



A CORRELATIONAL STUDY ON DEPRESSION AND SELF ESTEEM AMONG SMOKERS

Anubha Srivastava

Assistant Professor, Amity Institute of Behavioural and Allied Sciences,

Amity University, Gurgaon, India.

ABSTRACT

This study explored Relationship Between Depression and Self esteem Among Smokers. In this study, 120 (smokers and non-smokers) who fulfilled the inclusion and exclusion criteria were selected purposively for this study. After developing good rapport with subjects their socio demographic details were collected. Then Beck's Depression Inventory II and Self Esteem Questionnaire were administered on them. Findings revealed that there is a significant relationship between depression and self esteem among smokers.

Key Words: Depression, Self- esteem.

INTRODUCTION

In the United States, smoking is the leading cause of preventable death (Center for Disease Control and Prevention [CDC], 2002), and it is widely known that smoking has detrimental effects, both acute and chronic, on health such as bronchitis, asthma, and cancer (Arday et al., 1995). Although the percentages of experimental and regular smoking among adolescents have decreased since 2001, smoking among adolescents is still prevalent (CDC, 2004). Thus, adolescent smoking is a great concern. Depression is another major concern during adolescence for the following reasons: (a) the high prevalence of major depressive disorder (MDD) in adolescence (i.e., 15 to 20 %), (b) high recurrence of MDD (i.e., approximately 25% by 1 year, 40% by 2 years, and 70% by 5 years), and (c) high rate of suicide attempts

among depressed adolescents (approximately 30% among clinically depressed youngsters by age 17) (Cicchetti & Toth, 1998; Mash & Wolfe, 2002).

Researchers have suggested that smoking and depression are associated. However, in the literature, re-searchers have not reached a consensus on the nature of the relationship between smoking and depression. The current literature suggests five possible relationships between the two conditions. The first suggested relation-ship is that depression causes smoking. This idea is based on the “self-medication” hypothesis. This hypothesis posits that when people are depressed or cannot control negative feelings, they begin smoking to alleviate their depressive symptoms (Lerman et al., 1996). Studies have shown that nicotine can function as an anti-depressant (Hall, Munoz, Reus, & Sees, 1993). Administration of nicotine increases the release of such neurotransmitters as dopamine, nor epinephrine, and acetylcholine, which may help people change their negative affects into positive ones (Hall et al., 1993).

Depression is an extremely common problem, and it can be extremely painful one, regardless of individual’s age or life circumstances. Depression usually starts in early adulthood, with likely recurrences. It affects women more often than men, and unemployed people are also at high risk. An episode may be characterized by sadness, indifference or apathy, or irritability. It is usually associated with change in a number of neuro vegetative functions, (such as sleep patterns, appetite and weight, motor agitation or retardation, fatigue, impaired concentration and decision-making) as well as feelings of shame or guilt, and thoughts of death or dying. A small proportion of patients will experience psychotic symptoms. The duration of an untreated crisis ranges from nine months to several years. Approximately eight of ten people experiencing an initial depression. Episode of major depressive disorder will go on to have at least one additional episode during their lifetime. Approximately 10 to 15 per cent will have a subsequent manic episode, at which point the patient is then reclassified as having a bipolar disorder. The nature of depression is such that affected persons are unlikely to realize that they are depressed and are therefore unlikely to seek help for themselves. They are also less capable of appropriately taking their treatment as directed by health care professionals. In all chronic conditions the concurrence of depression highly affects the quality of care provided by patients themselves and received by others.

Kaltiala-Heino, Rimpelä, Marttunen, Rimpelä & Rantanen (1999) this study assess the relation between being bullied or being a bully at school, depression, and severe suicidal ideation. 16410 adolescents aged 14-16 were taken as sample. There was an increased prevalence of depression and severe suicidal ideation among both those who were bullied and

those who were bullies. Depression was equally likely to occur among those who were bullied and those who were bullies.

