Paan using in iran health and social care essay

Background: Using smokeless tobacco by young people is increasing in many countries, especially in developing countries. Paan is one of culturally popular smokeless products. We decide to study use of paan among our school-age males and assess attributed factors. Methods: A cross-sectional study was done on 504 high school pupils of Zahedan city, Capital of Sistan va Baluchistan province, south east of Iran, in June of 2007. Samples were selected by multistage sampling method from mannish high schools in different geographic areas. A questionnaire was completed consists of 43 questions by interview. Data was analyzed by SPSS software using t-test, chi square test, and logistic regression. Results: The mean age of participants was 16. 2±1. 1 years. While 10. 4% of the students were current users of paan, 17. 9% were ex-users. Mean duration of using paan was 2. 5±1. 6 years. Number of daily paan consumption was 4. 2±3. 6 a day. Cigar was the most illicit used at least one time by pupils (18. 6%) followed by paan (17. 9%), Naas (11. 5%), alcohol (10. 1%), opium (7. 1%) and marijuana (2. 9%). Only 64. 7% of our pupils hadn't used any illicit at the time of study. In students that have had past history use of any illicit, risk of use of paan was 18-fold more than others. In the case of attitude, for each attitude score accretion, risk of paan consumption decline up to 16%. Conclusions: The study showed that among multiple personal, familial and environmental factors, past history of use of any kind of illicit and attitude has strong association with using paan. Keywords: Paan, smokeless tobacco, knowledge, attitude, behavior, family, associated factors

Introduction:

Smokeless tobacco is an addiction for hundreds of millions of people worldwide and the use by young people is increasing in many countries1. From the other hand, observations suggest that smokeless tobacco consumption is a major risk factor for deaths due to circulatory, pulmonary, and malignant diseases2, Coronary Heart Disease3. By 1999, there were already 4. 9 million deaths from tobacco each year, and this huge number is projected to grow to 10 million per year by 2030, given present trends in tobacco consumption. Already about half of these deaths are in high-income countries, but recent and continued increases in tobacco use in the developing world is causing the tobacco-related burden to shift increasingly to low- and middle-income countries. By 2030, seven of every ten tobacco-attributable deaths will be in developing countries4. Many types of smokeless tobacco are marketed for oral or nasal use. All contain nicotine and nitrosamines1. The culturally popular product is " paan," which consists of a number of ingredients, including tobacco, areca nut, slaked lime, and spices rolled in a betel leaf5. Aqueous extracts of betel quids and arecanuts that are generally used to make paan produced carcinomas of the cheek pouch and fore-stomach of rodents after subcutaneous or intragastric administration6. Inhibition of the aerobic antimicrobial functions of neutrophils and monocytes by nicotine may alter the microbial ecology of the oral cavity, and this might be one mechanism by which nicotine compromises the oral health of users of tobacco products7. Those aged 40 years and older, compared to those aged 18-39 years, had poorer oral health8. Oral cancer is the eleventh most common cancer worldwide and tobacco use is estimated to account for about 41% of oral/pharyngeal cancer

cases in men, and 11% in women1. Kurtul et al evaluated Serum total sialic acid levels in smokers and users of smokeless tobacco in form of oral powder in turkey since smokeless tobacco (ST) used as 'oral powder' or 'Maras Powder' is consumed widely instead of cigarette smoking. They found that harmful effects of ST use as Maras powder as well as cigarette smoking9. Cervical cancer10, and squamouce cell carcinoma of esophagus11 are other cancers that are related to paan chewing. Despite this hazards and alarms counted about paan, in a community-based, qualitative study, younger respondents described the transition to chewing tobacco in paan as a smoking cessation aid instead of nicotine replacement therapy12. Furthermore in a study on adolescents in East London, authors reported that lifetime paan use was reported by 14. 1% of the sample and was almost completely confined to South Asian or mixed ethnicities13. In a search of many databases -using keywords such as smokeless tobacco, paan, youth, knowledge, attitude and behavior- we found few articles studied young paan users and attributed factors. In a study on use of smokeless tobacco among groups of Pakistani medical students by Imam et al, two hundred and twenty (21. 5%) students had used tobacco in some form (smoked or smokeless) in their lifetime. Sixty six (6. 4%) students were lifetime users of smokeless tobacco. Thirteen (1. 3%) were daily users while 18 (1. 8%) fulfilled the criterion for established users. Naswar was the most commonly used form of smokeless tobacco followed by paan and Nass. Most Naswar users belonged to NWFP while most paan users studied in Karachi. On univariate analysis, lifetime use of smokeless tobacco showed significant associations with the use of cigarettes, student gender (male> female), student residence (boarders > day scholars) and location of the College (NWFP > Karachi).

