

## Personal and social predictors of risky sexual behaviours in Iranian youth

**Farzaneh Mikaeli Manee\***, Department of Educational Sciences, Faculty of Literature and Human Sciences, Urmia University, Urmia, Iran.

**Alireza Mohammadi Aria**, Department of Preschool and Primary School Children Education, University of Social Welfare and Rehabilitation Sciences, Tehran, Iran.

### Suggested Citation:

Manee, F. M. & Aria, A. M. (2018). Personal and social predictors of risky sexual behaviours in Iranian youth. *Global Journal of Psychology Research: New Trends and Issues*. 8(1), 10–24.

Received from November 11, 2017; revised from December 22, 2017; accepted from February, 15, 2018.

Selection and peer review under responsibility of Prof. Dr. Tulay Bozkurt, Istanbul Kultur University, Turkey.

© 2018 SciencePark Research, Organization & Counseling. All rights reserved.

### Abstract

This study investigates the power of psychological variables of depression, self-esteem and impulsivity as well as social variables of perceived social support and subjective socio-economic status in predicting risky sexual behaviours. To accomplish this study, all those individuals who were commuting to the Behavioural Diseases Counseling Center of Urmia over the last 6 years were considered and then, 80 individuals were selected as the research sample using a available sampling method. The Rosenberg Self-esteem Scale, researcher-made scale for assessing risky sexual behaviours, Beck depression inventory, Barratt impulsivity scale, Zimet perceived social support scale and researcher-made questionnaire of subjective social status were used in this study. The results showed that all the variables have had significant roles in predicting the risky sexual behaviours. Depression has had the most power to predict risky sexual behaviours. After that self-esteem, perceived social support and subjective social status could predict important parts of variances in the risky behaviours ( $R^2 = 0.57$ ). Regarding the mentioned results, it may be concluded that psychological factors to commit risky sexual behaviours. Thus, personal factors-based preventive and therapeutic programmes for sexual risky behaviours for youth are recommended.

**Keywords:** Risky sexual behaviours, personal predictors, social predictors, ex post facto study.

---

\* ADDRESS FOR CORRESPONDENCE: **Farzaneh Mikaeli Manee**, Department of Educational Sciences, Faculty of Literature and Human Sciences, Urmia University, Urmia, Iran. E-mail address: [f.mikaeli.manee@gmail.com](mailto:f.mikaeli.manee@gmail.com) / Tel.: +98 44 3275 2740

## 1. Introduction

Sexual behaviour is a common behaviour around the world. However, it can take an unusual form and result in negative consequences for the health of individuals and society. Risky sexual behaviour greatly increases the risk of contracting sexually transmitted infections, including HIV as well as a host of other negative outcomes (Birthing & Latzman, 2014). The risky sexual behaviours are among those behaviours that are always been of interest to researchers and experts in the field of public health. Hall, Holmqvist and Sherry (2004) believe that these behaviours are defined as involvement in a sexual relation without any required health care. Establishment of sexual relationship at an early age, having multiple sexual partners (Parkes, Henderson, Wight & Nixon, 2011), lack of protective devices (Reid & Aiken, 2011) and having sex under the influence of drugs, psychotropic substances and alcohol (Alleyne, Coleman-Cowger, Crown, Gibbons & Vines, 2011) are among the characteristics of risky sexual behaviours.

Individuals' tendency and involvement in risky sexual behaviours significantly increase the possibility of infection with sexually transmitted diseases and autoimmune diseases. In this regard, studies have proved that the main cause of HIV infection in adolescence and early youth can be attributed to risky sexual behaviours (Bellamy et al., 2008; Dias, Marques, Gama & Martins, 2014). These behaviours put the physical, psychological and social health at risk and harm them thereof.

In recent years, researchers in the field of prevention have investigated the predictors and antecedents of risky sexual behaviours to identify the risk factors and protective elements (Bachanas et al., 2002). There is a dynamic interplay of individual, socio-demographic, lifestyle and structural factors, which influences risky sexual behaviours (Chanakira, O' Cathain, Goyder & Freeman, 2014). For example, studies have shown that psychological factors such as insecure attachment (Paulk & Zayac, 2013), peer pressure (Cherie & Berhane, 2012), attitudes toward sexual relations (Hahm, Lee, Choe, Ward & Lundgren, 2011), poverty (Underwood, Skinner, Osman & Schwandt, 2011) and impulsivity (Black, Serowik & Rosen, 2009) are able to predict risky sexual behaviours. All in all, the underlying factors lead individuals to be involved and commit these behaviours, which can be classified into two categories of personal and social variables. In this study, personal factors of self-esteem, impulsivity, emotional regulation problems and depression as well as social factors of perceived social support and subjective social status have been considered and examined as predictors of risky sexual behaviours.

One of the most important protective factors against the tendency to such behaviours is the concept of self-esteem. Self-esteem is defined as the assessment of one's own self. It is notable that self-worth is the main component of self-esteem (Wild, Flisher, Bhana & Lombard, 2004). It is believed that self-esteem has a protective function. According to this model, low self-esteem makes a person vulnerable to environmental and social factors that are associated with a low self-esteem sense. This makes the person more vulnerable to pressure groups and more likely to engage in risky behaviours as well (Auerbach & Gardiner, 2012).

In this regard, Wild et al. (2004) conducted a research and showed that there was a positive relationship between the low self-esteem that is related to peer relations and tendency to risky behaviours. In general, positive self-evaluation or, in other words, self-esteem makes a person less inclined to undertake dangerous behaviours such as risky sexual behaviours. Thus, high self-esteem is associated with fewer tendencies to risky behaviours (Erol & Orth, 2011; Peterson, Buser & Westburg, 2010; Unis, Johansson & Sallstrom, 2015).

Low or negative self-esteem is correlated with tendency to risky sexual behaviours (Gullette & Lyons, 2006; Stein, Rotheram-Borus, Swendeman & Milburn, 2005), alcohol and cigarettes usage (Gullette & Lyons, 2006), antisocial and criminal behaviours (Erol & Orth, 2011) and the use of hazardous and illegal substances such as different types of psychotropic substances (Fini et al., 2009; Hunt & Guindon, 2010). It seems that people with low self-esteem are unable to deal effectively with adverse events of life as well as negative emotions arising from them. Thus, they resort to more

available risky behaviours to attenuate their negative emotions (Wild et al., 2004). Accordingly, it is possible to consider the concept of self-esteem as a personal variable predicting the occurrence of risky sexual behaviours.