Evans, Heron, Francomb, Oke & Golding (2001) this study follow mothers' mood through pregnancy and after childbirth and compare reported symptoms of depression at each stage. Pregnant women resident within Avon with an expected date of delivery between 1 April 1991 and 31 December 1992 was taken as the sample of this study. Symptoms of depression are not more common or severe after childbirth than during pregnancy. Symptoms of depression are not more common or severe after childbirth than during pregnancy.

Self-esteem is an important aspect of our self. As persons we always make some judgment about our own value or worth. This value judgment of a person about herself/himself is called self-esteem. It reflects a person's overall subjective emotional evaluation of his or her own worth. It is a judgment of oneself as well as an attitude toward the self. It is a set of attitudes and beliefs that a person brings with him/her when facing the world. It includes beliefs as to whether he or she can expect success or failure, how much effort should be put forth, whether failure at a task will "hurt," and whether he or she will become more capable as a result of different experiences. In psychological terms, self-esteem provides a mental set that prepares the person to respond according to expectations of success, acceptance, and personal strength."

Some people have high self-esteem, whereas others may have low self-esteem. In order to assess self-esteem we present a variety of statements to a person, and ask her/ him to indicate the extent to which those statements are true for her or him. For example, we may ask a child to indicate the extent to which statements such as "I am good at homework", or "I am the one usually chosen for the games", or "I am highly liked by my peers", are true of her/ him. If a child reports these statements to be true for her/him, her/his self-esteem will be high in comparison to someone who says "no".

Studies indicate that by the age of 6 to 7 years, children seem to have formed self esteem at least in four areas: academic competence, social competence, physical/ athletic competence, and physical appearance, which become more refined with age. Our capacity to view ourselves in terms of stable dispositions permits us to combine separate self-evaluations into a general psychological image of ourselves. This is known as an overall sense of self-esteem. Self-esteem shows a strong relationship

with our everyday behaviour. For example, children with high academic self-esteem perform better in schools than those with low academic self-esteem, and children with high social

self-esteem are more liked by their peers than those with low social self-esteem. On the other hand, children with low self-esteem in all areas are often found to display anxiety, depression, and increasing antisocial behaviour. Studies have shown that warm and positive parenting helps in the development of high self-esteem among children as it allows them to know that they are accepted as competent and worthwhile. Children, whose parents help or make decisions for them even when they do not need assistance, often suffer from low self-esteem.

Self-esteem encompasses beliefs (for example, "I am competent", "I am worthy") and emotions such as triumph, despair, pride, and shame. Self-esteem is a set of attitudes and beliefs that a person brings with him- or herself when facing the world. It includes beliefs as to whether he or she can expect success or failure, how much effort should be put forth, whether failure at a task will "hurt," and whether he or she will become more capable as a result of different experiences. "The self-concept is what we think about the self; self-esteem, is the positive or negative evaluations of the self, as in how we feel about it", according to Smith and Mackie (2007).

According to the World Health Organization, self-esteem, self-image and tobacco use are directly linked. Adolescents who smoke tend to have low self-esteem, and low expectations for future achievement. Young non-smokers, on the other hand, tend to have higher self-esteem than teens that smoke. Teen's attitudes towards their friends, classmates, boyfriends and girlfriends who smoke can make a difference to their own likelihood of smoking. Studies have shown that the single most direct influence on smoking among young teens is the smoking habits of their five best friends. Some teens believe that smoking cigarettes makes them appear more mature or "cool." Role models who smoke are frequently seen as tough, sociable and attractive. For these teens, smoking is an attempt to improve the way they're perceived by friends and peers, which in turn increases their self esteem. This attitude is not lost on tobacco advertisers, who portray smoking as a proof of maturity, sophistication, popularity and attractiveness. Studies have shown that when teens react positively to this strategy and believe that smoking will help them attain their goals; these new smokers are likely to continue smoking.

