Pakistan Journal of Psychological Research, 2015, Vol. 30, No. 1, 01-19

Predictive Factors of Health-risk Behaviours Among Male Adolescents

Damanjit Sandhu

Punjabi University Patiala

Adolescent health-risk behaviours are alarmingly increasing in the developing countries. To have a broader context based understanding in the Indian scenario, the study was designed to investigate the role of the developmental context in predicting health-risk behaviours in male adolescents. Psychosocial developmental tasks of adolescence (identity formation and emotional autonomy) and the psychosocial context (family and classroom environment) were studied in relation to health-risk behaviours in 300 male adolescents (age 15-17 years) from various schools of Punjab (India). Adolescent Exploratory and Risk Behaviour Rating Scale (Skaar, 2009), Extended Objective Measure of Ego Identity Status-2 (Bennion & Adams, 1986), Emotional Autonomy Scale (Steinberg & Silverberg, 1986), Family Environment Scale (Moos & Moos, 1986), and Classroom Environment Scale (Moos & Trickett, 1974) were administered on participants. Using Step-wise Multiple Regression Analysis, the results revealed that identity achievement, teacher support, foreclosure, affiliation, family cohesion, and moratorium contributed negatively towards adolescent health-risk behaviours, while family conflict, identity diffusion, and emotional autonomy dimension of nondependency on parents contributed positively towards the criterion variable. Results also revealed that for adolescent health-risk behaviours, major variance was explained by the selected variables. The results emphasize the need to provide supportive and congenial environment to male adolescents and the importance of identity formation in predicting health-risk behaviours especially, in the collectivistic societies marked by authoritarianism and where adolescents' identity development is not often encouraged.

Keywords. Adolescent health-risks, identity, emotional autonomy, family, classroom environment

---

Damanjit Sandhu, Department of Psychology, Punjabi University, Patiala, India.

The present research was funded by University Grants Commission, New Delhi, under the scheme of Major Research Projects in Social Sciences.

Correspondence concerning this article should be addressed to Damanjit Sandhu at Department of Psychology, Punjabi University, Patiala, India. E-mail: daman10sept@yahoo.co.in

The various bio-psycho-social transitions accompanying adolescence result in the development of new attitudes, behaviours, and ideologies that shape future career options, quality of life, and health. Across the lifespan, adolescence is the time of greatest risk taking (Chick & Reyna, 2012). Adolescence is marked by hormonal upsurge, development of cognitive abilities, an increased awareness of sexuality, redefinition of parent-child relationship, identity crisis, struggles for autonomy, and greater orientation towards the peer group. All these changes during this time of life increase the growing child's propensity towards embracing lifestyles and behaviours which not only threaten their own well-being, but the health and safety of others too (Sales & Irwin, 2009).

Risk behaviours refer to actions that increase an individuals' likelihood of developing a disease or sustaining injury or disability at some point in the future (LaVeist, 2005). Although, there are many behaviours that might be considered risky, the Centers for Disease Control and Prevention (2006) has identified six health risk behaviours as being particularly salient for the development of optimal health. These six risk behaviours include: (a) Behaviours that contribute to unintentional injuries and violence; (b) Tobacco use; (c) Alcohol and other drug use; (d) Sexual behaviours that contribute to unintended pregnancy and sexually transmitted diseases; (e) Unhealthy dietary behaviours; and (f) Physical inactivity.

Adolescent Health-risk Behaviours and Identity Formation

Developmental view suggests that risk-taking cannot be defined in isolation from an individual's developmental context (Elliott, 1993; Lerner & Tubman, 1991). The developmental perspective considers risk-taking as normative and adaptive for the healthy psychological development of an individual (Baumrind, 1991; Irwin, 1987), and is also viewed as a way to deal with the developmental tasks of adolescence such as autonomy and exploration. According to normal/adaptive perspective, the experience of a risky behaviour provides the adolescent an opportunity to truly assess the outcome of that behaviour. Early developmental theorists, particularly Erikson (1968) have defined the period of adolescence as one presenting the crisis of identity versus role confusion, in which adolescents must determine who they are, combining self-understanding and social roles into a coherent identity. The term identity crisis describes the temporary confusion and instability that adolescents experience while struggling with alternatives and choices. As per Erikson's (1968) view, successful identity development is represented as a preponderance of identity synthesis over identity confusion.

One of the primary models of identity is Marcia's (1966) identity status approach. According to the identity status perspective, people differ on the extent to which they have explored identity options and made identity commitments, and can thus generally be categorized into one of four statuses: Identity diffusion, foreclosure, moratorium, and identity achievement. *Identity diffusion* represents either a lack of interest in identity issues or a confused and haphazard approach to identity and has been found to be associated with indulgence in health-risk behaviours (Adams, Munro, Munro, Doherty-Poirer, & Edwards, 2004). *Foreclosure* represents adopting commitments without prior exploration on the basis of identifications with important others. *Moratorium* represents actively considering identity alternatives, in the absence of strong commitments. Individuals with a clear sense of who they are and where they are going in their lives called *identity achieved* are more likely to feel positive about themselves, engage in enjoyable and caring relationships with other people, and are less likely to be distressed, worried, and engage in behaviour that is harmful to themselves or to others (Zimmer-Gembeck & Petherick, 2006). On the other hand, a confused sense of identity is found to be associated with internalizing symptoms (Schwartz, Zamboanga, Wang, & Olthuis, 2009), as well as externalizing symptoms, sexual risk taking, and illicit drug use (Schwartz, Mason, Pantin, & Szapocznik, 2008).