The concept of impulsivity can be considered as one of the psychological variables that may be associated with risky sexual behaviours. This concept is defined as readiness to demonstrate unplanned and impromptu reactions regardless of their future consequences. These reactions can occur due to exposure to external or internal stimuli (Moeller, Barratt, Dougherty, Schmitz & Swann, 2001). This construct has been conceptualised as a multidimensional variable that is composed of attention (inability to focus on a specific task), cognitive (inability to predict the consequences of one's own behaviour) and behavioural components (inability to stop a non-reflective reaction) (Jakubczyk et al., 2013). As Whiteside and Lynam (2001) have noted, four constructs of sensation seeking (tendency to engage in reckless actions), urgency (tendency to commit reckless actions during periods of intense emotion), premeditation (poor ability to think about the consequences of an action) and lack of persistence and follow-up (difficulty in following assignments from start to end) constitute the impulsive behaviours.

Impulsivity is frequently included as a risk factor in models of sexual risk-taking (Dir, Coskunpinar & Cyders, 2014). Some researchers believe that risky sexual behaviours can be categorised as a kind of impulsive behaviours because in such a situation, the person is not able to resist against or overcome pressures for doing those behaviours that are harmful to his/her health (Deckman & DeWall, 2011). In addition, there is a considerable overlap between risk taking and impulsivity. Taking a risk points to a behaviour that has at least one unpredictable outcome. This feature is visible in the definition of the concept of impulsivity proposed by Moeller et al. (2001). Accordingly, it seems that impulsivity is one of the main characteristics of individuals afflicted with risky behaviours (Jakubczyk et al., 2013).

The research results also indicate that impulsive individuals have some deep-rooted defects in their behavioural self-regulatory system. Therefore, they are unable to quickly and cognitively assess the gains and losses of their reaction. Consequently, when they are faced with risky situations that require appropriate decision-making, they fail to predict the right choice. Then, they are drawn to the actions that may bear some desirable short-term results and many unpleasant and dangerous long-term effects (Borders, McAndrew, Quigley & Chandler, 2012).

Deckman and DeWall (2011) found that hasty, careless and reckless individuals were more involved in risky sexual behaviours than others. According to these researchers, different levels of impulsivity could be a reliable predictor of risky sexual behaviours. Winters, Botzet, Fahnhorst, Baumel and Lee (2009) concluded that impulsivity functioned as a mediating factor amid the relationship between drug abuse and risky sexual behaviours. This meant that compared to others, the impulsive individuals had more risky sexual actions when they used drug or alcohol. Birthrong and Latzman (2014) indicated that impulsive individuals tended more to risky sexual behaviours in emotional and affective contexts.

Finally, the feelings of depression and low mood can be predictors of risky sexual behaviours. Depression is one of the most common psychological problems in all societies and it is associated with some neuropsychological defects such as low sensitivity to rewards and punishments (Beevers et al., 2013). In addition, it has been found that this mood is related to change and transformation of the nervous systems producing serotonin as well as related disabilities in making decisions (Must et al., 2007). Accordingly, the occurrence of risky behaviours, such as suicide, is relatively more prevalent among the depressed patients than ordinary individuals (Loyo, Martinez-Velazquez & Ramos-Loyo, 2013). Several studies have shown that the prevalence of depression is higher among individuals with risky sexual behaviours than among the general population (Mota, Cox, Katz & Sareen, 2010; Othieno, Okoth, Peltzer, Pengpid & Malla, 2015; Seth et al., 2011). Researchers believe that there is a relationship between depression and risky sexual behaviours, such as not using condom (Lehrer, Shrier, Gortmaker & Buka, 2006), having multiple sexual partners (DiClemente et al., 2001; Grello, Welsh & Harper, 2013), not treating the sexually transmitted diseases as well as their related

infections (Shrier, Walls, Lops & Feldman, 2009) and committing unconventional sexual behaviours (Halpern-Felsher, Cornell, Kropp & Tschann, 2005). Depression may harm cognitive functions and memory and reduce individual's control on impulsive behaviour. Furthermore, it can increase the emotional reactivity to relationships with peers, decrease motivation and increase the fatalism. These effects can decrease a person's risk perception and prepare him/her to engage in risky sexual behaviours (Khan et al., 2011). Borders et al. (2012) found that negative mood states could lead individuals to commit risky behaviours.

In addition, features such as a high level of frustration, helplessness, negative affection and emotional regulation problems, which have a strong relationship with depression and are considered among its characteristics, can stimulate and motivate individuals to commit risky behaviours because they can nullify such unpleasant internal feelings and divert their attention from them thereof (Tull & Gratz, 2013). Accordingly, it seems that depression is one of the significant predictors of risky sexual behaviours.

Also, there are some social factors that play a determining role in a person's tendency to risky behaviours and the perceived social support is considered as one of these important variables. This latter concept points to emotional, information and practical support provided by important individuals in a person's life, such as family, friends, colleagues and members of the society. The support may take the form of actual supports received from these groups or the person supposes that such supports are available when he/she needs help (Thoits, 2010).

Social support plays an important role in reducing psychological stress of an individual when he/she faces depression and anxiety (Grav, Hellzen, Romild & Stordal, 2012). Existing studies indicate that higher levels of social support are related to fewer HIV-related risk behaviours among female sex workers, people living with HIV/AIDS and heterosexual adults, in general (Qiao, Li & Stanton, 2014). Some studies have shown that social support can be a factor in preventing and reducing the tendency of individuals, especially adolescents and young adults, to risky behaviours, such as risky sexual behaviours (i.e. Kimberly & Serovich, 1999; Majumdar, 2006). In this regard, the results of a study conducted by Reininger, Perez, Aguirre-Flores, Chen and Rahbar (2012) indicated that perceived social support had been effective in protecting adolescents to find interest in all sorts of risky behaviours. Adedimeji, Heard, Odutolu and Omololu (2008) examined the African youth and found that the support of friends played an important role in protecting them against risky behaviours and observing the preventive standards in sexual relations. It seems that the social support functions as a protective shield against various events. Actually, social support is a kind of effective coping strategy that regulates negative emotions, reduces negative effects and prevents from tendency to inappropriate behaviours, including the risky behaviours.