Researchers have long recognized that there is a link between smoking cigarettes and depression. It is still not entirely clear exactly how smoking and depression are related, but several theories may explain the link:

- **Depression leads to smoking.** It may be that people who are depressed turn to smoking, hoping to make themselves feel better and alleviate their depression symptoms.
- **Smoking causes depression.** Recent research suggests that an increased risk of depression is among the many negative effects of smoking, possibly because nicotine damages certain pathways in the brain that regulate mood. As a result, nicotine may trigger mood swings.
- **A vicious cycle is at play.** Other studies have suggested that smoking makes people more depressed and depression makes people turn to smoking — smoking and depression may actually perpetuate each other.
- **There may be shared genetic triggers.** It has also been proposed that certain genetic predispositions may increase both the risk of smoking and depression in some people.

Depression/anxiety disorders and smoking behavior often begin in adolescence as co-occurring phenomena. Epidemiologically, the relationship between them is bidirectional. Professor David Fergusson, the study's lead researcher, said, "The reasons for this relationship are not clear. However, it's possible that nicotine causes changes to neurotransmitter activity in the brain, leading to an increased risk of depression." But he adds that the study "should be viewed as suggestive rather than definitive." Mood changes are common in smokers. You might be irritable, restless, or feel down or blue. Changes in mood in smokers usually get better in 1 or 2 weeks, and they are not as serious. Now studies have shown that second-hand smoke exposure may also be linked to depression. One found that those who never smoked or smoked fewer than 100 cigarettes in their lifetime but lived with or worked around smokers were more likely to have major depression than non-smokers not exposed to second-hand smoke. If you have depression, smoking or exposure to second hand smoke could make your symptoms worse. Likewise, if you're a smoker, an increased risk of depression is one more reason you should try to stop smoking and avoid second hand smoke exposure.

As most smokers know, however, quitting is easier said than done. For people already managing depression, giving up cigarettes can be even trickier, since stopping smoking can also trigger worsening symptoms of depression. Even so, these symptoms eventually pass and the health benefits of quitting clearly outweigh any downside.

However, after a careful and detailed review of the literature, Kassel and colleagues (2003) conclude that further research is needed, given the inconsistent findings regarding whether smoking cigarettes increases or decreases distress levels. The current study examines the association of self-esteem, coping skills, depression, and stress with smoking between smokers and non smokers of ages 18-40. The study also examines to understand the role of smoking on psychological aspects of this population.

According to Patton, Hibbert, Rosier, Carlin, Caust, and Bowes's paper, "Is smoking associated with depression and anxiety in teenagers?", a two-stage cluster sample of secondary school students in Victoria, Australia, were surveyed by using a computerized questionnaire, which included a 7-day retrospective diary for tobacco use and a structured psychiatric interview. This study was conducted to examine this association in a representative group of teenage smokers with an objective of finding an association of smoking with depression and anxiety has been documented in adult smokers. It yielded an association between regular smoking and psychiatric morbidity was found in girls of all ages but for boys only in the youngest group. Subjects reporting high levels of depression and anxiety were twice as likely to be smokers. The cross-sectional association is consistent with the use of smoking by teenage girls as self-medication for depression and anxiety.

According to Byrne and Mazanov (2001), in paper "Self-esteem, stress and cigarette smoking in adolescents", both high stress and low self-esteem have been consistently, though independently, reported to relate to aspects of adolescent smoking behaviour. Recent work on self-esteem, however, suggests that adequate provision of this attribute may protect the individual adolescent from unpleasant dysphoric or harmful behavioural states. In line with this suggestion, the present study sought to extend this to the area of adolescent smoking behaviour. While independent associations were confirmed there was not strong support for a protective effect of self-esteem on adolescent smoking in the face of stressor exposure. A modest sex effect was evident but not of sufficient magnitude to allow firm conclusions. Nonetheless, the results were tempting enough to indicate further investigation.

