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Personality traits of Younger and Older Adolescent smokeless tobacco Users – A Comparison

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Abstract

Government ban on tobacco products and tobacco related cancers do not deter adolescent smokeless tobacco users. Common factors shape initiation and maintenance of tobacco chewing habits such as tobacco use by adult family members and peers, experimentation and more accessibility of tobacco products. Emotional and psychological problems, problem behavior, poor school performance and truancy are often associated with tobacco use. The aim of the study was to find out if there are significant differences in the personality traits of younger (12 to 15 years) and older (16 to 18 years) adolescent tobacco users. 216 male and female tobacco users both school going and dropouts were identified in Nagpur city, Maharashtra, India. The Junior Senior High School Personality Questionnaire (HSPQ) was administered to them individually and in groups and the resulting data was analyzed using Means, standard deviations and t test. None of the personality differences between younger and older adolescent tobacco users were found significant. However based on the comparison of means of the two groups distinct personality profiles of young and older tobacco users emerged. Younger adolescent tobacco users both male and female tended to be more reserved, more intelligent, less emotionally stable, phlegmatic, more assertive, placid, self-controlled and tense. The older tobacco users were more outgoing, less intelligent, more emotionally stable, more excited, happy go lucky, conscientious, venturesome, less placid, more apprehensive, higher self-conflict and more relaxed. Insights into personality of older and younger tobacco users are helpful in the design of effective tobacco cessation programs.

Keywords: Adolescent Personality, Smokeless Tobacco Use, Adolescent Age.

Introduction

The Global Youth Tobacco Survey (GYTS) was conducted in different states of India for the period 2002-2004 supported by the Centre for Disease Control (CDC) and World Health Organization (WHO). They found that 17.5% of 13-15 year old students use different forms of tobacco. The high prevalence of tobacco products is found particularly among students living in the North Eastern states.12.5% of school going children in the age group of 13 to 15 years use smokeless tobacco[1].

Regular users of tobacco usually consume tobacco products through the day. A number of local level studies and surveys conducted in schools and colleges across several states of India indicate that 13–50% students consume *pan masala* and *gutkha* regularly. Influences to use tobacco included parental use, peer pressure, advertisements and colorful packaging[2].

Tobacco is the only legal drug that kills many of its users. Research suggests that the highest number of tobacco-related deaths will occur in developing countries, where there is an upward trend in the number of users[3].

Oral cancer is the sixth most common in the world and areas of high incidence are in South East Asia. Comparatively, the India population incidence rate of oral squamous cell carcinoma (OSCC) is higher. Prognosis for oral cancer in India is poor due to lesser early detection and poorly trained clinicians.

Factors associated with Tobacco Chewing: In the Global Adults Tobacco Survey (GATS) in India[4], the prevalence of smokeless tobacco use was nearly twice as high in rural areas compared to urban ones; it was higher in those without formal education (twice as high in men, eight times higher in women). The poorest people who are the most nutritionally disadvantaged and can least defend themselves from harmful chemicals in smokeless tobacco; are more at risk for tobacco related cancers.

An interrelated set of psychological and social factors have been proposed across a number of studies which lead to the initiation of tobacco among youth. Some of the major factors are use of tobacco by parents and other family members, use of tobacco by peers, desire to explore new experience, wide access to tobacco products, personality, emotional and psychological problems and problem behavior[5].

Other associated factors have also been found among tobacco users such as poor academic achievement, lack of future plans, truancy and dropping out of school. The stress associated with

these situations and problems related to tobacco use is high and it is no wonder that children and adolescents having anxiety and depression are more likely to consume tobacco or even other drugs for their unique properties- to relieve anxiety and generate a positive mood.

Ban on Tobacco Products in Maharashtra, India: Maharashtra is the first state of India to ban flavored chewing tobacco and supari products sold under a variety of names and combinations.

The Government took steps to ensure that gutkha and pan masala is classified as a food item. In so doing, the mentioned tobacco products came under the ambit of the Food Safety and Standards Act 2006[6]. This Act has banned items containing nicotine and tobacco since they are injurious to health. Now the government has a strong case to continue the prohibition on tobacco products in the interest of public health.