Another social variable, which is considered as the determinant variable in this study, is the (perceived) subjective social status (SSS). This concept, which is in line with the objective socio-economic status, points to subjective experience and understanding of an individual about his/her own class (Goodman, Huang, Schafer-Kalkhoff & Adler, 2007). In other words, individual's understanding of his/her status in the social hierarchy constitutes his/her perceived social class (Adler, 2006). SSS predicts health outcomes above and beyond the traditional objective measures of social status, such as education, income and occupation (Euteneuer, 2014).

This is a relatively new concept that has attracted some specialists in the field of health. Therefore, few researches exist in this area. Difficulty in assessing the objective social situation, unclear lines of poverty in different countries and the strong impact of subjective cognition and experience on behaviours have highlighted this concept thereof. In this regard, the study of Goodman et al. (2007) shows that if adolescents perceive their own socio-economic class as weak, they will have lower physical health and their health behaviours will be categorised in lower levels. The results of the study conducted by Hu et al. (2005) indicated that this variable can determine the health of individuals and this effect has remained steadfast even when objective indicators of socio-economic status have not

been significant. Regarding the relationship between this variable and mental health and the relationship between risky sexual behaviours and physical and mental health of the individual, it seems likely that this variable can verily predict these behaviours.

## **2. The Current Study**

According to the above-mentioned items, it is probable that personal factors (depression, self-esteem and impulsivity) and social factors (perceived social support and subjective socio-economic status) motivate the individuals to be inclined towards such risky sexual behaviours or they may inhibit them from doing the mentioned behaviours. Therefore, identification of these factors can be very valuable for the preparation of prevention and treatment programmes. Thus, the aim of this study was to determine the power of personal variables of self-esteem, impulsivity and depression as well as social variables of perceived social support and subjective socio-economic status in predicting risky sexual behaviours. The main question of this study was about the exact extent of variances in risky sexual behaviours predicted by personal and social variables.

## **3. Data and Methods**

### **3.1. Data**

To accomplish this study, all those individuals who were commuting to the Behavioural Diseases Counseling Center of Urmia from 2008 to 2012 were considered. It should be noted that all of them had exclusively risky sexual behaviours. Regarding the mentioned individuals, some available literate individuals were selected to answer the study tool (non-probability sampling—convenience sampling), which were mainly self-report forms. In addition, those individuals with a history of psychological problems leading to hospitalisation or continuous administration of the drug as well as epileptic and homeless individuals were excluded from the study to avoid the interference of unwanted variables in the research results. All the participants had a history of at least 1 year of risky behaviours (i.e. those behaviours were part of their sexual habits and were not occasional cases). Among all the patients, 80 individuals were willing to cooperate and completed the tests. Finally, 14 female and 66 male participants took part in this study. They had a mean age of 25 years and 4 months (SD = 4.20) and their education level was higher than junior high school. The lowest level of education belonged to a high school student and the highest academic level was related to graduate level.

## **4. Measures**

### **4.1. Beck depression inventory**

Beck depression inventory (BDI-II) is composed of 21 questions or items, each with four possible responses. Each response is assigned a score ranging from zero to three, indicating the severity of the symptom. The BDI has been shown to be valid and reliable, with results corresponding to ratings of depression in more than 90% of all cases. For the BDI-II, the coefficient alphas reported are 0.92, for outpatients, and 0.93, for the college students (Sharp & Lipsky, 2002).

### **4.2. Rosenberg self-esteem scale**

The scale is a 10-item Likert scale with items answered on a four-point scale—from strongly agree to strongly disagree. Also, the scale is a 10-item tool with high internal reliability (alpha 0.92) (Heatherton & Wyland, 2003).

### **4.3. Barratt impulsivity scale**

It includes 30 items that are scored to yield three second-order factors (attentional, motor and non-planning impulsiveness). Patton, Stanford and Barratt (1995) reported the internal consistency coefficients for the Barratt impulsivity scale (BIS)-11 total score that ranges from 0.79 to 0.83 for separate populations of under-graduates, substance-abuse patients, general psychiatric patients and prison inmates.

### **4.4. Multidimensional scale of perceived social support**

The multidimensional scale of perceived social support (MSPSS; Zimet, Dahlem, Zimet & Farley, 1988) is a 12-item scale that measures the perceived support from three domains: family, friends and a significant other. Participants completing the MSPSS are asked to indicate their agreement with items on a 7-point Likert-type scale, ranging from very strongly disagree to very strongly agree. Cauty-Mitchell and Zimet (2000) investigated the MSPSS and found internal reliability estimates of 0.93 for the total score and 0.91, 0.89 and 0.91 for the family, friends and significant others subscales.

#### **4.4.1. The researcher-made questionnaire of (perceived) subjective social status**

The most important available test that measures this variable is the MacArthur Subjective Social Status Scale (Goodman et al., 2001). This is a picture of a 10-step ladder and the participant must consider it as the social structure of his/her society. The upper steps represent the upper classes, high-level positions and excellent financial position. Conversely, the lower steps represent the lower socio-economic classes. The respondent must mark the step that reflects the socio-economic status of his/her family as well as himself/herself. Since Iranian respondents were unfamiliar with this form of test and due to particular complexity of socio-economic classes in this society, a 15-question test was developed on the basis of conceptual foundations of the perceived socio-economic status. Having consulted with two sociologists, some improvements were made in the test and finally four questions were removed. The test was conducted on 50 undergraduate students in order to estimate the reliability and assess the structure of the scale as well. The correlation between the questions and the total score was calculated and based on the results of the initial study, four questions that had very high or very low correlation were excluded. Again, the correlation between the questions and the total score was calculated and the obtained coefficients were determined as 0.66–0.89, respectively. Then, the reliability coefficient was determined as 0.85 using the internal consistency evaluation (Cronbach's alpha). It should be noted that the latter value was considered as an appropriate value in this regard. Finally, a seven-question test was generated thereof. This measure was graded on a 5° scale which indicated the socio-economic status of the society (low, medium low, medium, medium high and high).

#### **4.4.2. The researcher-made scale for assessing risky sexual behaviours**

This tool took into account the study conducted by Caminis, Henrich, Ruchkin, Schwab-Stone and Martin (2007) as well as those ethical and cultural characteristics accepted by Iranian society. Two psychologists and one sociologist checked the initial version of the test, consisting of 22 questions, and provided some suggestions for its improvement. The remaining questions were distributed among a group of 20 participants afflicted with risky behaviours. Having readjusted the questions, only 11 questions remained in the study. The reliability of the test was assessed using the test-retest reliability method and the obtained reliability was 0.76 which was considered an appropriate value in this regard. Two psychologists and two sociologists examined the scale to determine its validity and concluded that the scale was an appropriate tool to examine the risky sexual behaviours.