Associations between smoking cessation and anxiety and depression among US adults McClave, Dube, Strine, Kroenke, Caraballo, & Mokdad, (2009) Many studies have shown a relationship between smoking and depression. However, few studies have examined the association between current depression and smoking and even fewer used large cross-sectional data to support these findings. Using the 2006 Behavioral Risk Factor Surveillance

System data (n=248,800), we compared rates of lifetime depression, lifetime anxiety, current depression, and current depressive symptoms among smokers who unsuccessfully attempted to quit (unsuccessful quitters), former smokers (successful quitters), and smokers who made no attempts to quit (non-quitters). Unsuccessful quitters experienced more lifetime depression and anxiety than non-quitters (OR=1.2; 95% CI, 1.0-1.4), whereas successful quitters experienced less (OR=0.7, 95% CI, 0.6-0.8). Current depression prevalence was 14.3% among non-quitters, 18.8% among unsuccessful quitters, and 8.0% among successful quitters. On average, unsuccessful quitters also experienced more days of depressive symptoms during the previous month than either non-quitters or successful quitters. Our results suggest that smokers who attempt to quit unsuccessfully may experience lifetime depression as well as current depression at a higher rate than other smokers and former smokers.

‘Smoking, stress, and negative affect: Correlation, causation, and context across stages of smoking’ by Kassel, Jon, Stroud, Laura; Paronis, Carol (2003) This transdisciplinary review of the literature addresses the questions, Do stress and negative affect (NA) promote smoking? And does smoking genuinely relieve stress and NA? Drawing on both human and animal literatures, the authors examine these questions across three developmental stages of smoking--initiation, maintenance, and relapse. Methodological and conceptual distinctions relating to within- and between-subjects levels of analyses are emphasized throughout the review. Potential mechanisms underlying links between stress and NA and smoking are also reviewed. Relative to direct-effect explanations, the authors argue that contextual mediator-moderator approaches hold greater potential for elucidating complex associations between NA and stress and smoking. The authors conclude with recommendations for research initiatives that draw on more sophisticated theories and methodologies.

‘Relationships Between Stress, Negative Emotions, Resilience, and Smoking: Testing a Moderated Mediation Model’ a paper by Wang, Chen, Gong & Yan (2016) examined the role of negative emotions in mediating the link between stress and smoking and whether this indirect link was modified by resilience. Survey data were collected using audio computer-assisted self-interview (ACASI) from a large random sample of urban residents (n = 1249, mean age = 35.1, 45.3% male) in Wuhan, China. Perceived stress, negative emotions (anxiety, depression), resilience were measured with reliable instruments also validated in China. Self-reported smoking was validated with exhaled carbon monoxide. Mediation analysis indicated that two negative emotions fully mediated the link between stress and intensity of smoking (assessed by number of cigarettes smoked per day, effect =.082 for

anxiety and .083 for depression) and nicotine dependence (assessed by DSM-IV standard, effect = .134 for anxiety and .207 for depression). Moderated mediation analysis demonstrated that the mediation effects of negative emotions were negatively associated with resilience. Results suggest resilience interacts with stress and negative emotions to affect the risk of tobacco use and nicotine dependence among Chinese adults. Further research with longitudinal data is needed to verify the findings of this study and to estimate the effect size of resilience in tobacco intervention and cessation programs.

A study by Gupta and Mehta “Effect Of Smoking On Self-Esteem And Personality Type: A Study on Engineering Students” examines the effect smoking has on self-esteem of an individual and also the effect it has on the personality type. The sample size for the study was 100 with 50 smokers and 50 non-smokers. Among them 75 were boys and 25 were girls. All participants were students of Indian Institute of Technology Delhi and were hostel residents. The various variables of the study were gender, peer and family smoking habits, self-esteem, Personality type, alcohol consumption. The self-esteem mean is higher for smokers as compared to non-smokers along with t value greater than tabled value at $\alpha = .05$. The personality test result support the hypothesis that smokers are more inclined towards a type A personality as compared to non-smokers with the t value confirming the same with 95% probability. It is also observed that among smokers majority were either hardcore Type A or Type B with remaining equally distributed in between however in case of on-smokers the number of participants in between Type A and type B were considerably less. Hence there is a possibility that smoking leads to gradual shift from hardcore B personality towards A type personality as greater number of people with type B are observed in non-smokers as compared to smokers with number of participants in hardcore type A remaining almost the same in both cases.