Multivariate analysis showed independent association of lifetime use of smokeless tobacco with concomitant cigarette smoking, student gender and location of the medical college14. In a study in Russia, twenty-nine percent of boys smoked daily in 1995 and 31% in 2004. Knowledge about the fast development of tobacco addiction increased statistically significantly among boys. Fewer numbers of respondents of either gender thought that young smokers look 'cool' and more grown up. Having a best friend who smoked was the strongest predictor for smoking for both genders15. In general, parental socioeconomic status was not significantly associated with the subjects' smoking in adolescence or adulthood. Own socioeconomic status measured at the age of 21 and 28 was strongly related to smoking. Those who were most educated in adulthood had smoked the least already from the age of 13. Social mobility was not significantly associated with smoking16. In the same way, social class had no impact on tobacco consumption in men2. This is so important in our area from different aspects: at first, majority of our province population are youth, strategic location of the province since it is bounded with Afghanistan and Pakistan, and also such studies are not available from most populations in developing countries. Therefore, we decide to study use of paan among our school-age males and assess attributed factors.

Methods:

This cross-sectional study was done on 504 high school pupils of Zahedan city, Capital of Sistan va Baluchistan province, south east of Iran, in June of 2007. Samples were selected by multistage sampling method from mannish high schools in different geographic areas. At first we divided the city to

north, south, east, west and central areas. Then we selected two schools from each area and 54 pupils from each school. We selected pupils completely randomly from each grade of high school (9, 10 and 11) using list of their names. The purpose of study was explained for pupils, then they were asked to participate and answer question carefully. We certified them about the confidentiality of the data. The self-administered questionnaire was applied. They were free to leave the study. We selected items which cover the domain of condition tentatively and after careful consideration of the condition and research of the literature, then put them into question form. Then questions were organized into an appropriate order and structure. A draft of the questionnaire was passed back to the experienced colleagues who could check that all important aspects of the condition are covered by the suggested questions (content validity) and made suggestions to plug any existing gaps. The second draft of the questionnaire was viewed by 15 pupils from different levels and ages for face validity (reading simplicity and readability). Difficult questions were reworded and ambiguous questions excluded. The final questionnaire consists of 43 open and closed questions about individual and demographic information- 10 items, knowledge 3 items, attitude 19 items and behavior-5 items, and 6 questions about other information. Data was analyzed as uinvariate and multivariate analysis by SPSS software using t-test, chi square test, and logistic regression with $\alpha < 0.05$. Ethical approval of the study was obtained from local ethical committee of the district officer of education and then Zahedan University of Medical Sciences.

Results:

Overall 504 male high school pupils have participated in this study. The mean age of participants was 16. 2±1. 1 years which ranged from 13-21 years. Mean number of family members was 7. 1±2. 4 persons with range of 2-20 persons. Majority of them (86. 9%) lived with their parents. At the time of study, 10. 4% of the students were current users of paan, while 17. 9% of pupils had an experience of using paan (ex-users). Mean duration of using paan was 2. 5±1. 6 years with minimum of one year and maximum of 7 years. Number of daily paan consumption was 4. 2±3. 6 a day (at least one time and maximum 15 times). Parents of Forty two cases (77. 8%) mentioned that their parents did not know anything about paan consumption by them. Paan users reported that they feel vertigo (30. 5%), calmness (22. 3%), impatience (18. 6%), headache (5. 8%) and nausea (13. 5%) after consumption. Twelve pupils did not experience any impression and some of them reported two or more symptoms. More than one third (38. 6%) of students believed that most of their friends use paan and 29. 2% of them infer that more than 70% of their classmates consume this smokeless tobacco. Some data about them (level of education, use of any kind of illicit) and their family (number of household members, education level of father, education level of mother, familial relationship status, father's job, and use of any kind of illicit by parents) are shown in the table 1. Cigar was the most illicit used at least one time by pupils (18. 6%) followed by paan (17. 9%), Naas (11. 5%), alcohol (10. 1%), opium (7. 1%) and marijuana (2. 9%). Only 64. 7% (n= 324) of our pupils hadn't used any illicit at the time of study. Knowledge score of the pupils from 3 questions about paan, ingredients and its complications was 3 and mean of knowledge score was 1. 2 ± 0. 7 ranged

