Introduction

While the spreading of tobacco use slightly decelerated following the declaration by the General Assembly of the World Health Organisation (WHO) that ‘tobacco products are detrimental to health’, cigarette smoking still continues to be one of the most serious global health problems and is one of the six leading causes of death (Akdur, 2009). Each year 4.9 million people die due to tobacco-related illnesses and if the current consumption patterns continue, it is estimated that another 10 million will die by 2020; 70% of whom are expected to be in developing countries.

Tobacco consumption is increasing in Turkey, as it is in other developing countries (WHO, 2005; WHS, 2012). Worldwide, 32% of men and 8% of women over the age of 15, and 21% of male and 14% of female adolescents between the ages of 13 and 15 smoke. In Turkey, 33.4% of people who are 18 years old and above use tobacco products (WHS, 2012). While 47% of males and 15% of females who are fifteen years or older smoke, 14% of the males and 7% of females in the 13-15 age bracket use tobacco products (WHS, 2012). One in every 3 Turkish children in this age bracket has tried cigarettes before the age of 10 (GYTS, 2003). Turkey ranks third in Europe and seventh in the world in tobacco consumption (WHO, 2007; WHO, 2008). Studies indicate an increasing prevalence of cigarette use and official figures show that people start smoking before the age of 10. The distribution of smokers according to socio-economic status is similar in most countries across the globe (WHO, 2002; 2007; WHS, 2012). These findings indicate the necessity for effective action in dealing with the harmful effects of cigarettes.

The identification of risk factors associated with smoking initiation and established smoking are crucial in the fight against tobacco products. Studies indicate that there are many determinants which influence the decisions to start or continue smoking, the most prominent being parental attitudes (Herken et al., 1997; Henriksen and Jackson, 1998; Fletcher and Jefferies, 1999; Adalbjarnardottir and Hafsteinson, 2001; Jackson, 2002; Robinette et al., 2002; Chassin et al., 2005; Ulusoy et al., 2005; Castrucci and Gerlach, 2006; Bektas et al., 2010; Becano et al., 2012). Parental attitudes affect the development of a positive self-concept in children. A positive self-concept leads to high levels of self-efficacy. Children with high levels of self-efficacy exhibit fewer negative health behaviours such as smoking (Bandura, 1989; Haktanır and Baran, 1998; Bektas et al., 2010; Ulgen et al., 2012).

Studies on the effects family attitudes have on smoking indicate that democratic family attitudes (high levels of approval/acceptance and supervision) lead to fewer
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Children experiencing with cigarettes and continuing to smoke (Herken et al., 1997; Henriksen and Jackson, 1998; Fletcher and Jefferies, 1999; Adalbjarnardottir and Hafsteinsson, 2001; Jackson, 2002; Robinette et al., 2002; Chassin et al., 2005; Castrucci and Gerlach, 2006; Becano et al., 2012). It was reported that children who experience permissive/neglectful (low levels of approval and supervision) parental attitudes have higher rates of smoking (Jackson, 2002; Chassin et al., 2005; Ulusoy et al., 2005; Castrucci and Gerlach, 2006). Authoritarian and permissive/neglectful parental attitudes can cause children to receive less family support, decrease their self-esteem levels and cultivate unhealthy practices such as smoking (Haktanir and Baran, 1998; Yavuzer, 2007; Ulgén et al., 2012). De Jesus (2000) reported that perceived benefits of smoking was low and its perceived detriments was high in parents who display high levels of involvement with their children. In order to prevent tobacco use which is a major health problem both in Turkey and around the world, it is essential to identify and respond to the factors affecting children’s perceptions of the benefits and harms of smoking (Plummer et al., 2001; Chen et al., 2006a; 2006b; 2008; Bektas et al., 2010). Parental attitudes constitute one of the factors that significantly influence children’s perceptions of the benefits and risks of smoking (Bektas et al., 2010) Numerous studies have been conducted in Turkey and around the world to examine the effects of parental attitudes on smoking (Herken et al., 1997; Henriksen and Jackson, 1998; Fletcher and Jefferies, 1999; Adalbjarnardottir and Hafsteinsson, 2001; Jackson, 2002; Robinette et al., 2002; Chassin et al., 2005; Ulusoy et al., 2005; Castrucci and Gerlach, 2006; Becano et al., 2012) and these studies were carried out with adolescents who had initiated smoking. However, the main objective is to identify the factors that instigate smoking by children, including how perceived parental attitudes can affect children’s views on its benefits and harms (Bektas et al., 2010). Having reviewed Turkish and international literature, we found no studies regarding how perceived parental attitudes affect children’s views on smoking. This study was conducted with the aim of examining the effects of perceived parental attitudes on children’s perception of the advantages and disadvantages of cigarettes.