A study by Rosario, Schrimshaw, and Hunter (2010) “Cigarette Smoking as a Coping Strategy: Negative Implications for Subsequent Psychological Distress among Lesbian, Gay, and Bisexual Youths examined whether smoking moderates the relation between stress and subsequent psychological distress, and whether alternative coping resources (i.e., social support) moderate the relation between smoking and subsequent distress. An ethnically diverse sample of 156 LGB youths was followed longitudinally for 1 year. Significant interactions demonstrated that smoking amplified the association between stress and subsequent anxious distress, depressive distress, and conduct problems. Both friend and family support buffered the association between smoking and subsequent distress. Smoking

has negative implications for the distress of LGB youths, especially those reporting high levels of stress or few supports. Interventions and supportive services for LGB youths should incorporate smoking cessation to maximally alleviate distress.

METHODOLOGY

AIM:

To study the relationship of depression and self-esteem between smokers and non-smokers.

OBJECTIVE:

To study the relationship of depression and self-esteem between smokers and non-smokers.

HYPOTHESIS:

There will be significant relationship between depression and self esteem among smokers.

SAMPLE:

A sample of 120 (60 smokers and 60 non smokers) was purposively selected for the present study fulfilling the inclusion and exclusion criteria were taken.

INCLUSION CRITERIA:

- Subjects were diagnosed as smokers using Nicotine Dependence Scale.
- Age criteria- above 18-40 years
- Male and female
- Subjects who were cooperative for the study.

EXCLUSION CRITERIA:

- Subjects having organicity.
- Subjects who were not cooperative.

TOOLS/SCALES:

1. Beck's Depression Inventory II, Aaron T. Beck, Robert A. Steer, Gregory K. Brown (1996)
2. Self Esteem Questionnaire by Rosenberg (1965)

DESCRIPTION OF THE TOOLS AND SCALES:

1. Self Esteem Questionnaire by Rosenberg 1965: The scale is a 10- item Likert scale with items answered on a four point scale - from strongly agrees to strongly disagree. The original sample for which the scale was developed consisted of 5,024 High School Juniors and seniors from 10 randomly selected schools in New York State.
2. Beck's Depression Inventory II, Aaron T. Beck, Robert A. Steer, Gregory K. Brown 1996: The Beck Depression Inventory (BDI-II), created by Aaron T. Beck, is a 21-question multiple-choice self-report inventory, one of the most widely used psychometric tests for measuring the severity of depression. The BDI-II is designed for individuals aged 13 and over, and is composed of items relating to symptoms of depression such as hopelessness and irritability, cognitions such as guilt or feelings of being punished, as well as physical symptoms such as fatigue, weight loss, and lack of interest in sex.

PROCEDURE:

In this study, 120 (smokers and non-smokers) who fulfilled the inclusion and exclusion criteria were selected purposively for this study. After developing good rapport with subjects their sociodemographic details were collected. Then Beck's Depression Inventory II and Self Esteem Questionnaire were administered on them.

STATISTICS:

The present study utilized quantitative techniques that included Pearson's correlation.

RESULT

Table 1 Showing correlation between depression and self esteem among smokers

		depression	selfesttem
depression	Pearson Correlation	1	-.565(**)
	Sig. (2-tailed)		.000
	N	60	60
selfesttem	Pearson Correlation	-.565(**)	1
	Sig. (2-tailed)	.000	
	N	60	60

** Correlation is significant at the 0.01 level (2-tailed).

Table 2 Showing correlation between depression and self esteem among non-smokers

		depression	selfesttem
depression	Pearson Correlation	1	-.518(**)
	Sig. (2-tailed)		.000
	N	60	60
selfesttem	Pearson Correlation	-.518(**)	1
	Sig. (2-tailed)	.000	
	N	60	60

