УДК: 316.613-053.6:178.7]:364-787(497.7)
Изворен научен труд

CULTURAL NUANCES IN ADOLESCENT SMOKING: THE ROLE OF FAMILY, TEACHERS, AND ECONOMIC WELL-BEING IN NORTH MACEDONIA

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Abstract

The epidemic of smoking bears grave implications for the health of individuals, escalating mortality rates in alarming numbers globally. This circumstance has compelled institutions and policymakers to implement diverse strategies to alleviate this challenging issue. Concurrently, researcheres are focused on identifying various social and personal factors to increase the efficacy of these strategies, particularly during adolescence, a highly susceptible age prone to risky behaviors. The support from family and teachers, as well as communication with parents, emerge as predictors of smoking, although findings are varying in research conducted in different countries. This study aims to predict smoking based on family and teacher support, communication with the father and mother, and family financial well-being among Macedonian and Albanian adolescents. The sample encompasses 5144 adolescents aged 11, 13, and 15 from North Macedonia, with 48.4% being male and 51.6% female. Reflecting the population structure, 66.6% are Macedonian adolescents, and 33.4% are Albanians. The data presented is part of the cross-sectional study Health Behaviour in School-aged Children collected during 2022.

The findings derived from binary logistic regression indicate that the communication with the father and the support from the teachers serve as predictors for smoking in both ethnic groups. Family support, communication with the mother, family structure, and economic well-being resulted as smoking predictors in Macedonian adolescents but not in their Albanian counterparts. Differences in smoking concerning the gender and age of adolescents are additionally discussed. Devising policies to reduce smoking must address the cultural specificities of different ethnic groups within countries.

Keywords: *smoking, family support, school support, family affluence, adolescences*

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Introduction

By scrutinizing the underlying factors of smoking in youth, the significance of the current investigation arises as it fills this void by predicting family and school as instigators of this unhealthy conduct. Precisely, the significance of this research is underscored by its incorporation of the imperative to solve disconcerting psychological issues within the study's context, alongside contentious matters and any incongruities arising from previous research findings, simultaneously, with the need for a deeper theoretical extension of this problem. Aligned with the addressed issue, the principal objective of this study is to explore the relation between smoking and the support of the family, communication with the mother and the father, and teacher support. This research aims to dissect how this relation fluctuates concerning socio-economic factors, living with a single parent or both, in male and female adolescences of Macedonian and Albanian ethnicity aged 11, 13 and 15 in the Republic of North Macedonia.

Adolescence represents a stage of life in which young people are likely to begin experimenting and engaging in dangerous behaviors that may have negative health consequences. Since the 90s, according to the Problem behavior theory, smoking is predicted as a new social challenge and problem (Jessor et al., 1994)

According to WHO, in 2020 about 22.3% of the world's population are smokers. The average smoking rate in EU countries by teenagers is 14%, both by boys and girls (OECD/EU, 2016), while in Korea youth aged 14-16 who had experienced smoking in their lifetime reaches 31.4 % (So & Yeo, 2015). If tobacco control in Saudi Arabia leftovers at the same intensity, WHO has estimated that by 2025, 38% of men and 2% of women aged 15-24 will be smokers (Alasqah, et. al, 2019).

Because of smoking, about 8 million people die each year, and in addition to mortality, smoking causes several diseases such as cardiovascular and respiratory diseases (WHO, 2023). These data are even more disturbing after devising the Framework Convention on Tobacco Control by WHO in 2003 as a response to the smoking epidemic and to reaffirm the right to a higher standard of people's health.

Additionally, adult individuals who engage in smoking persist in this behavior despite their awareness of its association with a range of diseases, including heart diseases, lung, and throat cancer (Trofor et al. 2018). It appears that merely providing information about the repercussions of smoking falls short in deterring the habit.

To understand the development in adolescence, it is important to see the context as well as the relationship with others who are important to them, but even further, in this direction, the adolescent's relationship with their parents takes a central place (Collins & Laursen, 2009). Family support emerges as a crucial pre-

dictor as in the internalization of issues in adolescents but also in health state (Guevara et al. 2021), social media usage (Boer et al. 2020), and engagement in dangerous behaviors (Goldfarb et al. 2014). Moreover, the theory of human development ecology posits that, beyond individual factors, environmental factors like family, school, and other social contexts can affect unhealthy behaviors such as smoking (Bronfenbrenner, 1976).