Materials and Methods

Aims

This descriptive, cross-sectional study was conducted to assess the effects of parental attitudes on children’s perception of the benefits/harms of cigarettes.

Sample

The study was conducted in three schools selected via randomized stratified sampling of elementary schools representing low, middle and high socioeconomic status (SES) in one of the major cities in Turkey. The schools have a total of 912 students attending grades 6, 7 and 8, with two classes in each grade per school. Classes included in the study were randomly selected. The study sample was a total of 268 students, 105 students from the high SES school, 88 and 57 from middle and low SES schools respectively. The final sample consisted of 250 students in the 6th, 7th and 8th grades who volunteered to participate in the study, provided parental consent and were present at school during the data collection phase and completed the forms fully. Study participation rate was 93.2%. Data were collected by the researchers in the classroom environment.

Data Collection Instruments

Data were collected via a socio-demographic survey questionnaire, Parental Attitude Scale (PAS) and Decisional Balance Scale (DBS).

Socio-demographic survey questionnaire was used to assess age, sex, grade at school, smoking status of the students and their friends; as well as parental educational levels, income levels and smoking status.

Parental Attitude Scale (PAS)

The instrument was developed by Lamborn et al. (1991). It is a 26 item 4-point Likert Scale instrument. Internal consistency coefficients for acceptance/involvement, strictness/supervision and psychological autonomy were 0.72, 0.76 and 0.82 respectively. Reliability and validity tests of the scale in the Turkish language were done by Yılmaz (2000). It was found that for the acceptance/involvement sub-scale test-retest validity coefficient was 0.74, Cronbach’s Alpha coefficient was 0.60; for strictness/supervision the test-retest validity coefficient was 0.93 and Cronbach’s Alpha coefficient was 0.75; and for psychological autonomy, test-retest validity coefficient was 0.79 and Cronbach’s Alpha coefficient was 0.67. Median values of the scores are used in assessing parental attitudes, where children whose scores are in the median range are not included in the study. If there are too many children within this score range, scores equal to and above the median constitute a new group in which parental attitudes are determined (Yılmaz, 2000). Parents of the subjects who score above and below the median in acceptance/involvement and strictness/supervision dimensions are classified as ‘democratic’ and ‘neglectful’ respectively. Parents of the subjects who score below the median in acceptance/involvement and above the median in strictness/supervision are classified as ‘permissive’ (Yılmaz, 2000). Children whose scores were in the median range were included in the upper group in the current study.

Decisional Balance Scale (DBS)

This scale has 24 items and was developed by Velicer, DiClemente, Prochaska and Brandenburg in 1985 to assess adult perceptions of benefits and harms of cigarettes. DBS for children was adopted from the original scale in 1998 by Pallonen, Prochaska, Velicer, Prokhorov and Smith and was reduced to 12 items. Children’s DBS has six items addressing the ‘pros’ sub-scale and 6 items addressing the ‘cons’ sub-scale and covers each of 12 situations that involve the benefits and harms of smoking. The instrument is a 5-point Likert scale. Sub-dimension scores of Children’s DBS range between 6 and 30. High mean scores in the ‘pros’ sub-scale indicate high perceptions of benefits of smoking and high mean.
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 scores in the 'cons' sub-scale indicate high perception of the harms of smoking. The reliability and validity of the scale for Turkish children was done by Bekttaş (2010). The Cronbach’s Alpha coefficient related to the benefit and harm sub-dimensions of the scale are 0.74 and 0.78 respectively while test-retest reliability coefficients are r=0.848 and r=0.698 respectively. Total variance explained by each factor was 22% for benefit and 28% for harm sub-dimensions. Confirmatory factor analysis yields a correlation coefficient of 0.49 between the benefit and harm sub-dimensions of the scale. As a result, DBS was found to be a reliable and valid instrument for use in the Turkish culture (Bekttaş et al., 2010).