Adolescent Health-risk Behaviours and Emotional Autonomy

Another perspective which can be instrumental in understanding risk-taking in adolescents can be the psychosocial developmental task of emotional autonomy. Adolescence marks the redefinition and reorganization of family relations. *Emotional autonomy* is defined in terms of relationships with others and includes relinquishing dependencies and individuating from parents (Steinberg, 1999). Many psychologists (Blos, 1979; Ryan & Lynch, 1989; Smetana & Asquith, 1994) emphasize the importance of mastering this psychosocial developmental task of adolescence for healthy adolescent growth and development. On the contrary, research also indicates that emotional autonomy does not promote well-being in adolescents. Lamborn and Steinberg (1993) found that adolescents who exhibit high levels of emotional autonomy are also more likely to get engaged in delinquent acts. Matos, Barbosa, Almedia, and Costa (1999) have also found autonomous qualities and heightened feelings of insecurity to be related. Nondependency on parents might be stressful too because parents are not used as a source of guidance. Beyers and Goosens (1999) also consider the process of emotional autonomy as stressful

for adolescents, specifically, for those caught in the middle of transition. Seemingly the process of emotional autonomy is very significant for understanding adolescent health-risk behaviours.

Adolescent Health-risk Behaviours and Family Environment

The backdrop, in which the child learns to deal with drives, emotions, and to handle problems in a socially acceptable manner, is the family. Adolescent problem behaviours, including running away, substance abuse, and other externalizing problems are the symptoms of maladaptive family interaction patterns (Jacob, 1987). Against poor outcomes, close relationship with parents can be a protective factor. The secure base function is the part of this protective relationship that parents continue to play in the adolescent years of their children (Daniel, Wassell, & Gilligan, 1999). Inadequate or poor family functioning such as lack of knowledge; control and organizational structure; low levels of emotional warmth and cohesion; conflict and poor family values have consistently been amongst the strongest predictors of risk for violent/aggressive, delinquent, criminal, and adjustment and behavioural problems and risk-taking among adolescents (Capaldi, Crosby, & Stoolmiller, 1996; Willoughby & Hamza, 2011).

Adolescent Health-risk Behaviours and Classroom Environment

Outside family, the primary institution within which adolescents' development can be directed and shaped, is the school. Adolescents with positive social bond or affiliation with their school perform well academically and show more prosocial behaviours than the adolescents who fail to establish such affiliation. They are also less likely to engage in problem behaviours such as bullying, fighting, vandalism, substance use, and truancy (Dishion & Piehler, 2009; McBride et al., 1995; Wentzel, Barry, & Caldwell, 2004). For students' psychosocial development, classroom has long been recognized as a crucial milieu. Classrooms are social settings where teaching and learning takes place through social interactions between teachers and students. Findings suggest that a positive classroom environment is a strong protective factor against problem behaviours in boys (Lopez, Perez, Ochoa, & Ruiz, 2008).

The review of literature presents some very interesting areas to explore in order to understand the health-risk behaviours of adolescents. It is especially relevant in exploring the psychosocial developmental tasks of identity and autonomy for adolescent development within the Indian context as Indians live in a collectivist

society where individuals set aside personal goals for the good of the whole. Identities are born and cultivated through family lineage and caste membership resulting in an identified in-group rather than striving for a personal identity. Moreover, Punjab is on the verge of a drug epidemic and a vast majority is involved in it (Gupta, 2014).Youth of Punjab, especially, men are falling in vicious trap of drug abuse at early age with high rates of relapse. Reports also suggest of drug addiction even in pre-teen boys (Sehgal, 2014). High prevalence of alcohol consumption was noted in a study on men in Harayana (a neighbouring State of Punjab), which may not only eventually lead to health/social issues, but also adversely influence the younger generation for easy and early uptake of alcohol (Sachdeva, Nagar, Tyagi, Sachdeva, & Bharti, 2014). To control this problem, researchers suggest that families, community groups, schools, policymakers, and health professionals need to be involved (Gupta, Kaur, Singh, Kaur, & Sidhu, 2013).

The present day scenario poses a big challenge to the social scientists in India to understand and deal with the issues that are slowly engulfing Punjabi men. Thus, keeping in mind the current needs of the society, a study towards understanding the psychosocial context within which the health-risk behaviours emerge and are further maintained was conceived. The present research, thus, attempted to explore how adolescents' psychosocial developmental tasks (identity formation and emotional autonomy) and psychosocial environment (family and classroom) predict health-risk behaviours in male adolescents. Extensive review of literature was carried out and keeping in mind the earlier studies, the following hypotheses were framed:

Hypotheses

1. Identity statuses of achievement, foreclosure, moratorium, and various dimensions of emotional autonomy would inversely contribute to health-risk behaviours in male adolescents, while identity diffusion would contribute positively towards health-risk behaviours in male adolescents.
2. Family environment dimensions of cohesion and expressiveness and classroom environment dimensions of involvement, affiliation, and teacher support would inversely contribute to adolescent health-risk behaviours while conflict in family environment would positively contribute to adolescent health-risk behaviours in male adolescents.