There are numerous social factors related to smoking among adolescents (Grenard, 2006). This transition period between childhood and adulthood is characterized by a sensitivity to their environment and, in particular, to the family and school environment. The relation with school, the support from teachers, the socio-economic status, living with one or two parents and the communication with parents have proved to play a role in the adoption of risky behaviors in both girls and boys during adolescence (Osaki, 2006; Otten, 2007). Likewise, other authors accentuate that among the sources of stress that can encourage male and female adolescents to engage in risky behavior are the economic situation, the increase in parent-child conflict, poor quality communication with parents, having a less supportive parent-child relationship as well as poor relationships with the school (Broman & Reckase, 2008). Such stressors may lead adolescents to engage in risky health behaviors as a coping strategy (Barrett and Turner, 2006).

The “contribution” of the family is extensively explored concerning smoking, encompassing aspects like family dining habits (Goldfarb et al., 2014), family engagement in school matters (Reynolds et al., 2019), familial ambiance (Romero, Dominguez & Castro, 2017), family support (Zaborskis et al, 2021), and communication with the family (Luk et al. 2009; Evans et al., 2023). Adolescents who reported diminished family support exhibited a higher likelihood of smoking compared to those with more robust family support (Zaborskis et al, 2021; Evans et al., 2023). According HBSC examining smoking trends among Irish youth, the results posit that the principal protective factor against smoking lies in communication with the family (Evans et al., 2018).

The absence of verbal conflicts between parents and adolescents correlates to a small extent with the prevention of smoking in both male and female adolescents (Kristjansson, 2008), and a reduced level of communication with adolescents heightens the likelihood of smoking (Evans et. al. 2023). A substantial body of literature indicates that the frequency and quality of parent-child communication demonstrate a negative correlation with adolescent substance use (Kafka & London, 1991; Stoker & Swadi, 1990).

Based on children’s self-reporting data, Cohen, Richardson, and LaBree (1994) proposed that the quantity of time parents invest with their children and the frequency of parent-child interaction are linked to diminish risks for both the

initiation of smoking and the consumption of alcohol. Beyond the importance of communication with the parents in general, cross-sectional data from the Health Behavior in School-Aged Children (HBSC) study carried out in the USA demonstrated that the correlation between mother and father communication and adolescent substance use varied according to the type of substance and gender. Among boys, father communication was protective against marijuana use, while mother communication was protective against smoking, whereas neither among girls, father nor mother communication was protective against tobacco use and other hazardous substances (Luk et al., 2009). Conversely, Evans et al. (2017) asserted that reduced communication with parents poses a hazard for smoking in adolescents. According to Fang et al. (2011), in a study encompassing American and Asian girls, results indicated that, compared to girls who did not use tobacco, girls who used it had lower levels of parental monitoring and a poor mother-daughter communication link, while the relationship with school was not related to smoking in girls.

The significance of communication between adolescents and parents has also been substantiated by Kafka and London (1991), suggesting that the extent to which adolescents engage in open conversations with their parents can impact the extent of tobacco use, and the mere presence of one parent is sufficient to influence a reduction in tobacco use and other substances. Other data posit that living with a single parent, particularly the mother, contributes to the expansion of risky behaviors such as smoking (Dierker, Kühn & Mönkediek, 2023). In alignment with this, the sociological stress theory (Pearlin, 1989) focuses on the stress arising from the conflict and instability experienced by adolescents due to parental separation, heightening their likelihood to engage in risky behaviors (Kirby, 2002) as a coping mechanism to overcome that situation. Previous research has established a positive relation between experiencing parental separation or living in a single-parent household and the experiencing stress in adolescents, steering their behavior towards risky acts, including smoking (Barrett and Turner, 2005). However, certain studies have discerned disparities even within the category of young people living in single-parent households and those who don't have parents, indicating that youth living in more stable "traditional" homes, with one parent or guardian, resulted with lower rates of tobacco use compared to adolescents in living alternative shelters, who notably exhibited heightened tobacco consumption (Felner & Calzo, 2022).