Analysis of data

Data analysis consisted of percentages, median, one-way analysis of variance (ANOVA). Bonferroni adjusted t-test was used post-hoc. Statistical significance was set at 0.05.

Ethical issues

Ethical committee approval, Institutional permission of the Provincial Directorate of the Ministry of Education, written consent of the parents and oral consent of the children were obtained.

Results

The study sample consisted of 117 (46.8%) male, and 133 (53.2%) female students with mean ages of 13.1±0.98 and 13.3±0.88 respectively. The students attended 6th (N=83), 7th (N=82) and 8th grades (N=85). Socio-demographic data showed that 79.4% of the families were middle income families and 49.8% of the mothers were elementary school graduates and 30.1% were smokers. A large percentage of the fathers (40.2%) were also elementary school graduates and 53.6% were smokers. We found that 15.0% of the students were also smokers. Descriptive analysis of the PAS scores of the children showed that mean supervision sub-dimension score of the scale was 22.8±3.6 with a median of 24. Acceptance/involvement sub-dimension scores were calculated as 24.4±3.4 with a median of 25.

We used one-way ANOVA to explore any differences between the mean ‘pros’ sub-dimension scores of the groups. Among the students who perceived parental attitude as permissive, mean DBS ‘pros’ dimension scores were 7.8±3.8, while children who perceived their parents as authoritative and democratic scored 9.5±4.3 and 7.9±3.1 respectively. We found a statistically significant difference between perceived parental attitudes and mean pros scores in terms of DBS scores (F=3.172, p=0.025).

Post-hoc Bonferroni corrections showed the statistically significant differences in the DBS scores to be valid between children who perceived parental attitudes as democratic and authoritative (p=0.037); democratic and neglectful (p=0.010); neglectful and permissive (p=0.045). There were no statistically significant differences in the mean DBS scores of the children who perceived parental attitudes as democratic and permissive (p=0.771), neglectful and authoritarian (p=0.857) or authoritarian and permissive (p=0.098).

One-way ANOVA was used to test for differences between the mean cons sub-dimension scores of the groups. Mean DBS cons sub-dimension scores were 27.6±5.1 in children who perceived parental attitudes as permissive, while mean scores in children who perceived parental attitudes as authoritarian, neglectful and democratic were 27.9±5.3, 28.0±3.9 and 28.5±3.4. There were no statistically significant differences between the mean cons sub-dimensional scores of the children by parental attitudes (p=0.698, F=0.478).

Discussion

This is a descriptive study conducted in order to examine the effects of perceived parental attitudes on children’s views of the benefits and harms of cigarettes. Parental Attitudes and Decisional Balance Scale ‘Pros’ Sub-dimension. A significant difference was found in the mean score for DBS pros sub-dimension according to parental attitudes (p=0.25, Table 1). Following advanced data analysis to determine which groups the difference stemmed from, statistically significant differences were found in children who perceived their parents as democratic and those who viewed them as authoritarian (p=0.37); children who perceived their parents as democratic and those who viewed them as neglectful (p=0.010) and those who viewed their parents as permissive and ones who perceived them to be neglectful (p=0.45). No statistically significant difference was found in the other groups (Table 1).