** Correlation is significant at the 0.01 level (2-tailed).

DISCUSSION

The present study was done in an attempt to see the relationship between depression and self esteem among smokers. For this purpose a sample of 120 (60 smokers and 60 non smokers) was purposively selected for the present study fulfilling the inclusion and exclusion criteria were taken. In the present study the mean of depression of smokers was 13.95 and for non smokers it was 13.93. However the mean of self-esteem of smokers was 18.46 and for non smokers it was 19.90. According to World Health Organization self-esteem, self-image and tobacco use are directly linked. Adolescents who smoke tend to have low self-esteem, and low expectations for future achievement. Often they see smoking as a way to cope with the feelings of stress, anxiety and depression that stem from a lack of self-confidence. Adolescents who see cigarettes as a way to handle negative feelings are more likely to ignore the long term health consequences of smoking. Young non-smokers, on the other hand, tend to have higher self-esteem than teens that smoke. Teen's attitudes towards their friends, classmates, boyfriends and girlfriends who smoke can make a difference to their own likelihood of smoking.

In the present study, it was found that there is negative correlation between depression and self-esteem among smokers and non-smokers. Correlation between depression and self esteem among smokers and non-smokers is significant at the 0.01 level.

In the present study, smokers emerged as more deviant than non-smokers in what they admire, their reputations, activities, self-perception and communication. This was accompanied, however, with there being no differences in the extent to which they disliked conforming activities, reputations, perceptions and communications. This suggests that it is specifically the non-conforming reputation that cigarette smokers strive to attain which

distinguishes them from experimental users and non-users, rather than a dislike for conforming activities. This may be due to the fact that teenage cigarette usage, which is typically regarded as undesirable by adults, may be interpreted as a conforming activity by some adolescent peer groups (Houghton *et al.*, 1998a). Thus individuals who engage in cigarette usage, although portraying and seeking a non-conforming reputation in the eyes of adults, may not necessarily want to be seen as less conforming amongst adolescent peers. According to Byrne and Mazanov (2001), in paper “Self-esteem, stress and cigarette smoking in adolescents”, both high stress and low self-esteem have been consistently, though independently, reported to relate to aspects of adolescent smoking behaviour. Recent work on self-esteem, however, suggests that adequate provision of this attribute may protect the individual adolescent from unpleasant dysphoric or harmful behavioural states. In line with this suggestion, the present study sought to extend this to the area of adolescent smoking behaviour. While independent associations were confirmed there was not strong support for a protective effect of self-esteem on adolescent smoking in the face of stressor exposure. A modest sex effect was evident but not of sufficient magnitude to allow firm conclusions. Nonetheless, the results were tempting enough to indicate further investigation.

SUMMARY AND CONCLUSION

The main aim of the study was to see the relationship of depression and self-esteem between smokers and non-smokers. A sample of 60 smokers and 60 non smokers was taken as per the inclusion and exclusion criteria. The sample was selected using purposive sampling method. In the present study, it was found that there is negative correlation between depression and self-esteem among smokers and non-smokers. Correlation between depression and self esteem among smokers and non-smokers is significant at the 0.01 level.