Many studies perceive the economic factor as a risk factor that leads adolescents to smoking. According to a study of Dutch adolescents, smoking was more common among those with a low than those with a high socioeconomic status for both males and females (Vries, 1995). The WHO states that 80% of smokers

live in low- and middle-income countries where a large proportion of this percentage are high school teenagers (World Health Organization, 2015). Among adolescents, there are also differences in their perception of smoking. Adolescents with a high socio-economic status associated the use of tobacco as a mechanism to relieve their boredom as well as to try the taste of tobacco, while those with a low socio-economic status perceived smoking as an opportunity to be closer to peers and to socialize (Vries, 1995). The high prevalence of tobacco use, even more among male adolescents due to low socio-economic status, as well as low support from the family, has also been argued by Ekpenyong et.al (2023).

In addition to the family, the present study predicts the school environment as a crucial factor influencing smoking. As indicated by Pfiffner et.al (2023), the school, while fostering a welcoming and positive atmosphere for all students in an unrestrictive setting, can also serve as a source for risky behaviors. The study on healthy behaviors among Israeli youth by Walch et.al, (2009) underscores that adolescents born in Israel reported higher levels of teacher support at school and lower level of smoking compared to their immigrant counterparts. The latter, experiencing low perceptions of teacher support, exhibited higher levels of mental distress and engaged in risky behaviors, including smoking. Coleman (1961) further affirms the importance of the school, particularly the support from teachers and its impact on unhealthy behaviors in adolescents, intensifying with age. Other studies also suggest that the quality of student-teacher relationships has a strong negative connection with the component of risky behaviors, specifically smoking (Balluerka et al., 2016).

While acknowledging schools' profound influence on the psychological, somatic health and healthy behaviors of adolescents, there remains, a lack of knowledge regarding the health and behavioral ramifications resulting from the absence of support from teachers. Numerous studies posit the school context, particularly support from teachers, as a contributory factor to youth exposure to smoking (Forrester et al., 2007; Hayakawa et al., 2016).

Inchley (2016) reported data from the HBSC study on the prevalence of adolescent smoking in 42 states, showing large variations in smoking initiation and weekly smoking across states and regions. In Bulgaria, Croatia, Hungary and Italy, every fifth adolescent reported smoking once a week, while less than 10% of adolescents in Denmark, Ireland, Sweden and the United Kingdom reported smoking. These data orientate towards tracing eventual differences between different cultures even within the countries themselves.

Despite our study encompassing ethnically diverse adolescents, the scientific literature offers limited insights into the correlation between young individuals' family relationships and smoking based on ethnicity and culture. Furthermore,

various ethnic cultures foster contrasting views of the parent-adolescent relationship (Feldman & Rosenthal, 1991). While in Japan, adolescents interpret stringent parental control as a form of warmth and no negligent parents, whereas in North America, such relationships are perceived as oppressive (Rohner & Pettengill, 1985). Nevertheless, numerous studies have established consistent correlations between specific healthy adolescent behaviors and parenting styles. In a multiethnic sample, adolescents perceiving their parents as authoritative rather than authoritarian or neglectful exhibited lower levels of unhealthy behaviors, including smoking (Steinberg, 2001). Concerning the ethnic differences among Macedonian and Albanian adolescents in North Macedonia in relation to smoking, data from the HBSC study in 2014 indicate significant inter-ethnic differences. Notably, 15-year-old Macedonian girls report twice the prevalence of smoking, at least once a week, compared to their Albanian peers (Unkovska & Nanevska, 2014).

However, the aforementioned studies did not test at a common point all the factors influencing adolescent smoking at the country level. Furthermore, the current study aims to fill these gaps in the literature, aiming to examine whether family support, mother and father communication, and support from teachers can influence smoking in adolescents. The study also considered the socio-economic factor, living with both or one parent, in male and female adolescents of Macedonian and Albanian ethnicity aged 11, 13 and 15.

Methods

Sampling

The data of this study are collected in 2022 as part of Health Behavior in School-aged Children (HBSC) North Macedonia. HBSC is a collaborative cross-national survey that was conducted every four years in more than 50 countries. The representative sample consists of 5144 students aged 11, 13 and 15 years.

The sample was selected in a systematic sampling manner, where the units of analysis were primary and secondary schools in the country. During the selection of the subjects, the stratification was made according to the languages teaching is conducted in - Albanian and Macedonian. Consequently, the study included 66.6% of young people who learn in Macedonian and 33.4% who learn in Albanian. Based on gender, 51.6% girls and 48.4% boys were included in the study.