The mean ‘pros’ score of the children with democratic parents were significantly lower than those who perceived their parents as neglectful or authoritarian. These findings indicate that children’s views on the benefits of smoking are influenced by perceived parental attitudes. We did not find in the literature any Turkish or international studies directly related to how parental attitudes affect children’s views on the benefits of smoking. Current studies are generally aimed at determining how parental styles affect the percentage of children taking up smoking or continuing to smoke, and may therefore indirectly indicate whether children see smoking as beneficial or not. However, various studies indicate that children’s perception of parental attitudes and of the risk/benefit factors of smoking are two principal determinants affecting the decisions to start and continue smoking (Herken et al., 1997; Henrikssen and Jackson, 1998; Fletcher and Jeffreries, 1999; De Jesus, 2000; Adalbjarnardottir and Hofstein, 2001; Plummer et al., 2001; Jackson, 2002; Robinette et al., 2002; Chassin et al., 2005; Ulusoy et al., 2005; Castrucci and Gerlach,

Table 1. Comparison of Mean Decisional Balance Scale (DBS) Scores of Children by Parental Attitudes

<table>
<thead>
<tr>
<th>Perceived Parental Attitude</th>
<th>Pros Sub-scale (X±SS)</th>
<th>Cons sub-scale (X±SS)</th>
</tr>
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<tbody>
<tr>
<td>Permissive</td>
<td>7.8±3.8</td>
<td>27.6±5.1</td>
</tr>
<tr>
<td>Authoritative</td>
<td>9.4±4.5</td>
<td>27.9±5.3</td>
</tr>
<tr>
<td>Neglectful</td>
<td>9.5±4.3</td>
<td>28.0±3.9</td>
</tr>
<tr>
<td>Democratic</td>
<td>7.9±3.1</td>
<td>28.5±3.4</td>
</tr>
</tbody>
</table>

F=3.172  p=0.025  F=0.478  p=0.698
Results of studies on tobacco use by children in relation to parental attitudes indicate that democratic family attitudes (high levels of approval/acceptance and supervision) decrease children’s tendency both to try smoking (Adalbjarnardottir et al., 2001) and to continue smoking (Herken et al., 1997; Henriksen et al., 1998; Fletcher et al., 1999; Jackson, 2002; Robinette et al., 2002; Chassin et al., 2005; Castrucci et al., 2006; Becano et al., 2012). It was found that children from families characterised as indulgent/neglectful (low levels of acceptance and supervision) had higher rates of tobacco use (Jackson, 2002; Chassin et al., 2005; Ulusoy et al., 2005; Castrucci et al., 2006). Adalbjarnardottir et al. (2001) reported that adolescents who characterise their families as democratic have lower rates of cigarette initiation than those who characterise their families as neglectful, and adolescents who characterise their families as neglectful have higher rates of having tried smoking than those who perceive their families as authoritative. Castrucci et al. (2006) reported that democratic parental attitudes is a significant predictor of adolescent smoking and that adolescents who perceive their families as democratic are less likely to smoke than those who perceive their families as indulgent. The remaining parental attitudes were not found to affect the smoking status of children. In a study conducted with adolescents, Robinette et al. (2002) determined that those who perceive their families as more democratic had lower rates of smoking than those who viewed their families as being less democratic. Chassin et al. (2005) reported that the increase in the prevalence of smoking is lower in adolescents who perceive their families as democratic, authoritative and indulgent when compared to those who view their parents as permissive/neglectful. Increase in adolescent smoking rates was determined to be lower in adolescents with democratic mothers in comparison to those with permissive/neglectful mothers. A study by Herken et al. (1997) indicates that families who exhibit democratic attitudes have lower rates of smoking. Ulusoy et al. (2005) determined that tobacco addiction is more prevalent in children whose parents are permissive/neglectful and oppressive/authoritarian. De Jesus (2005) indicated that highly attentive parents tended to score high on their perceptions of the disadvantages and low on the advantages of smoking.