Stepwise regression was used for data analysis. The total score of risky sexual behaviours scale was considered as the criterion variable. Then, the scores of self-esteem, impulsivity and depression scales

as well as the total score, the MSPSS and perceived socio-economic status were entered into the analysis as predictor variables.

## 5. Results

The mean age of participants was 25.3 (SD = 4.20) and their education level was higher than junior high school. The lowest level of education belonged to a high school student and the highest academic level was related to graduate level. Regarding all the participants, 48 were single, 28 were married and 4 were divorced persons. None of the parents of participants were separated at the time of this study. Given all the participants, 22 individuals self-reported themselves as students and 14 individuals asserted that they were employees. Furthermore, 32 individuals announced that they were self-employed and others asserted that they were unemployed. Table 1 presents the descriptive data on the research variables:

Table 1. Descriptive statistics of research variables

Variable	Variable	Mean	SD
Impulsivity	Lack of planning	39.77	6.60
	Motor impulsivity	35.47	5.79
	Cognitive impulsivity	41.40	6.71
	Total score	90.18	13.29
Self-esteem	Self-esteem	15.1	3.61
Depression	Depression	27.40	9.71
Perceived social support	Family	17.31	4.51
	Friends	18.29	5.34
	Important individuals	20.46	5.73
	Total score	54.61	11.21
Subjective socio-economic status	SSS	3.03	1.02
Risky sexual behaviours	Risky sexual behaviours	43.89	9.72

Table 2. represents the results of the correlation test between variables and parameters of the study.

Variable		1	2	3	4	5	6	7	8	9	10	11
Impulsivity	Lack of planning	1										
	Motor impulsivity	**0.38	1									
	Cognitive impulsivity	**0.51	**0.57	1								
	Total score	**0.46	**0.59	**0.39	1							
Self-esteem	Self-esteem	-0.13	*0.22	*-0.21	*-0.24	1						
Depression	Depression	*0.25	*-0.25	*0.24	*0.23	** -0.31	1					
Perceived social support	Family support	0.08	0.16	0.19	0.12	**0.34	*0.21	1				
	Friend support	0.10	0.14	0.19	0.15	**0.30	**0.44	**0.40	1			
	Support of important individuals	0.12	0.14	0.19	0.15	**0.40	** -0.34	**0.49	**0.51	1		
	Total support	-0.11	*-0.19	-0.14	0.14	** -0.43	**0.39	**0.41	**0.50	**0.49	1	
Subjective socio-economic status	SSS	*0.12	0.14	0.17	*0.23	**0.33	** -0.37	**0.32	0.18	*0.22	*0.25	1
Risky sexual behaviours	Risky sexual behaviours	**0.31	*0.19	**0.39	**0.47	** -0.54	-0.64	** -0.39	*-0.23	*-0.31	** -0.34	** -0.37



Table 3 represents the results of the stepwise regression analysis to predict risky sexual behaviours.

Table 3. Stepwise regression analysis of the criterion variable of risky sexual behaviours in relation to predictive variables

Step	Variable	Statistical index/predictor	P	T	Beta	SE	B	P	R <sup>2</sup>	R
First	Depression	Depression	0.000	5.61	0.34	0.25	0.89	0.000	0.19	0.438
Second	Self-esteem	Self-esteem	0.000	-5.01	-0.25	-0.20	-0.76	0.001	0.16	0.512
Third	Impulsivity	Cognitive impulsivity	0.001	4.31	0.22	0.16	0.54	0.001	0.34	0.582
		Total score	0.01	3.74	0.22	0.13	0.45	0.01	0.41	0.644
Fourth	Perceived social support	Family Total score	0.01	-3.41	-0.18	-0.11	-0.41	0.10	0.47	0.688
		Total score	0.01	-3.03	-0.14	-0.09	-0.39	0.01	0.51	0.71
Fifth	SSS	SSS	0.03	-2.99	0.13	-0.07	-0.33	0.1	0.57	0.759

Regarding the results set forth in Table 2, the variables of depression, self-esteem, cognitive impulsivity, total score of impulsivity, perceived social support from family, its total score and the perceived socio-economic class could explain and predict about 57% of the variance in the risky sexual behaviours. Among these variables, the depression was the most powerful predictor variable ( $R^2 = 0.19$ ) because it was able to significantly explain 19% of the variance in the criterion variable ( $P = 0.000$ ). Then, the self-esteem was able to explain 26% of variance in risky sexual behaviours. In other words, the addition of this variable to the analysis increased its predictive power up to 7% thereof.

## 6. Discussion and Conclusion

The aim of this study was to investigate personal and social predictors of risky sexual behaviours. The results indicated that the personal variables of depression, self-esteem, cognitive impulsivity, total impulsivity as well as social variables of perceived social support from family, total support and the perceived socio-economic class could explain and predict about 57% of the variance in the risky sexual behaviours. Therefore, it can be concluded that similar to many other behaviours, the occurrence of risky behaviours is the result of the synchronous interaction of personal and social factors together. In this regard, Currie et al. (2012) suggest that risky behaviour, especially those behaviours among adolescents and youth, are the result of interaction among personal, individual, social and ecological characteristics. That is why the presence of living and working environments that are hazardous and contaminated or personal characteristics that may increase the tendency towards risky behaviours cannot be considered as the sole factors leading to such risky behaviours.

The depression was the most powerful variable in predicting the occurrence of risk behaviours. This latter finding confirms the results of studies which have pointed out that the prevalence of depression is higher among individuals with risky sexual behaviours than among the general population (Grello et al., 2013; Lehrer et al., 2006; Mota et al., 2010; Othieno et al., 2015). In addition, depressed adolescents and young adults are less likely to use health care methods in terms of sexual behaviours and, therefore, they are more susceptible to problems arising from these risky behaviours (Shrier et al., 2011). Furthermore, it is possible that depression negatively affects the cognitive abilities, decreases individual's ability to estimate the risky positions, decreases a person's risk perception and prepares him/her to engage in such risky sexual behaviours (Khan et al., 2011). In addition, depression is associated with low sensitivity to rewards and daily pleasant stimuli as well as high level of frustration, helplessness, negative affection and emotional regulation problems. Accordingly, these factors lead him/her to demand higher-than-usual stimuli to enjoy thereof. These types of stimuli are

usually found in such risky behaviours as drug use, dangerous driving and unconventional and dangerous sexual behaviours that can pave the way for individuals with symptoms of depression to be inclined towards these mentioned behaviours (Tull & Gratz, 2013). Another explanation has been proposed by Spear and Kulbok (2001) who believe that depression leads to decreased self-esteem, self-efficacy and assertiveness and makes a person unable to control his/her sexual relationships and engage in unhealthy relationships. In general, it seems that depression negatively affects different cognitive and emotional aspects of a person's life and causes problems in decision-making, determining and predicting the consequences of actions. These defects lead to behaviours such as risky sexual behaviours that can turn into serious personal and social problems.