Method

Sample

The total sample consisted of 300 boys of age ranging between 15 to 17 years (M = 16.15, SD = .54) studying in schools of various districts of State Punjab (India). The participants studied in grades 10-12. First a list of 22 districts of State Punjab was prepared. Six districts (approximately 25% of the total) were randomly picked from the fishbowl technique. A list of 30 private urban schools contributing to middle class socioeconomic status, in the randomly selected districts was prepared and eight schools (25% of the total schools) were again randomly selected by the fishbowl technique.

Measures

Following measures were used in the present study to collect the required information from the respondents.

Adolescent Exploratory and Risk Behaviour Rating Scale AERRS). This scale was developed by Skaar (2009) and consisted of 25 item rating scale that assessed adolescent exploratory and risk behaviours. Fourteen items measured Health Risks, while 11 items measured Exploratory Risks; therefore, 14 items pertaining to adolescent Health Risks were used in the present study. The responses were acquired on a 4-point rating scale: *never*, *rarely*, *sometimes*, and *often*. The scoring was done by giving a score of 1 to *never*, 2 to *rarely*, 3 to *sometimes*, and 4 to *often*. The possible range of scores is 14-56 with higher scores representing more health-risk behaviours. The author reported coefficient alphas above .70 (Skaar, 2009).

Extended Objective Measure of Ego Identity Status-2. This was developed by Bennion and Adams (1986)**.** It consisted of 64 items and assessed the identity formation of an individual across two domains, that is, Ideological and Interpersonal with equal number of items in each domain. The items in Ideological domain covered areas like occupation, religion, politics, and philosophical life style; while Interpersonal domain included items on friendship, recreation, dating, and sex roles areas of identity formation. Both the domains measured four identity statuses namely Identity Achievement, Moratorium, Foreclosure, and Diffusion. The response options on a 6-point scale ranged from *strongly agree* (1) to *strongly disagree* (6). The possible range of scores on each of the identity statuses was 8-48 for a single domain. In the present study, the domain scores were added to yield total scores on four identity statuses and the scores lied in the range of

16-96. Satisfactory reliability has been reported by O' Connor (1995) for the instrument ranging from .65 to .83.

Emotional Autonomy Scale (EAS). This scale was developed by Steinberg and Silverberg (1986). It consisted of 20 structured items, designed to assess four components of emotional autonomy, including, Perceiving Parents as People, Parental De-idealization, Nondependency on Parents, and Individuation. All items were responded on a 4-point Likert scale ranging from 1 (*strongly disagree*) to 4 (*strongly agree*). Negatively worded items were reverse-scored and then were summed up in each section. Scores ranged from a minimum of 20 to a maximum of 80. Higher scores indicated greater emotional autonomy. The authors reported the Cronbach's alpha to be .75.

Family Environment Scale-Form R (FES). This scale was developed by Moos and Moos (1986). It comprised of 10 subscales that measure the social environmental characteristics of all types of families and the individuals' perceptions of his or her family environment. The ten FES subscales assess three underlying domains, or sets of dimensions: the Relationship Dimensions, the Personal Growth Dimensions, and the System Maintenance Dimensions. In the present study, only the Relationship Dimensions (in total 27 items of Cohesion, Expressiveness, Conflict subscales) were used. Cohesion (9 items) included the degree of commitment, help, and support family members provide for one another. Expressiveness (9 items) related to the extent to which family members would encourage to act openly and to express their feelings directly. Finally, Conflict (9 items) included the amount of openly expressed anger, aggression, and conflict among family members. The respondents were required to mark whether each statement was *True* or *False* on a separate answer sheet, and the total score was estimated for each subscale (with a maximum score of 9, for each subscale. High score suggested greater presence of the dimension being measured). Authors reported an internal consistency of subscales ranging from .61 to .78 with test-retest reliability ranging from .68 to .86.

Classroom Environment Scale-Form R (CES). This was developed by Moos and Trickett (1974). This was a 90 item scale composed of nine subscales that assessed the social climate of junior-high and high-school classrooms. It focused on teacher-student and student-student relationships and organization structure of a classroom. The nine subscales of CES tap three underlying domains, or sets of dimensions i.e., Relationship, Personal Growth (or Goal

Orientation), and Change. In the present study, only the relationship (30 items in total) dimensions were used.

Relationship dimensions were measured by Involvement (10 items), Affiliation (10 items), and Teacher Support (10 items) subscales. These subscales assessed the level of student involvement in the classroom, the feeling of friendship between students in the class, and how much teachers support students. Involvement indicated the extent to which students were attentive and interested in classroom activities, participate in discussions, and did additional work on their own. Affiliation reflected the level of friendship students feel for each other, as expressed by getting to know each other, helping each other with homework, and enjoying working together. Teacher Support expressed the amount of help and friendships the teacher manifests towards students; how much the teacher talked openly with students, trusted them, and was interested in their ideas.