0 to 2. 75. Attitude score was calculated based on 3-point Likert scale; hence total score of attitude was 57. Mean of attitude score was 50. 1±6 ranged 14 to 57. Responses of the pupils to attitude questions are shown in table 2. At the first step, a univariate regression analysis was done on these variables: age, educational level, education level of father and mother, father's job, number of household member, familial relationship status, previous history of use of any kind of tobacco product and/or opium/alcohol and any kind of illicit, family's knowledge about use of paan, number of paan user friends, pupils idea about number of paan users in their school, use of any kind of illicit by parents, knowledge, attitude. In the next step, variables that had P-value less than 0. 25 including familial relationship status, father's job, education level of father and mother, age, number of paan user students in school, and past history use of illicit was analyzed in a multivariate model by backward method. Finally, only attitude and past history of use of any kind of tobacco product remained in the model as in students that has had past history use of any illicit, risk of use of paan was 18-fold more than others (OR= 18. 0; 95% CI: 6-54). In the case of attitude, for each attitude score accretion, risk of paan consumption decline up to 16% (OR= 16. 0; 95% CI: 11-20).

Discussion:

Current users of paan were 10. 4% of pupils while more than half of pupils (55%) answered that they have had many paan user friends in their school, so we might underestimate the current users of paan. Rozi and Akhtar17 reported that 16. 1% of Pakistani male high school pupils were current user of paan. Nawaz et al showed that 11. 2% of Pakistani medical students were

smokers18. Their results are somehow compatible with our results. Our study showed that paan using among pupils had no association with parent's education level, number of family members and use of illicit by parents. Chen study demonstrated the same results except that children's smoking behavior was still significant among those living in less-educated families19. However, these results are not compatible with Rozi and Akhtar study17 and Roohafza study20, so we should pay more attention to other predictive and attributable factors that may affect it in our community. Factors like history of using illicit by pupil and family relationship status were important in using paan in our pupils in Abdullah study21. We showed in our study that pupil's attitude has significant association with using paan that is similar with another studies. In a study by Chen and Jew-Wu also only attitudes, smoking intention, friends' smoking practices, and educational goals made a significant and substantial contribution to the discrimination of smokers from non-smokers when all variables were considered concomitantly22-23. About half of our pupils (46. 8%) guess that 50% of their school pupils use paan and from this proportion, 29. 2% guess that more than 70% of their school pupils use paan. This may affect on their attitude toward paan. Our study showed that 17. 9% of the pupils were ex-users of paan and 9% of them had used paan as the first illicit. This is an important alarm because low social dissonance and hidden use of paan comparing with cigar, make paan as the first illicit in youth and this will be a major risk factor for using another substances and this endless cycle will affect our potentially effective but impressible proportion of community so we should cut this cycle with good programming and preventive activities. Availability of paan and low price of it in our community (about 7-28 cent) may be another factor that should pay

attention. Conclusions: Based on results, it seems that restriction of smoking in public places and the prohibition of sale of tobacco to children and teenagers, complete ban on smoking advertisements and increasing the price of tobacco products should be our short term actions and in long term we should design long term programs to save our teenager to intend to using smokeless tobacco.

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Ethical approval:

Ethical Committee of Zahedan University of Medical Sciences was approved the study.

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