However, though the government has enforced a ban on manufacture, storage, sale and distribution of flavored tobacco and supari, it continues to be manufactured and sold at higher prices across the state.

Adolescent Personality: According to Cattell, "Personality is that which permits a prediction of what a person will do in a given situation. The goal of psychological research in personality is thus to establish laws about what different people will do in all kinds of social and general environmental situations…. Personality is concerned with all the behavior of the individual, both overt and under the skin".

Cattell was of the view that behavioral sequences can be understood more fully when seen across a backdrop of the entire functioning of the organism. For instance substance use in the form of tobacco consumption can be better understood against the larger framework of personality.

Cattell went on to describe - "The source traits promise to be the real structural influences underlying personality which it is necessary for us to deal with in developmental problems, psychosomatics and problems of dynamic integration…"[7]. Therefore understanding the real structural influences underlying personality will give more insight into tobacco consumption and also help to develop programs to reduce deviant or risky behavior.

Carvalho R and Novo R[8] discuss the relevance of personality traits development in the context of adolescence and behavior. The development of personality traits and their development emerges strongly during adolescence. The Five Factor model and the expression of personality traits during adolescence discuss how personality changes as well as stabilizes during this period and the association between personality and adaptive behavior through early and late adolescence.

There is a trend for more stability of personality during late adolescence and increase in the scores of Affability, Openness to experience, Conscientiousness, and emotional stability. During late adolescence there is also a decline in negative emotionality and more inhibited behavior. In early adolescence personality features of impulsiveness, irresponsibility and sensation seeking can be observed. Overall adolescents become more conscious, affable and emotionally stable as they progress from early to late adolescence. This also indicates that the adaptation levels of adolescence increase with age and there are lower chances of risky or problem behavior and stressful situations.

Personality can protect adolescents from stress as well as expose them to higher levels of stress and negative stimuli. The manner in which adolescents manage these stressors take on an important role in the context of problem behavior. For example, Conscientiousness and inhibiting behavior can often predict low exposure to stress, lower frequency of impulsive action and can also produce a pattern of internalizing and externalizing problems. Also Extraversion and Affability are closely connected with positive health and well-being, healthy social relationships and integration. On the other hand, Neuroticism predicts anxiety and other clinical symptoms.

In this context, integration is essential in adolescence. Sufficient integration during adolescence and adulthood helps in healthy development and wellbeing as well as a sound expression of individuality. On the other hand disturbances in integration lead to lack of self-esteem and difficulties in finding meaning in life.

The Maturing Adolescent Brain: Research studies have found that the frontal lobes of the human brain continue to develop well into the early or mid-twenties[9]. This indicates that adolescents may be quicker to react to emotions, act without thinking and may not be able to adequately reflect on the consequences of their actions. In this context the reason behind the poor health decisions, problem behavior engaged by many adolescents is quite evident. It underlines the need for parental monitoring, discipline and guidance by mature adults through the period of adolescence.

Psychopathological Model of Personality and substance Use: The psychopathological model indicates that mental disorders can be the underlying reason for substance use. These mental disorders can include cognitive and mood disturbances. Many people seeking rehabilitation from drugs have been found to have coexisting mental disorders.

Based on such evidence, the concept of 'addictive personality' has been proposed. It may be that some common personality characteristics are at the foundation of addictive disorders. Some characteristics can include denial of problems, difficulty in emotional and impulse regulation.

More studies are needed to find out the dynamics of an 'addictive personality'. However the coexistence of addiction and personality disorders has been fairly well established. To resolve personality disorders- psychotherapy for personality restructuring and improved cognitive and emotional functioning is needed[9].

This current study will probe into the underlying personality characteristics of younger and older tobacco users to find out common or distinguishing personality traits which will help to design suitable programs for tobacco cessation in schools as well as for tobacco users who are dropouts.