The participants in the study were asked to mark whether each statement was *True* or *False* on a separate answer sheet, and the total score was estimated for each subscale. The range of scores for each dimension is 0-10. High score indicated greater presence of the attribute being measured. The scale has been reported as reliable and valid instrument (Ellison & Trickett, 1978).

Procedure

Permission was sought from the principals of the schools and the participants were approached in their classrooms. The information was collected from all those pupils who were present in their classrooms. The participants were informed and briefed about the nature and purpose of the study. Their written consent was taken after informing that they could withdraw themselves from the study at any point and that their responses would be kept confidential. In the case of a co-educational classroom, the teachers were requested to shift the female students to some other activity room, so that only male students could participate in the study.

Results

Pearson's Product Moment Correlation Coefficients were computed to study the relationship of health-risk behaviours with various identity statuses, and various dimensions of emotional autonomy, family and classroom environment. The results of correlation analyses are presented in Table 1.

Table 1

Correlation of Health Risk Behaviours with Identity, Emotional Autonomy, Family Environment, and Classroom Environment (N = 300)

Variables	Health-risk Behaviours
Identity	
Achievement	-.30**
Moratorium	-.24**
Foreclosure	-.21**
Diffusion	.25**
Emotional Autonomy	
De-idealization of Parents	-.18**
Nondependency on Parents	-.01
Individuation	-.20**
Perceiving Parents as People	.04
Family Environment	
Cohesion	-.25**
Expressiveness	-.03
Conflict	.36**
Classroom Environment	
Involvement	-.03
Affiliation	-.24**
Teacher Support	-.25**

**$p > .01$.

It is visible from the results that health-risk behaviours in boys are inversely correlated with the identity statuses of Achievement, Moratorium, and Foreclosure, while positively correlated with the identity status of Diffusion. Correlation analyses also reveals that health–risk behaviours in male adolescents are inversely correlated with De-idealization of Parents and Individuation dimensions of emotional autonomy. It is also evident from Table 1 that within family environment, Cohesion is inversely correlated, while Conflict is positively correlated with health-risk behaviours in boys. Within the classroom environment, the dimensions of Affiliation and Teacher Support are inversely correlated with health-risk behaviours in boys. Seemingly classroom relationship dimensions are significantly associated with adolescent health-risk behaviours.

Keeping in mind the strength of the correlation coefficients as evident in Table 1, Step-Wise Multiple Regression Analysis has been computed to determine the amount of variance in the criterion (adolescent health-risk behaviours) that could be accounted for by the different variables (identity statuses, dimensions of emotional

autonomy, family environment, and classroom environment), and the contribution of each predictor towards the criterion. The results are presented in Table 2.

Table 2

Stepwise Multiple Regression Analysis for Adolescent Health-Risk Behaviours (N = 300)

Variables	*R*	R^2	ΔR^2	*B*	*β*	*F*	*p*
Conflict	.36	.13	.13	1.78	.36	45.01	.00
Identity Achievement	.44	.19	.06	-.14	-.25	34.82	.00
Teacher Support	.47	.22	.03	-.78	-.17	27.68	.00
Foreclosure	.49	.24	.02	-.08	-.14	23.12	.00
Affiliation	.51	.26	.02	-.62	-.14	20.28	.00
Diffusion	.52	.27	.01	.06	.11	17.84	.00
Nondependency on Parents	.53	.28	.01	.42	.11	16.19	.00
Cohesion	.54	.29	.01	-.57	-.11	14.82	.00
Moratorium	.55	.30	.01	-.06	-.11	13.79	.00

Note. Only the variables with significant betas have been reported.

Results of regression analyses presented in Table 2 reveal that for adolescent health-risk behaviours, 30% variance is explained by the selected variables with maximum variance i.e., 13 %, produced by Conflict dimension of family environment. In order to delineate the variables significantly contributing towards the criterion, *F*-ratios are calculated. It is revealed that identity achievement, teacher support, foreclosure, affiliation, cohesion, and moratorium are contributing negatively towards adolescent health-risk behaviours, while conflict, identity diffusion, and nondependency on parents are contributing positively towards adolescent health-risk behaviours.

Discussion

It is evident from the results that identity achievement contributes inversely to health-risk behaviours, while identity diffusion contributes positively to health-risks in boys, thereby supporting the first hypothesis of the study. Confusion about ones' self or a lack of a consolidated sense of identity can be detrimental in adolescent adjustment, well-being, and healthy transition to adulthood. For Erikson (1983), adolescents have to form a clear sense of who one is as a person and how one wishes to behave in the world. When that process is successful, individuals are likely to avoid major risk-taking, but for individuals who have a more diffused state of identity, there

may be an association with drug use and other risks. In Erikson's (1983) view, individuals with a clear sense of who they are and where they are going in their lives are more likely to feel positive about themselves, engage in enjoyable and caring relationships with other people, and are less likely to be distressed, worried, and engage in behaviours that are harmful to themselves or to others. On the other hand, a confused sense of identity is found to be associated with externalizing symptoms, sexual risk taking, and illicit drug use (Schwartz et al., 2008). Identity diffusion was found to be associated with low self-esteem, drug or alcohol problems, and delinquency (Luyckx, Goossens, Soenens, Beyers, & Vansteenkiste, 2005).