LIMITATIONS AND FUTURE DIRECTION

Limitations

1. Sample size was small.
2. Sample was collected only from one place.

Future Directions

1. Sample size can be increased.
2. Some other important variables can be included.

3. Sample can be collected from different places.

REFERENCES

- Arday, D.R., Giovino, G.A., Schulman, J., Nelson, D.E., Mowery, P., & Samet, J.M. (1995). Cigarette smoking and self-reported health problems among U.S. high school seniors, 1982-1989. *Am J Health Promot*, 10(2), 111-116.
- Beck, A. T., Steel, R. A & Brown, G. K (1996). Beck Depression Inventory Manual. The Psychological Corporation, (Second edition). Harcourt Brace & Company: San Antonio, USA.
- Byrne, D. G., & Mazanov, J. (2001). Self-esteem, stress and cigarette smoking in adolescents. *Stress and Health*, 17(2), 105–110. doi:10.1002/smi.885.
- Center for Disease Control and Prevention (2002). Annual smoking-attributable mortality, years of potential life lost, and economic costs-United States, 1995-1999, *MMWR Morb Mortal Wkly Rep*, 51(14), 300-303.
- Center for Disease Control and Prevention (2004). Cigarette use among high school students: United States, 1991-2003.
- Cicchetti, D., & Toth, L. (1998). The development of depression in children and adolescents. *Am Psychol*, 53(2), 221-241.
- Evans J, Heron J, Francomb H, Oke S, Golding J. Cohort study of depressed mood during pregnancy and after childbirth. *British Medical Journal*. 2001;323:257–260. [PMC free article] [PubMed]
- Gupta, S., & Mehta, S. (2011). Effect of Smoking on Self-Esteem and Personality Type: A Study on Engineering Students. *Indian Journal of Psychological Sciences*, Vol 2, 51–60.
- Hall, S.M., Mun oz, R.F., Reus, V.I., & Sees, K.L (1993). Nicotine, negative affect, and depression. *J Consult Clin Psychol*, 61(5), 761-767.
- Houghton, S., Carroll, A., Odgers, P. and Allsop, S. (1998a) Young children, adolescents and alcohol Part II: reputation enhancement and self-concept. *Journal of Child and Adolescent Substance Abuse*, 7, 31–56.
- Kaltiala-Heino R, Rimpelä M, Rantanen P, Laippala P. Finnish modification of the 13-item Beck depression inventory (R-BDI) in screening an adolescent population for depressiveness and positive mood. *Nord J Psychiatry* (in press).

- Kassel, J. D., Stroud, L. R., & Paronis, C. A. (2003). Smoking, stress, and negative affect: Correlation, causation, and context across stages of smoking. *Psychological Bulletin*, 129(2), 270–304. doi:10.1037/0033-2909.129.2.270.
- Lerman, C., Audrain-McGovern, J., Orleans, C.T., Boyd, R., Gold, K., Main, D., et al. (1996). Investigation of mechanisms linking depressed mood to nicotine dependence. *Addict Behav*, 24(1), 9-19.
- Mash, E.J., & Wolfe, D.A. (2002). *Abnormal child psychology*. Belmont, CA: Wadsworth.
- McClave, A. K., Dube, S. R., Strine, T. W., Kroenke, K., Caraballo, R. S., & Mokdad, A. H. (2009). Associations between smoking cessation and anxiety and depression among U.S. Adults. *Addictive Behaviors*, 34(6-7), 491–497. doi:10.1016/j.addbeh.2009.01.005. *MMWR Morb Mortal Wkly Rep*, 53(23), 499-502.
- Patton, G. C., Hibbert, M., Rosier, M. J., Carlin, J. B., Caust, J., & Bowes, G. (1996). Is smoking associated with depression and anxiety in teenagers?. *American Journal of Public Health*, 86(2), 225–230. doi:10.2105/ajph.86.2.225.
- Rosario, M., Schrimshaw, E. W., & Hunter, J. (2010). Cigarette smoking as a coping strategy: Negative implications for subsequent psychological distress among Lesbian, gay, and bisexual youths. *Journal of Pediatric Psychology*, 36 (7), 731–742. doi:10.1093/jpepsy/jsp141.
- Rosenberg, M. (1965) self-esteem Scale. In. Ahmed, R., Sami, S., Khanum, S.J. (2014).
- Smith, E. R.; Mackie, D. M. (2007). *Social Psychology (Third ed.)*. Hove: Psychology Press. ISBN 978-1-84169-408-5.
- Wang, Y., Chen, X., Gong, J., & Yan, Y. (2016). Relationships between stress, negative emotions, resilience, and smoking: Testing a moderated mediation model. *Substance Use & Misuse*. doi:10.3109/10826084.2015.1110176.