The results have shown that self-esteem is another significant predictor of risky sexual behaviours. This result is in line with the results of other studies in that low or damaged self-esteem is correlated with tendency to risky sexual behaviours such as dangerous sexual behaviours (Gullette & Lyons, 2006; Stein et al., 2005), alcohol, drug and cigarettes usage (Gullette & Lyons, 2006), antisocial and criminal behaviours (Erol & Orth, 2011) and the use of hazardous and illegal substances such as different types of psychotropic substances (Hunt & Guindon, 2010). Magnani, Seiber, Gutierrez and Vereau (2001) studied Peruvian adolescents and found that low self-esteem was an appropriate predictor of early and unprotected sexual activities as well as reckless healthy precautions. Some theorists believe that people with low self-esteem resort to risky behaviours to cope with or escape from the negative emotions resulting from worthlessness feeling because these behaviours are the only means available to them to overcome stress. In addition, feelings of worthlessness and low self-esteem lead individuals to demonstrate less resistance against peer pressure and they are more likely to be involved in abnormal behaviours (Wild et al., 2004).

It seems that low self-esteem leads individuals to demonstrate less resistance against environmental pressures. Similarly, they cannot resist the temptation to engage in risky behaviour when they are faced with dangerous situations. Regarding the persons with high self-esteem, this ability can function as a shield to prevent them to commit risky behaviours. Accordingly, this factor can be considered as one of the foundations of personal flexibility that helps the person to resist against environmental, peers and society pressures and he/she becomes less susceptible to commit risky and harmful behaviours (Veselska et al., 2009).

The results of the study show that impulsivity can significantly predict the risky sexual behaviours. In other words, compared to ordinary individuals, those who commit risky sexual behaviours are more susceptible to demonstrate rapid, injudicious and narrow-minded reactions. Consequently, these elements may bear undesirable results. This finding has been replicated in several other studies (Black et al., 2009; Dir et al., 2014; Jakubczyk et al., 2013). For example, Deckman and DeWall (2011) found in their study that hasty, careless and reckless individuals were more involved in risky sexual behaviours than others. Similarly, the established relationship between drug abuse and dangerous sexual behaviours was adjusted by the impulsivity variable. This meant that individuals with higher levels of impulsivity had higher dose of drug usage and that they committed more risky behaviours when they consumed psychotropic drugs. This can be explained that impulsive individuals have some deep-rooted defects in their behavioural self-regulatory system. Therefore, they are unable to quickly and cognitively assess the gains and losses of their reaction. Consequently, when they are faced with risky situations that require appropriate decision-making, they fail to predict the right choice. Then, they are drawn to the actions that may bear some desirable short-term results and many unpleasant and dangerous long-term effects. The above explanation is completely in line with another finding of this study which indicates that there is a strong association between the cognitive impulsivity and risky sexual behaviours and that the former can significantly predict the latter. These individuals are not able to predict the immediate and future consequences of events or postpone their sense of satisfaction. Therefore, they are often involved in abnormal and damaging behaviours (Arce & Santisteban, 2006).

Similarly, the perceived social support can significantly explain and predict some parts of variances in risky sexual behaviours. As the person can receive emotional, information and practical support from important individuals in his/her life, such as family, friends, colleagues and members of the society or as he/she supposes that such supports are available when he/she needs help, he/she will demonstrate more resistance against risky behaviours thereof. Several studies have shown that social support can be a factor in preventing and reducing the tendency of individuals, especially adolescents and young adults, to risky behaviours such as risky sexual behaviours (Majumdar, 2006; Reiningger et al., 2012). In addition, those supports directed by parents and family are particularly effective in attracting or preventing youth and adolescent to risky behaviours. The research results have indicated that parental control (Wild et al., 2004), frequency of family member's togetherness, such as eating together, (Eisenberg, Neumark-Sztainer, Fulkerson & Story, 2008) and the structure and level of stress in the family (Nazari et al., 2012) can contribute to individuals' tendency to risky behaviours. It seems that the social support functions as a protective shield against various events. Actually, social support is a kind of effective coping strategy that regulates negative emotions, reduces its negative effects and prevents from tendency to inappropriate behaviours, including the risky behaviours. Actually, the families that spend more time together and are important to each other and have appropriate verbal interactions with each other are verily more sensitive to early ad beginning signs of danger and damage among the members. Accordingly, these families can readily avoid the occurrence of problems (Goldfarb, Tarver & Sen, 2014). Thus, the perceived and received support from the family can be a protective and preventive factor in terms of tendency towards risky behaviours.

Finally, the results show that perceived socio-economic status significantly predicts the risky sexual behaviours. This means that as the participants assess their socio-economic status to be located in a lower position, they will be more inclined towards risky sexual behaviours. Ghaed and Gallo (2007) concluded in their study that the subjective perceptions of social status and the position of oneself in the social hierarchy played a crucial role in the health-related behaviours. Those women who thought that their status was a poor one had fewer health-care behaviours and they did not adhere to their health. Ritterman (2007) showed that adolescents' perception of their socio-economic status had an important role in their tendency towards risky behaviours. Those adolescents who considered themselves to be located in weak status would possibly select some poor and at-the-risk peers as their friends. Furthermore, they were more involved in risky and damaging behaviours.

Regarding two extensive longitudinal studies that examined the relationship between subjective social statuses as well as physical and psychological health and social function in the United Kingdom and the United States of America, the results showed that this variable, like level of education, was better and stronger than objective criteria and it can predict the health status of women and men (Singh-Manoux, Marmot & Adler, 2005). It may be said that the subjective evaluation of socio-economic status is a combination of individuals' understanding on various factors influencing their life. So, this index is considered a better indicator thereof (Borg & Kristensen, 2000). Since the subjective social status is a cognitive-perceptual combination of past, present and future statuses, it can be considered a better index to determine the behaviour and actions of individuals (Singh-Manoux et al., 2005).