It is also evident from the results that moratorium status is negatively contributing to health-risk behaviour in boys, thereby supporting the first hypothesis. Moratorium represents actively considering identity alternatives, in the absence of strong commitments. Previous research indicated that adolescents in this status adopt an informational processing orientation and actively seek out and evaluate self-relevant information in an analytical fashion (Berzonsky 2004; Berzonsky & Kuk 2000; Schwartz, Mullis, & Waterman, 2000). This positive aspect of moratorium is also consistent with findings demonstrating that individuals in this status were similar to their peers in the achievement status on a number of variables, such as autonomy, moral reasoning, low authoritarianism, warmth, and intimate relationships (Meeus 1992). Seemingly, identity exploration in boys is not associated with indulgence in health-risk behaviours.

The results of the present research indicate that foreclosure status in boys is inversely contributing to health-risks, thereby supporting the first hypothesis. Individuals in foreclosure status exhibit commitments, despite not having experienced a crisis. Such a person's attitudes and goals rigidly reflect those of parents. Foreclosure seems a secure status for adolescents who do prefer to explore various ideological and interpersonal domains of life relevant to their sense of self. Such adolescents are comfortable in accepting and imbibing parental and authority tutelage, and willingly adopt and conform to the values of the popular culture, thus, leaving a little scope for embarking on deviant life tracks. Foreclosure status has been found to be associated with less anxiety and opposition to drug use (Marcia, 1980), high self-esteem (Cramer, 1997), self-satisfaction (Makros & McCabe, 2001), and increased well-being (Berzonsky, Macek, & Nurmi, 2003). Later researches also suggest that foreclosure has been associated with high degrees of self-esteem, life satisfaction, and psychological well-being (Schwartz et al., 2011).

A confusing picture emerges regarding the relation of emotional autonomy with health-risk behaviours. Correlation analysis reveals that health–risk behaviours in boys are inversely correlated with De-idealization of Parents and Individuation dimensions of emotional autonomy, whereas contrary to the second hypothesis, Nondependency on Parents positively contributes to health-risk behaviours in boys. Some researchers have suggested that there is a universal process through which individuals develop healthy autonomy (Kagitcibasi, 2005; McLeod, 1987). If individuals develop a high sense of agency (taking responsibility for their own actions), while retaining close connections with significant adults, they are likely to develop a healthy autonomous and relational self, which is likely to result in relatively low risk-taking. When this process goes awry, the result is often increased risk-taking. The available research on the adaptive value of emotional autonomy for adolescent development is laden with controversy (Silverberg & Gondoli, 1996). While some authors with psychoanalytic background found normal and desirable that teenager should take a certain distance from their progenitors upon reaching puberty, the research of other scholars, such as Ryan and Lynch (1989) endorsed the hypothesis that a high degree of emotional autonomy may indicate an earlier experience of inadequate support and love from family, leading to the formation of a more insecure bond with parents; this might produce obstacles to full development during the adolescent years. Ryan and Lynch (1989) have also viewed the development of emotional autonomy as detachment and noted that although, detachment could result in some increases in self-reliance, it might also result in loss of valuable connections with others. Consistent with these findings, Lamborn and Steinberg (1993) found that adolescents who display high emotional autonomy may also be more likely to be engaged in delinquency activity. Frank et al. (1990) found that de-idealization was linked to adolescents' feelings of insecurity. Matos et al. (1999) have also suggested autonomous qualities to be related to heightened feelings of insecurity.

Family cohesion has emerged as significant correlate and a negative predictor of adolescent health-risk behaviours, thus, supporting second hypothesis of the study. Also family conflict has been found to be a positive predictor of adolescent health-risk behaviours, again lending support to the framed second hypothesis. In preventing youth risk-taking, past research has demonstrated the importance of family cohesion. For instance, close family bonding has been identified as a protective factor for youth sexual risk-taking behaviour (Lonczak, Abbot, Hawkins, Kosterman, & Catalano, 2002),

and family connectedness is also related to less frequent cigarette use in teens (Resnick et al., 1997). Feinberg, Ridenour, and Greenberg (2007) also reported that family cohesion is negatively related to youth risk behaviour. Various studies (Cummings, Schermerhorn, Davies, Goeke-Morey, & Cummings, 2006) have suggested that children and adolescents tend to exhibit higher rates of behavioural problems, specifically, when they have witnessed or suffered the conflicts within the family environment.

Providing support to the second hypothesis of the study, classroom environment dimensions of Teacher Support and Affiliation are inversely predicting health-risk behaviours. School is the institution, after family, which plays a major role in the socialization of the young, and has a tremendous potential to directly influence students' motivations, aspirations, and risk-taking behaviours. Students who identify with school have an internalized concept of belonging and value success in school relevant goals. School connectedness has been recognized as a critical protective factor in the development of adolescents, and it has been shown to be related to improved emotional health and wellbeing, higher levels of school retention, and reduced problem behaviour (Bond et al., 2007; Shochet, Smyth, & Homel, 2007). Data from a longitudinal study of adolescent health (Dornbusch, Erickson, Laird, & Wong, 2001) showed that higher levels of school connectedness and delayed initiation of deviant behaviour including delinquency, marijuana use, cigarette smoking, and violent behaviour among adolescents were related. It is also evident from the research that adolescents, who feel that their teachers care about them and are fair, are less likely to engage in drug use, weapon related violence, and suicidal ideation or attempts (McNeely & Falci, 2004).