Methodology

The effective sample of 216 male and female users in the age group of 12 to 18 years were drawn from Government and semi government schools and resettlement colonies, building construction sites, low income residential areas of Nagpur. Female users in late adolescence were working as daily labourers at construction sites. Interaction with users in schools, helped to find out other users.

Roadside vendors of tobacco products also helped in identification of users. The users represented various government, semi government, private schools and junior colleges all over Nagpur. Those who were dropouts were found in resettlement colonies and temporary settlements in Nagpur city. Local health workers and Anganwadi workers helped to find adolescent tobacco users.

Operational definition of tobacco user and non user: For the purpose of the study adolescents regular tobacco users were selected based on the following criteria. Currently chews at least two packets of kharra in a day and/ or currently chews at least two to four packets of gutka in a day. Non tobacco users were adolescents who had never consumed tobacco products.

The period of reference of the study is 2012- 2015. In July 2013, the Maharashtra Government issued a notification banning the storage, sale and manufacture of tobacco products. This ban is still in force. However the illegal sale of tobacco products continues unabated at increased prices.

Tools Used for Data collection: The Junior Senior High School Personality Questionnaire (HSPQ) was designed by Raymond B. Cattell and Mary D. L. Cattell[11] as a reliable and valid personality measure for students in high school between 12 to 18 years. The HSPQ has been translated in Hindi and adapted to the Indian context by S.D. Kappor, S.S. Srivastava and G.N.P. Srivastava[12].

It measures fourteen personality dimensions. . Form A was used and contains 142 items with three response choices each. The average time required for completion of the questionnaire was 40 minutes.

Procedure for data collection: In schools, the questionnaire was administered in groups in the class room setting. A brief introduction was given about the purpose of the questionnaire as a tool for better self awareness and understanding of one's personality. For school dropouts, especially females in late adolescence, each question was read out and the participants wrote their responses in the given answer sheet.

Variables under study: In the present study factor of age of tobacco users was treated as the independent variable and 14 personality dimensions were treated as dependent variables. The factor of age was varied at two levels ie. younger age group (12 to 15 years) and older age group (16 to 18 years).

Research Design: A 2x2 factorial design was used.

Statistical Treatment of Data: First the data were treated by mean and SD and then t test was used to find out if the differences in the means were significant.

Results and Discussion

Means and standard deviations of young adolescent tobacco users (12 to 15 years) and older adolescent tobacco users (16 to 18 years) for 14 Personality Factors.

Factor A represents reserved versus outgoing dimension. The younger adolescents are more reserved as compared (X=8.74) to the older adolescents (X=9.22) who are more outgoing. There are chances that older adolescents had growing exposure to different experiences and had become more outgoing as compared to the younger adolescents who may have limited social skills.

This result is further confirmed by Schaie[13] who found that outgoing characteristics increase with age. However when t test were applied the results were not significant (t=0.11, df=214, ns).

Factor B represents less and more intelligence. Both younger and older adolescents score towards the lower intelligence dimension. The novelty of the task, lack of adequate abstract thinking abilities and poor quality of education can be possible reasons.

The younger adolescents have shown higher mean scores (X=4.22) as compared to the older adolescents (X=3.81), indicating that they may have better analytical and verbal skills. There were more number of dropouts among the older group and this may account for the lower scores on this dimension. Schaie[13] found that the opposite is true, in that levels of intelligence increase with age.

The results of the t test results indicate that the difference between the groups is not significant. (t=0.11, df=214, ns)

