of choice. *Science*, 21, 453-458.
- Zuckerman, M. (1994). *Behavioral expressions and biosocial bases of sensation seeking*. Cambridge: Cambridge University Press.

Received: June 13, 2011

Revision received: June 28, 2011

Accepted: October 01, 2011

Sweta Sonthalia, School Psychologist, PhD Research Scholar, Department of Applied Psychology, University of Calcutta, Kolkata - 700 009.
Email: swetainbloom@yahoo.com

Subrata Dasgupta, PhD, Reader and Head, Department of Applied Psychology, University of Calcutta, Kolkata.



Indian School Psychology Association (InSPA)

welcomes new members

contact further details:

www.inspa.info

Email: inspaindia@gmail.com