Limitations and Suggestions

Although, the study has highlighted a number of contextual issues in determining the involvement of male adolescents in health-risk behaviours, the role of emotional autonomy in predicting the health-risk behaviours in male adolescents needs to be explored further. An in-depth qualitative approach in studying the implications of emotional autonomy for male adolescents in a collectivistic society like India needs to be adopted. A major limitation of the research was not addressing the issue of health-risk behaviours in female adolescents. Future studies may explore the ways in which the contextual factors play the same or opposite role in predicting health-risk behaviours in both the genders. Also more research needs to study

the actual prevalence of each of the adolescent health-risk behaviours. Future researchers may design the study from the perspective of teachers and parents and may assess the role of peers in health-risk behaviours in adolescents.

Implications

The results are especially relevant in understanding health-risk behaviours in the collectivistic societies which are marked by authoritarianism and where identity formation is not often encouraged. Identity formation is usually not encouraged in collectivistic societies, however, as the results show that male adolescents who form a self-definition or are struggling to define themselves show lesser inclination towards health-risk behaviours. Knowing ones direction and purpose in life seems an important developmental task for a healthy adolescent. Conflict in the family bodes negatively for adolescent health while family cohesion inversely contributes to health-risk behaviours in male adolescents. Family conflicts usually escalate during adolescence. Most of the conflicts are over the issues of autonomy, which often polarizes relationship between parents and children. The study emphasizes the need to maintain warm and congenial family environment for preventing male adolescents from falling into a trap of risky behaviours. Also, healthy classroom environment serves as a negative predictor of adolescent health-risk behaviours. The results also point towards a significant role played by the educational environment of an adolescent. Educationists should encourage students' bonding with their institute and its mission and goals and teachers can play a pivotal role in healthy adolescent development. Supportive teachers can provide a buffer against many unhealthy outcomes in male adolescents' life. School teachers can play a major role in the prevention of male adolescent health-risk behaviours by catering to the adolescents' psychosocial needs at this phase of life.

References

Adams, G. R., Munro, B., Munro, G., Doherty-Poirer, M., & Edwards, J. (2004). Identity processing styles and Canadian adolescents' self-reported delinquency. *Identity: An International Journal of Theory and Research, 5*, 57-65.

Baumrind, D. (1991). Effective parenting during the early adolescent transition. In P. A. Cowan & M. Hetherington (Eds.), *Family transitions: Advances in family research series* (pp. 111-163). Hillsdale, NJ: Erelbaum.

Bennion, L. D., & Adams, G. R. (1986). A revision of the extended version of the Objective Measure of Ego Identity Status: An identity instrument for use with late adolescents. *Journal of Adolescent Research, 1*, 183-198.

Berzonsky, M. D. (2004). Identity processing style, self-construction, and personal epistemic assumptions: A social-cognitive perspective. *European Journal of Developmental Psychology, 1*, 303-315.

Berzonsky, M. D., & Kuk, L. S. (2000). Identity status, identity processing style, and the transition to university. *Journal of Adolescent Research, 15*, 81-98.

Berzonsky, M. D., Macek, P., & Nurmi, J. E. (2003). Interrelationships among identity process, content, and structure. *Journal of Adolescent Research, 18*, 112-130.

Beyers, W., & Goosens, L. (1999). Emotional autonomy, psychosocial adjustment, and parenting: Interactions, moderating, and mediating effects. *Journal of Adolescence, 22*, 753-769.

Blos, P. (1979). *The adolescent passage*. New York, USA: International Universities Press, Inc.

Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., & Bowes, G. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of Adolescent Health, 40*(4), 9-18.

Capaldi, D. M., Crosby, L., & Stoolmiller, M. (1996). Predicting the timing of first sexual intercourse for at-risk adolescent males. *Child Development, 67*, 344-359.

Centers for Disease Control and Prevention. (2006). Youth risk behavior surveillance, United States. *Morbidity and Mortality Weekly Report, 55*(SS-5), 1-108.

Chick, C. F., & Reyna, V. F. (2012). A fuzzy trace theory of adolescent risk taking: Beyond self-control and sensation seeking. In V. Reyna, S. Chapman, M. Dougherty, & J. Confrey (Eds.), *The adolescent brain* (pp. 379-428). Washington, DC, USA: American Psychological Association.

Cramer, P. (1997). Identity, personality, and defense mechanisms: An observer-based study. *Journal of Research in Personality, 31*, 58-77.

Cummings, E. M., Schermerhorn, A. C., Davies, P. T., Goeke-Morey, M. C., & Cummings, J. S. (2006). Inter-parental discord and child adjustment: Prospective investigations of emotional security as an explanatory mechanism. *Child Development, 77*(1), 132-152.

Daniel, B., Wassell, S., & Gilligan, R. (1999). *Child development for child care and protection workers*. London: Jessica Kingsley Publishers.