In sum, it can be concluded that personal and social factors together can significantly explain and predict important parts of risky sexual behaviours. As such, the followings are recommended:

- Since depression is the most common psychological disorder and due to this fact that this factor underlies some other problems as tendency to risky behaviours, it requires more serious attention on the part of Iranian health authorities and officials.
- The likelihood of having symptoms of depression as well as necessary measures to diagnose and treat such disorder should be taken into account when treating patients with risky behaviours.

- Therapeutic interventions and preventive programmes based on promoting self-esteem are among those effective and low-cost programmes that can be set forth in educational and treatment programmes for youth as well as those with risky behaviours.
- Identification of psychological and social antecedents and risk factors of risky behaviours is the duty of those researchers active in this field. It should be noted that this latter task plays an important role in managing and providing knowledge-based prevention and treatment programmes. Therefore, the future researchers are suggested to study other psychological variables such as assertiveness, anxiety and social factors such as interpersonal communication skills and social problem solving in their future studies.

### **Ethical Considerations**

Ethical issues (including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc.) have been completely observed by the authors.

### **Acknowledgements**

Hereby, all the participants who took part in this study as well as all staff of Behavioural Diseases Counseling Center of Urmia are appreciated.

### **References**

- Adedimeji, A. A., Heard, N. J., Odutolu, O. & Omololu, F. O. (2008). Social factors, social support and condom use behavior among young urban Slum inhabitants in southwest Nigeria. *East African Journal of Public Health*, 5(3), 215–223.
- Adler, N. E. (2006). Overview of health disparities. In G. E. Thompson, F. Mitchell & M. Williams (Eds.), *Examining the health disparities research plan of the National Institutes of Health: unfinished business* (pp. 129–188). Washington, DC: National Academic Press.
- Alleyne, B., Coleman-Cowger, V. H., Crown, L., Gibbons, M. A. & Vines, L. N. (2011). The effects of dating violence, substance use and risky sexual behavior among a diverse sample of Illinois youth. *Journal of Adolescence*, 34, 11–18.
- Arce, E. & Santisteban, C. (2006). Impulsivity: A review. *Psicothema*, 18(2), 213–220.
- Auerbach, R. P. & Gardiner, C. K. (2012). Moving beyond the trait conceptualization of self-esteem: The prospective effect of impulsiveness, coping, and risky behavior engagement. *Behavior Research and Therapy*, 50(10), 596–603.
- Bachanas, P. J., Morris, M. K., Lewis-Gess, J. K., Sarett-Cuasay, E. J., Sirl, K., Ries, J. K. & Sawyer, M. K. (2002). Predictors of risky sexual behavior in African American adolescent girls: Implications for prevention interventions. *Journal of Pediatric Psychology*, 27, 519–530.
- Beevers, C. G., Worthy, D. A., Gorlick, M. A., Nix, B., Chotibut, T. & Todd Maddox, W. (2013). Influence of depression symptoms on history-independent reward and punishment processing. *Psychiatry Research*, 207(1–2), 53–60.
- Bellamy, N. D., Wang, M. Q., Matthew, R. F., Leitao, M. P., Agee, R. A. & Yan, A. F. (2008). Structural model analysis of HIV risk behaviors among sexually active minority adolescents. *Journal of the National Medical Association*, 100, 914–924.
- Black, R. A., Serowik, K. L. & Rosen, M. I. (2009). Associations between impulsivity and high risk sexual behaviors in dually diagnosed outpatients. *American Journal of Drug and Alcohol Abuse*, 35(5), 325–328.
- Birthing, A. & Latzman, R. D. (2014). Aspects of impulsivity are differentially associated with risky sexual behaviors. *Personality and Individual Differences*, 57, 8–13.

- Manee, F. M. & Aria, A. M. (2018). Personal and social predictors of risky sexual behaviours in Iranian youth. *Global Journal of Psychology Research: New Trends and Issues*, 8(1), 10–24.
- Borders, A., McAndrew, L. M., Quigley, K. S. & Chandler, H. K. (2012). Rumination moderates the associations between PTSD and depressive symptoms and risky behaviors in U. S. Veterans. *Journal of Traumatic Stress*, 25, 583–586.
- Borg, V. & Kristensen, T. S. (2000). Social class and self-rated health: Can the gradient be explained by differences in life style or work environment? *Social Science & Medicine*, 5, 1019–1030.
- Caminis, A., Henrich, C., Ruchkin, V., Schwab-Stone, M. & Martin, A. (2007). Psychosocial predictors of sexual initiation and high-risk sexual behaviors in early adolescence. *Child and Adolescent Psychiatry and Mental Health*, 1(14), 1–14.
- Canty-Mitchell, J. & Zimet, G. D. (2000). Psychometric properties of the Multidimensional Scale of Perceived Social Support in urban adolescents. *American Journal of Community Psychology*, 28, 391–400.
- Chanakira, E., O’Cathain, A., Goyder, E. C. & Freeman, J. V. (2014). Factors perceived to influence risky sexual behaviours among university students in the United Kingdom: A qualitative telephone interview study. *BMC Public Health*, 14, 1055.
- Cherie, A. & Berhane, Y. (2012). Peer pressure is the prime driver of risky sexual behaviors among School Adolescents in Addis Ababa, Ethiopia. *World Journal of AIDS*, 2, 159–164.
- Currie, C., Zanotti, C., Morgan, A., Currie, D., de Looze, M., Roberts, C., ... Barnekow, V. (2012). *Social determinants of health and well-being among young people: health behaviour in school-aged children (HBSC) study: International report from the 2009/2010 survey*. Copenhagen, Denmark: WHO Regional Office for Europe.
- Deckman, T. & DeWall, N. C. (2011). Negative urgency and risky sexual behaviors: A clarification of the relationship between impulsivity and risky sexual behavior. *Personality and Individual Differences*, 51, 674–678.
- Dias, S., Marques, A., Gama, A. & Martins, M. O. (2014). HIV risky sexual behaviors and HIV infection among immigrants: a cross-sectional study in Lisbon, Portugal. *International Journal Environmental Research and Public Health*, 11(8), 8552–8566.
- DiClemente, R. J., Wingood, G. M., Crosby, R. A., Sionean, C., Brown, L. K., Rothbaum, B. & Davies, S. (2001). A prospective study of psychological distress and sexual risk behavior among Black adolescent females. *Pediatrics*, 108(5), 1–6.
- Dir, A. L., Coskunpinar, A. & Cyders, M. A. (2014). A meta-analytic review of the relationship between adolescent risky sexual behavior and impulsivity across gender, age, and race. *Clinical Psychology Review*, 34(7), 551–562.
- Eisenberg, M. E., Neumark-Sztainer, D., Fulkerson, J. A. & Story, M. (2008). Family meals and substance use: Is there a long-term protective association? *Journal of Adolescent Health*, 43(2), 151–156.
- Erol, R. Y. & Orth, U. (2011). Self-esteem development from age 14 to 30 years: A longitudinal study. *Journal of Personality and Social Psychology*, 101(3), 607–619.
- Euteneuer, F. (2014). Subjective social status and health. *Current Opinion in Psychiatry*, 27(5), 337–343.
- Ghaed, S. G. & Gallo, L. C. (2007). Subjective social status, objective socioeconomic status, and cardiovascular risk in women. *Health Psychology*, 26(6), 668–674.
- Goldfarb, S., Tarver, W. L. & Sen, B. (2014). Family structure and risk behaviors: The role of the family meal in assessing likelihood of adolescent risk behaviors. *Psychology Research and Behavior Management*, 7, 53–66.
- Goodman, E., Adler, N. E., Kawachi, I., Frazier, A. L., Huang, B. & Colditz, G. A. (2001). Adolescents’ perceptions of social status: Development and evaluation of a new indicator. *Pediatrics*, 108(2), 31–36.
- Goodman, E., Huang, B., Schafer-Kalkhoff, T. & Adler, N. (2007). Perceived socioeconomic status: A new type of identity that influences adolescents’ self-rated health. *Journal of Adolescent Health*, 41, 479–487.
- Grav, S., Hellzen, O., Romild, U. & Stordal, E. (2012). Association between social support and depression in the general population: the HUNT study, a cross-sectional survey. *Journal of Clinical Nursing*, 21(1–2), 111–120.
- Grello, C., Welsh, D. & Harper, M. (2013). No strings attached: The nature of casual sex in college students. *Journal of Sex Research*, 43, 255–267.
- Gullette, D. L. & Lyons, M. A. (2006). Sensation seeking, self-esteem, and unprotected sex in college students. *Journal of the Association of Nurses in AIDS Care*, 17(5), 23–31.