Table-1
Results of the t test

Factor		Young	Older	(t)	
A - Reserved vs Outgoing	*X*	8.74	9.22	0.11	Non-significant
	S	*3.02*	*2.83*		
B - Less Intelligent vs More Intelligent	*X*	4.22	3.81	0.11	Non -significant
	S	*2.69*	*1.64*		
C - Affected by feelings vs Emotionally Stable	*X*	10.55	10.89	0.09	Non-significant
	s	2.70	3.04		
D- Phlegmatic vs Excitable	*X*	9.27	10.03	0.16	Non-significant
	S	*3.36*	*3.38*		
E -Obedient vs Assertive	*X*	9.72	9.26	0.10	Non-significant
	S	3.35	3.16		
F - Sober vs Happy Go Lucky	*X*	10.26	10.53	0.07	Non-significant
	S	2.83	3.20		
G - Expedient vs Conscientious	*X*	9.51	9.96	0.10	Non-significant
	S	*3.30*	*3.65*		
H - Shy versus Venturesome	*X*	9.83	9.68	0.04	Non-significant
	S	2.94	2.93		
I - Toughminded versus Tenderminded	*X*	10.36	11.06	0.15	Non-significant
	S	3.49	3.49		
J - Vigorous versus Doubting	*X*	9.63	9.33	0.08	Non-significant
	S	*2.61*	*2.92*		
O -Placid versus Apprehensive	*X*	10.14	10.21	0.02	Non-significant
	S	2.93	3.42		
Q2 -Group Dependent versus Self sufficient	*X*	10.27	9.59	0.16	Non-significant
	S	2.98	3.27		
Q3 -Undisciplined Self conflict versus Controlled	*X*	10.35	10.19	0.04	Non-significant
	S	3.31	3.41		
Q4 - Relaxed versus Tense	*X*	9.02	8.99	0.01	Non-significant
	S	*2.84*	*3.17*		

t value at 0.05 is 1.96 and for 0.01 is 2.57

Factor C refers to the dimension affected by feelings versus emotional stability. The results of both older (X=10.89) and younger (X=10.55) groups do not show much difference. However both groups tend towards the average range of this personality dimension. It seems that some of the adolescents' tobacco users may be more emotionally mature and others may be affected by feelings. The difference between the two groups is not significant (t=0.09, df=214, ns).

Factor D refers to the phlegmatic versus excitable dimension. The older adolescents have shown more excitable characteristics as compared to the younger adolescents who show more phlegmatic characteristics. According to Schaie[13], Factor D usually reduces with age, but this study shows contrary results. It may be that the younger adolescents lack in confidence and are more subdued as compared to the older adolescents who have discovered a stronger new identity for themselves and show more extrovert and excitable characteristics. However the difference between the younger and older group is also not significant (t=0.16, df=214, ns).

Obedient versus assertive is represented by Factor E. The results show that the younger group (X=9.72) is superior to the older group (X=9.26). It means that the younger group show more signs of assertiveness rather than the older group of adolescents. Schaie[13] observes that adolescents show more assertiveness with age. In the current study, it is possible that the younger tobacco users have lesser experience of discipline and enjoy more freedom to behave how they wish.

During the data collection it was observed that higher levels of discipline as well as more behavioural expectations were communicated to the older adolescents, this may have led to more obedient as compared to assertive behavior. However on administration of the t test, the difference between the groups was not significant (t=0.10, df=214, ns).

Factor F represents the dimension Sober versus Happy go lucky. The results of the study show that the means obtained by the younger (X=10.26) and older (X=10.53) groups do not show much difference. Even the t test applied showed that the difference is not significant. (t=0.10, df=214, ns). However, it seems that the older group seems more happy go lucky as compared to the younger group.

The factor of social desirability may have influenced the older adolescents who have projected themselves as more carefree and fun loving.

Factor G is the dimension of Expedient versus Conscientious. Older adolescents seem to be more conscientious (X=9.96) as compared to the younger adolescents (X=9.51). Ego strength is known to increase with age and the older adolescents who belong to a higher stage of moral development are more influenced by rules governing behavior as compared to the younger adolescents. In this case also the t test showed non-significant results (t=0.10, df=214, ns).

Younger adolescents are more (X=9.83) shy than older (X=9.68) adolescents who are more venturesome as shown by Factor H – Shy versus Venturesome. Though the t test does not show significant results (t=0.04, df=214, ns), it does seem that younger tobacco users have lesser social skills and have lesser exposure to social events as compared to the older tobacco users.