Dishion, T. J., & Piehler, T. F. (2009). Deviant by design: Peer contagion in development, interventions, and schools. In K. H. Rubin, W. M. Bukowski, & B. Laursen, (Eds.) *Handbook of peer interactions, relationships and groups* (pp. 589-602). New York, USA: Guilford Press.

Dornbusch, S., Erickson, K.G., Laird, J., & Wong, C.A. (2001). The relation of family and school attachment to adolescent deviance in diverse groups and communities. *Journal of Adolescent Research, 16*(4), 396-422.

Elliot, D. S. (1993). Health-enhancing and health-compromising lifestyles. In S. G. Millstein, A. C. Petersen, & E. O. Nightingale (Eds.), *Promoting the health of adolescents: New directions for the twenty-first century* (pp. 112-145). New York, NY: Oxford University Press.

Ellison, T. A., & Trickett, E. J. (1978). Environmental structure and the perceived similarity-satisfaction relationship: Traditional and alternative schools. *Journal of Personality, 46*, 57-71.

Erikson, E. H. (1968). *Identity: Youth and crisis*. New York, USA: W. W. Norton & Company, Inc.

Erikson, E. H. (1983). Reflections. *Adolescent Psychiatry, 11*, 9-13.

Feinberg, M. E., Ridenour, T. A., & Greenberg, M. T. (2007). Aggregating indices of risk and protection for adolescent behavior problems: The communities that care youth survey. *Journal of Adolescent Health, 40*, 516-537.

Frank, E., Kupfer, D. J., Perel, J. M., Cornes, C., Jarrett, D. B., Mallinger, A. G., …Grochocinski, V. J. (1990). Three-year outcomes for maintenance therapies in recurrent depression. *Archives of General Psychiatry, 47*, 1093-1099.

Gupta, S. (2014, August 14). Four out of 10 men addicted to drugs in Punjab. *Hindustan Times*. Retrieved from http://www.hindustantimes.com/chandigarh/four-out-of-10-men-addicted-to-drugs-in-punjab/article1-1251901.aspx

Gupta, V. K., Kaur, P., Singh, G., Kaur, A., & Sidhu, B. S. (2013). A study of profile of patients admitted in the drug de-addiction centres in the state of Punjab. *International Journal of Research in Health Sciences, 1*(2), 53-61.

Irwin, C. E., Jr. (1987). *Adolescent social behavior and health*. San Francisco, CA, USA: Jossey-Bass.

Jacob, T. (1987). *Family interaction and psychopathology*. New York, USA: Plenum.

Kagitcibasi, C. (2005). Autonomy and relatedness in cultural context: Implications for self and family. *Journal of Cross-Cultural Psychology, 36*(4), 403-422.

Lamborn, S., & Steinberg, L. (1993). Emotional autonomy redux: Revisiting Ryan and Lynch. *Child Development, 64*, 483-499.

LaVeist, T.A. (2005). Disentangling race and socioeconomic status: A key to understanding health inequalities. *Journal of Urban Health: Bulletin of the New York Academy of Medicine, 82*(2), 26-34.

Lerner, R. M., & Tubman, J. G. (1991). Developmental contextualism and the study of early adolescent development. In R. Cohen & A. W. Siegel

(Eds.), *Context and development* (pp. 183-210). Hillsdale, NJ: Lawrence Erlbaum.

Lonczak, H. S., Abbott, R. D., Hawkins, J. D., Kosterman, R., & Catalano, R. F. (2002). Effects of the Seattle social development project on sexual behavior, pregnancy, birth, and sexually transmitted disease outcomes by age 21 years. *Archives of Pediatrics & Adolescent Medicine, 156*(5), 438-447.

Lopez, E. E., Perez, S. M., Ochoa, G. M., & Ruiz, D. M. (2008). Adolescent aggression: Effects of gender and family and school environments. *Journal of Adolescence, 31,* 433-450.

Luyckx, K., Goossens, L., Soenens, B., Beyers, W., &Vansteenkiste, M. (2005). Identity statuses based on 4 rather than 2 identity dimensions: Extending and refining Marcia's paradigm. *Journal of Youth and Adolescence, 34*, 605-618.

Makros, J., & McCabe, M. (2001). Relationships between identity and self representations during adolescence. *Journal of Youth and Adolescence, 30*(5), 623-639.

Marcia, J. E. (1966). Development and validation of Ego Identity Status. *Journal of Personality and Social Psychology, 3*, 551-558.

Marcia, J. (1980). Identity in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 159-187). New York, USA: Wiley.

Matos, P. M., Barbosa, S., Almedia, H. M. D., & Costa, M. E. (1999). Parental attachment and identity in Portuguese late adolescents. *Journal of Adolescence, 22*, 805-818.

McBride, C. M., Curry, S. J., Cheadle, A., Anderman, C., Wagner, E. H., Diehr, P., & Psaty, B. (1995). School-level application of a social bonding model to adolescent risk-taking behavior. *The Journal of School Health, 65*(2), 63-68.

McLeod, J. (1987). *Ain't no making it: Leveled aspirations in a low-income neighborhood.* Boulder, CO, USA: Westview.