- Manee, F. M. & Aria, A. M. (2018). Personal and social predictors of risky sexual behaviours in Iranian youth. *Global Journal of Psychology Research: New Trends and Issues*, 8(1), 10–24.
- Hahm, H., Lee, C., Choe, J., Ward, A. & Lundgren, L. (2011). Sexual attitudes, reasons for forgoing condom use, and the influence of gender power among Asian-American women: A qualitative study. *Journal of AIDS & Clinical Research*, 16(1), 179–188.
- Hall, P. A., Holmqvist, M. & Sherry, S. B. (2004). Risky adolescent sexual behaviour: A psychological perspective for primary care clinicians. *Topics in Advanced Practice Nursing e-Journal*, 4(1), 1–4.
- Halpern-Felsher, B. L., Cornell, J. L., Kropp, R. Y. & Tschann, J. M. (2005). Oral versus vaginal sex among adolescents: perceptions, attitudes and behavior. *Pediatrics*, 115(4), 845–851.
- Heatherston, T. F. & Wyland, C. L. (2003). Assessing self-esteem. In S. J. Lopez & C. R. Synder (Eds.), *Positive psychology assessment* (pp. 975–998). Washington, DC: American Psychological Association.
- Hu, P., Adler, N., Goldman, N., Weinstein, M. & Seeman, T. (2004). Relations between subjective social status and measures of health in older Taiwanese persons. *Journal of the American Geriatrics Society*, 53(3), 483–488.
- Hunt, B. & Guindon, M. H. (2010). Alcohol and other drug use and self-esteem in young adults. In M. H. Guindon (Ed.), *Self-esteem across the lifespan: issues and interventions* (pp. 219–229). New York, NY: Routledge/Taylor and Francis Group.
- Jakubczyk, A., Klimkiewicz, A., Wnorowska, A., Mika, K., Bugaj, M., Podgorska A. & Wojnar, M. (2013). Impulsivity, risky behaviors and accidents in alcohol-dependent patients. *Accident Analysis & Prevention*, 51, 150–155.
- Khan, M. R., Behrend, L., Adimora, A. A., Weir, S. S., Tisdale, C. & Wohl, D. A. (2011). Dissolution of primary intimate relationships during incarceration and associations with post-release STI/HIV risk behavior in a Southeastern city. *Sexually Transmitted Diseases*, 38(1), 43–47.
- Kimberly, J. A. & Serovich, J. M. (1999). The role of family and friend social support in reducing risk behaviors among HIV-positive Gay men. *AIDS Education and Prevention*, 11(6), 465–475.
- Lehrer, J. A., Shrier, L. A., Gortmaker, S. L. & Buka, S. (2006). Depressive symptoms as a longitudinal predictor of sexual risk behaviours among US middle and high school students. *Pediatrics*, 118, 189–200.
- Loyo, L. M. S., Martinez-Velazquez, E. S. & Ramos-Loyo, J. (2013). Influence of emotions on executive functions in suicide attempters. *Suicidology*, 4, 42–55.
- Majumdar, D. (2006). Social support and risky sexual behavior among adolescents: The protective role of parents and best friends. *Journal of Applied Sociology*, 23(1), 28–43.
- Magnani, R. J., Seiber, E. E., Gutierrez, E. Z. & Vereau, D. (2001). Correlates of sexual activity and condom use among secondary school students in urban Peru. *Studies in Family Planning*, 32, 53–66.
- Moeller, F. G., Barratt, E. S., Dougherty, D. M., Schmitz, J. M. & Swann, A. C. (2001). Psychiatric aspects of impulsivity. *American Journal of Psychiatry*, 158, 1783–1793.
- Mota, N., Cox, B., Katz, L. & Sareen, J. (2010). Relationship between mental disorders/suicidality and three sexual behaviors: results from the National Comorbidity Survey Replication. *Archives of Sexual Behavior*, 39(3), 724–734.
- Must, A., Juhasz, A., Rimanoczy, A., Szabo, Z., Keri, S. & Janka, Z. (2007). Major depressive disorder, serotonin transporter, and personality traits: why patients use suboptimal decision-making strategies? *Journal of Affective Disorders*, 103(1–3), 273–276.
- Othieno, C. J., Okoth, R., Peltzer, K., Pengpid, S. & Malla, L. O. (2015). Risky HIV sexual behaviour and depression among University of Nairobi students. *Annals of General Psychiatry*, 14, 16–21.
- Parillo, K. M., Freeman, R. C., Collier, K. & Young, P. (2001). Association between early sexual abuse and adult HIV-risky sexual behaviors among community-recruited women. *Child Abuse Neglect*, 25, 335–346.
- Parkes, A., Henderson, M., Wight, D. & Nixon, C. (2011). Is parenting associated with teenagers' early sexual risk taking, autonomy and relationship with sexual partners? *Perspectives on Sexual and Reproductive Health*, 43, 30–40.
- Patton, J. H., Stanford, M. S. & Barratt, E. S. (1995). Factor structure of the Barratt impulsiveness scale. *Journal of Clinical Psychology*, 51(6), 768–774.
- Paulk, A. & Zayac, H. (2013). Attachment style as a predictor of risky sexual behavior in adolescents. *Journal of Social Sciences*, 9, 42–47.