A large body of research shows that democratic parental attitudes are effective in preventing children from starting and continuing to smoke (Herken et al., 1997; Henriksen and Jackson, 1998; Fletcher and Jeffries, 1999; Adalbjarnardottir and Hafsteinsson, 2001; Jackson, 2002; Robinette et al., 2002; Chassin et al., 2005; Ulusoy et al., 2005; Castrucci and Gerlach, 2006; Becano et al., 2012). Bandura (1989) emphasises that children who feel valued, whose participation in decision-making processes are supported, encouraged and guided, develop better coping skills and higher levels of self-awareness, self-esteem, self-efficacy and internal locus of control. Such children are less likely to exhibit negative health behaviours and resort less often to negative coping methods (Bandura, 1989). Thus, children who perceive their parents’ attitudes as democratic develop positive self-perception and ultimately, high levels of self-respect and self-efficacy (Bektas et al., 2010). As such children have lower rates of starting and continuing cigarette smoking, it may be that those who perceive their parents’ attitudes as democratic also have lower perceptions of the advantages of smoking. In contrast, highly authoritarian and neglectful parental attitudes create a negative environment for children. Bandura (1989) stresses that as individuals and their demeanour are influenced by their environments, positive environments will support the development of positive behaviours in children, while those raised in negative environments will be at risk of developing unhealthy behaviour patterns. Some of the abovementioned studies (Herken et al., 1997; Henriksen and Jackson, 1998; Fletcher and Jeffries, 1999; Adalbjarnardottir and Hafsteinsson, 2001; Jackson, 2002; Robinette et al., 2002; Chassin et al., 2005; Ulusoy et al., 2005; Castrucci and Gerlach, 2006; Becano et al., 2012) suggest that children who perceive their parents’ attitudes as authoritarian and neglectful are more likely to initiate and continue smoking, that they view smoking as a method of coping with problems, and therefore tend to consider tobacco use as being advantageous more than children who perceive their parents as having democratic attitudes. This is consistent with the results of our study which indicate that children of parents with perceived neglectful and authoritarian attitudes have higher perception of the advantages of smoking than those who characterise their families as democratic and accepting. The results indicate that perceived parental attitudes affect children’s perceptions of the advantages of smoking.

There are studies regarding children’s perceptions of the advantages of smoking, yet we have not found any studies that directly address the relationship between parental attitudes and children’s perceptions of the disadvantages of smoking. Existing studies which report that children who perceive their parents as authoritarian and neglectful have high rates of initiating and continuing smoking, indirectly indicate that such children have low levels of perceived harms of smoking (Herken ve ark, 1997; Henriksen and Jackson, 1998; Fletcher and Jeffries, 1999; De Jesus, 2000; Adalbjarnardottir and Hafsteinsson, 2001; Jackson, 2002; Robinette et al., 2002; Chassin et al., 2005; Ulusoy et al., 2005; Castrucci and Gerlach, 2006; Becano et al., 2012). It has been stressed that the self-perception and self-esteem levels of children who perceive their parents as authoritarian and neglectful are negatively impacted and as a result develop low self-efficacy levels. Children with low self-efficacy levels are more likely to demonstrate negative coping behaviours such as smoking and view cigarettes as a method of stress-management. They therefore may have lower levels of perception of the harms of smoking.
(Bandura, 1989). As it has been established that children’s views on the advantages of smoking are influenced by the perceived attitudes of their parents, it can be expected to find such differences with regards to perceived disadvantages of smoking. The results of the current study indicate that perceived parental attitudes did not affect children’s perceptions regarding the disadvantages of smoking. However, while not statistically significant, it is noteworthy that the mean scores indicate that the children who most view cigarette smoking as harmful are those who characterise their parents as democratic. The lack of a statistically significant difference may be attributable to the fact that the study subjects had low smoking rates, that their close friends were non-smokers, that the parental smoking-rate was high and that some children may have had difficulty correctly conveying their experiences regarding initiating or continuing smoking.

In conclusion, parental attitudes that are perceived as democratic and accepting positively impact the reduction of perceptions on the benefits of smoking. As there have been few studies in Turkey and around the globe on how parental attitudes affect perceptions of smoking, it is recommended that further such studies are conducted within various regions and throughout various cultures.

References


De Jesus MC (2000). Comparison of smoking beliefs among columbus, Ohio third graders and their parents, Master Thesis, Graduate School of The Ohio State University, USA, 1-63.