Factor I represents the tough minded versus tender minded dimension. Schaie[13] shows that Factor I reduces with age. In the current study, the reverse is true. The younger tobacco users (X=10.36) show more tough minded characteristics as compared to the older tobacco users (X= 11.06). The older adolescent group may have more individuals who are tender minded and sensitive in the group which have influenced the results. The t test result obtained is not significant (t=0.15, df=214, ns).

Factor J refers to Vigourous versus doubting dimension. The older users (X=9.33) are more vigorous as compared to the younger tobacco users who are less vigorous and more doubting (X=9.63). Perhaps the older users are more influenced by peer group and show more characteristics of going with the group and accepting common standards as compared to the younger group. However the difference between the groups is not much significant (t=0.08, df=214, ns).

The personality dimension of Placid versus apprehensive represents Factor O. The younger tobacco users are more placid (X=10.14) and the older tobacco users seem to be less placid, showing more signs of apprehension (X=10.21). It does seem that with age, the experience of more life stressors in addition to increase in tobacco use shows in a more pronounced way in the scores of older adolescent users. The t test yields non-significant results. (t= 0.02, df=214, ns).

Factor Q2 describes the dimension group dependent versus self-sufficiency with younger tobacco users scoring higher scores (X=10.27) relating more to the self-sufficient pole as compared to older tobacco users who tend to the group dependent pole. (X=9.59). The t result in this case is also not significant. (t=0.16, df=214, ns). The practice of tobacco chewing in older adolescents often leads to the forming of groups where tobacco is shared among users, leading to more group dependent behaviour. This is often not the case in younger adolescents where it is assumed that the practice of tobacco chewing is in the initiation stage.

Undisciplined self-conflict versus controlled describes Factor Q3. In this case, the younger tobacco users (X=10.35) have scored marginally higher scores than the older tobacco users (X=10.19) indicating that that they are more controlled as compared to the older users. The older users in the group were

mostly those who had either failed or repeated a class and also school dropouts.

This may have influenced their scores leading to higher levels of inner conflict and more given to following their own urges as compared to the younger group. The t test result was not significant (t=0.04, df=214, ns).

Factor Q4 relates to the relaxed versus tense dimension. The younger tobacco users are more tense (X=9.02) as compared to the older tobacco users who are more relaxed (X=8.99). It may be that longer period of habituation to tobacco produced more lethargic and relaxed behavior among older adolescents as compared to the younger users. The t test result in this case was not significant (t=0.01, df=214, ns).

The HSPQ manual notes that there are significant age changes on several personality factors as part of the biological and cultural growth of personality. With increase in age, higher scores were noticed in factors A (reserved versus outgoing), B (less intelligent versus more intelligent), E (Obedience versus Assertive and reduced scores in Factor D (Phlegmatic versus Excitable), I(Tough minded versus Tender minded) and O (Placid versus Apprehensive).[14]The current study supports some of these findings but the differences are not significant.

Researchers studying the development of personality using the Big Five personality domains found negative trends in psychosocial maturity from late childhood into adolescence. [15]

Conclusion

None of the personality differences between younger and older adolescent tobacco users were found significant. However based on the comparison of means of the two groups a personality profile of young and older tobacco users can be constructed. Younger tobacco users both male and female tended to be more reserved, more intelligent, less emotionally stable, phlegmatic, more assertive, placid, self-controlled and tense.

The older tobacco users were more outgoing, less intelligent, more emotionally stable, more excited, happy go lucky, conscientious, venturesome, less placed, more apprehensive, less placid, higher self-conflict and more relaxed.

For the current study the differences in personality dimensions of male and female tobacco users with respect to age is negligible. However as one study observed[12], there is less attention given to age differences and tobacco use. Less is known about how tobacco consumption patterns progress from initiation to maintenance during adolescence.

Most of the studies discuss cigarette smoking and little is known about the individuals who initiate tobacco chewing in early adolescents and go on to maintain the habit through adulthood. For effective cessation programs for school going youth and dropouts the dynamics of initiation and escalation of the tobacco chewing habit need to be further examined with a focus on adolescent personality features.

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