- Manee, F. M. & Aria, A. M. (2018). Personal and social predictors of risky sexual behaviours in Iranian youth. *Global Journal of Psychology Research: New Trends and Issues*, 8(1), 10–24.
- Peterson, C., Buser, T. J. & Westburg, N. G. (2010). Effects of familial attachment, social support, involvement, and self-esteem on youth substance use and sexual risk taking. *Family Journal*, 18(4), 369–376.
- Qiao, S., Li, X. & Stanton, B. (2014). Social support and HIV-related risk behaviors: A systematic review of the global literature. *AIDS Behavior*, 18(2), 419–441.
- Reid, A. E. & Aiken, L. S. (2011). Integration of five health behavior models: Common strengths and unique contributions to understanding condom use. *Psychology & Health*, 26, 1499–1520.
- Reininger, B. M., Perez, A., Aguirre-Flores, M. I., Chen, Z. & Rahbar, M. H. (2012). Perceptions of social support, empowerment and youth risk behaviors. *Journal of Primary Prevention*, 33(1), 33–46.
- Ritterman, M. L. (2007). *Perceived social status and adolescent health and risk behaviors: A systematic review*. Berkeley, CA: Institute for the Study of Social Change, Institute for the Study of Societal Issues, UC Berkeley. Retrieved from <http://escholarship.org/uc/item/01s0w5m9>
- Reitzel, L. R., Vidrine, J. I., Li, Y., Mullen, P. D., Velasquez, M. M., Cinciripini, P. M. & Wetter, D. W. (2007). The influence of subjective social status on vulnerability to postpartum smoking among young pregnant women. *American Journal of Public Health*, 97(8), 1476–1482.
- Schrier, L. A., Schillinger, J. A., Aneja, P., Rice, P. A., Batteiger, B. E., Braslins, P. G. & Fortenberry, J. D. (2009). Depressive symptoms and sexual risk behavior in young chlamydia-infected, heterosexual dyads. *Journal of Adolescent Health*, 45, 63–69.
- Seth, P., Patel, S. N., Sales, J. M., DiClemente, R. J., Wingood, G. M. & Rose, E. S. (2011). The impact of depressive symptomatology on risky sexual behavior and sexual communication among African American female adolescents. *Psychology, Health & Medicine*, 16(3), 346–356.
- Sharp, L. K. & Lipsky, M. S. (2002). Screening for depression across the lifespan: A review of measures for use in primary care settings. *American Family Physician*, 66(6), 1001–1008.
- Shrier, L. A., Walls, C., Lops, C. & Feldman, H. A. (2011). Correlates of incorrect condom use among depressed young women: an event-level analysis. *Journal of Pediatric and Adolescent Gynecology*, 24(1), 10–14.
- Singh-Manoux, A., Marmot, M. G. & Adler, N. E. (2005). Does subjective social status predict health and change in health status better than objective status? *Psychosomatic Medicine*, 67(6), 855–861.
- Spear, H. J. & Kulbok, P. A. (2001). Adolescent health behaviors and related factors: A review. *Public Health Nursing*, 18(2), 82–93.
- Stein, J. A., Rotheram-Borus, M.-J., Swendeman, D. & Milburn, N. G. (2005). Predictors of sexual transmission risk behaviors among HIV-positive young men. *AIDS Care*, 17(4), 433–442.
- Thoits, P. A. (2010). Stress and health: Major findings and policy implications [Special Issue]. *Journal of Health and Social Behavior*, 51, S41–S53.
- Tull, M. T. & Gratz, K. L. (2013). Major depression and risky sexual behavior among substance dependent patients: The moderating roles of distress tolerance and gender. *Cognitive Therapy and Research*, 37, 483–497.
- Underwood, C., Skinner, J., Osman, N. & Schwandt, H. (2011) Structural determinants of adolescent girls' vulnerability to HIV: Views from Community Members in Botswana, Malawi, and Mozambique. *Social Science & Medicine*, 73, 343–350.
- Unis, B., Johansson, I. & Sallstrom, C. (2015). Rural High School Students' sexual behavior and self-esteem. *Open Journal of Nursing*, 5, 24–35.
- Veselska, Z., Geckova, A. M., Orosova, O., Gajdosova, B., van Dijk, J. P. & Reijneveld, S. A. (2009). Self-esteem and resilience: The connection with risky behavior among adolescents. *Addictive Behaviors*, 34(3), 287–291.
- Wild, L. G., Flisher, A. J., Bhana, A. & Lombard, C. (2004). Associations among adolescent risk behaviours and self-esteem in six domains. *Journal of Child Psychology and Psychiatry*, 45, 1454–1467.
- Whiteside, S. P. & Lynam, D. R. (2001). The five factor model and impulsivity: Using a structural model of personality to understand impulsivity. *Personality and Individual Differences*, 30(4), 669–689.
- Winters, K. C., Botzet, A. M., Fahnhorst, T., Baumel, L. & Lee, S. (2009). Impulsivity and its relationship to risky sexual behaviors and drug abuse. *Journal of Child & Adolescent Substance Abuse*, 18(1), 43–56.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G. & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52, 30–41.