McNeely, C., & Falci, C. (2004). School connectedness and the transition into and out of health-risk behavior among adolescents: A comparison of social belonging and teacher support. *Journal of School Health, 74*(7), 284-292.

Meeus, W. (1992). Toward psychosocial analysis of adolescent identity. In W. Meeus, M. de Goede, W. Kox, & K. Hurrelmann (Eds.), *Adolescence, careers, and cultures* (pp. 55-75). Berlin, Germany: de Gruyter.

Moos, R. H., & Moos, B. S. (1986). *Family Environment Scale manual* (2nd ed.). Palo Alto, CA, USA: Consulting Psychologists Press.

Moos, R. H., & Trickett, E. J. (1974). *Classroom Environment Scale manual*. Palo Alto, CA, USA: Consulting Psychologists Press.

O'Connor, B. P. (1995). Identity development and perceived parental behavior as sources of adolescent egocentrism. *Journal of Youth and Adolescence, 24*, 205-227.

Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., & Jones, J. (1997). Protecting adolescents from harm: Findings from the national longitudinal study on adolescent health. *Journal of the American Medical Association, 278*(10), 823-832.

Ryan, R. M., & Lynch, J. H. (1989). Emotional autonomy versus detachment: Revisiting the vicissitudes of adolescence and young adulthood. *Child Development, 60,* 340-356.

Sachdeva, S., Nagar, M., Tyagi, A. K., Sachdeva, R., & Bharti (2014). Alcohol consumption practices amongst adult males in a rural area of Haryana. *Medical Journal of Dr. D. Y. Patil University, 7*(2), 128-132.

Sales, J. M., & Irwin, C. E. Jr.(2009). Theories of adolescent risk-taking: A biopsychosocial model. In R. DiClemente & R. Crosby (Eds.), *Adolescent health: Understanding and preventing risk behaviors and adverse health outcomes* (pp. 31-50). San Francisco, CA, USA: Jossey-Bass.

Schwartz, S. J., Beyers, W., Luyckx, K., Soenens, B., Zamboanga, B. L., Forthun, L. F., & Waterman, A. S. (2011). Examining the light and dark sides of emerging adults' identity: A study of identity status differences in positive and negative psychosocial functioning. *Journal of Youth and Adolescence, 40,* 839-859.

Schwartz, S. J., Mason, C. A., Pantin, H., & Szapocznik, J. (2008). Effects of family functioning and identity confusion on substance use and sexual behavior in Hispanic immigrant early adolescents. *Identity: An International Journal of Theory and Research, 8*, 107-124.

Schwartz, S. J., Mullis, R. L., & Waterman, A. S. (2000). Ego identity status, identity style, and personal expressiveness: An empirical investigation of three convergent constructs. *Journal of Adolescent Research, 15*, 504-521.

Schwartz, S. J., Zamboanga, B. L., Wang, W., & Olthuis, J. V. (2009). Measuring identity from and Eriksonian perspective: Two sides of the same coin? *Journal of Personality Assessment, 91*, 143-154.

Sehgal, M. (2014, June, 29). Child drug addiction soars in Punjab as peddlers target pre-teens some of whom are born into dependency. *Daily Mail, The Mail on Sunday & Metro Media Group.* Retrieved from http://www.dailymail.co.uk/indiahome/indianews/article-2673539/Child-drug-addiction-soars-Punjab-peddlers-target-pre-teens-born-dependency. html

Shochet, I. M., Smyth, T., & Homel, R. (2007). The impact of parental attachment on adolescent perception of the school environment and school connectedness. *Australian and New Zealand Journal of Family Therapy, 28*(2), 109-118.

Silverberg, S. B., & Gondoli, D. M. (1996). Autonomy in adolescence. A contextualized perspective. In G. R. Adams, R. Montemayor, & T. P. Gullotta (Eds.), *Psychosocial development during adolescence* (pp. 12-61). Thousand Oaks, CA: Sage.

Skaar, N. R. (2009). *Development of the Adolescents' Exploratory and Risk Behaviour Rating Scale*. (Unpublished Doctoral Dissertation). Faculty of the Graduate School of the University of Minnesota, USA.

Smetana, J. G., & Asquith, P. (1994). Adolescents' and parents' conceptions of parental authority and personal autonomy. *Child Development*, *65*, 1147-1162.

Steinberg, L. (1999). *Adolescence* (5th ed.). New York, USA: McGraw-Hill.

Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. *Child Development, 57*, 841-851.

Wentzel, K. R., Barry, C. M., & Caldwell, K. A. (2004). Friendships in middle School: Influences on motivation and school adjustment. *Journal of Educational Psychology, 96*, 195-203.

Willoughby, T., & Hamza, C. (2011). A longitudinal examination of the bidirectional associations among perceived parenting behaviors, adolescent disclosure, and problem behavior across the high school years. *Journal of Youth and Adolescence, 40*, 463-478.

Zimmer-Gembeck, M. J., & Petherick, J. (2006). Intimacy dating goals and relationship satisfaction during adolescence and emerging adulthood: Identity formation, age, and sex as moderators. *International Journal of Behavioral Development, 30*, 167-177.

Received January 23, 2014

Revision received June 15, 2015