Students from private schools, schools for students with special needs and schools for young people in detention were excluded. To respect ethical research procedures, the selected schools were initially notified through the Ministry of

Education and Science and the Bureau for Development of Education. In cooperation with the schools, a consent form for parents was distributed to all the students, as well as the students' participation was voluntary.

Measures

Cigarette smoking was assessed by the following question: 'On how many days (if any) have you smoked cigarettes in your lifetime?' with response options: 1 = never; 2 = 1–2 days; 3 = 3–5 days; 4 = 6–9 days; 5 = 10–19 days; 6 = 20–29 days; and 7 = 30 days (or more), (Inchley et al., 2016). In analyses, the ones who selected the first option (never) are categorized as non-smokers, while the ones who chose 1-2 days or other remaining options are categorized as smokers.

Family support was measured using Multidimensional Scale of Perceived Social Support (Zimet et al., 1988). Four items which assess family support, e.g., "whether they can talk about problems with their family", with responses ranging from 1 "very strongly disagree" to 7 "very strongly agree". The high values indicated high family support. The internal consistency of the scale in this simple was very good (Cronbach's alpha = 0.90).

Teacher support was assessed by three questions (Torsheim et al., 2000) dealing with the perception about the support students get by their teachers, for example "I feel that my teachers accept me as I am." There were five response options ranging from strongly agree to strongly disagree. Calculating the mean of responses on three items, the scale of teacher support ranging from 1 "low support" to 5 "high support" was obtained. The internal consistency of the scale was good (Cronbach's alpha = 0.85).

Communication with parents from the adolescent's perspective was measured through the item designed for the HBSC study. The perception of easy communication was measured through the question "How easy is it for you to talk to the following people about things that really bother you?" The possible answers on a scale from 1 "very easy" to 4 "very difficult" and 5 "don't have or see this person" were separate for the mother and father. The fifth option "don't have or see this person" was considered as missing data and the values have been recoded from 1"very difficult" to 4 "very easy".

Family structure includes the question of who the adolescent lives with, either consistently or predominantly. Responses encompassed biological mother and father, stepfather (mother's partner), stepmother (father's partner), residing in a foster home (foster family), or living elsewhere or with someone else. In the analysis, the categories included adolescents living with both biological parents and all others.

Family affluence was assessed using the Family Affluence Scale (Currie et al., 2008), devised for the HBSC study. This scale is validated for measuring the ma-

terial wealth of the family, relying on six items owned by the family: the number of cars, having a bedroom, the number of computers (tablets, smartphones), the number of bathrooms, possession of a dishwashing machine, and the number of vacations/trips abroad. The Family Affluence Scale (FAS) score is derived by summing the points from the responses to these six items, with a higher FAS value indicating greater family wealth. Consistent with the HBSC report (Inchley et al., 2016), this indicator was recoded into three groups, specific for North Macedonia. The first group-encompassed adolescents in the lowest 20%, the second group comprised the middle 60%, and the third group included those in the highest 20% of FAS.

Findings

Descriptive analysis

By the dichotomous use of the smoking item, the prevalence of smoking in the sample was 15.6%, of which 16.8% were boys and 14.4% were girls. Smoking shows an increasing tendency among adolescents as they grow up, namely, 7.4% of 11-year-olds, 11.7% of 13-year-olds and 28.2% of 15-year-olds declare that they smoke. Teenagers who live with both parents have a lower prevalence of smoking (12.3%), than those who live with one parent or in the foster family (18.4%). Albanian adolescents report a higher prevalence of smoking (17.9%) compared to Macedonian adolescents (14.5%).

Non-smokers report higher family support in both ethnic groups (MM = 6.17; MA = 6.13) than adolescents who smoke (MM = 5.19; MA = 5.40) (Table 1).

There are also differences between smokers and non-smokers in both ethnic groups regarding communication with parents. Non-smokers declare that they have easier communication with fathers (MM = 3.17; MA = 3.18) than smokers (MM = 2.71; MA = 2.82). There are no significant statistical differences in terms of family support and easy communication with fathers between Albanian and Macedonian smokers and non-smokers.

Unlike smokers (MM = 3.03; MA = 3.23), non-smokers also report easier communication with mothers (MM = 3.49; MA = 3.57). A significant statistical difference between (non)smokers regarding easy communication with mothers is also according to ethnic groups, in favor of Albanians (Table 1).

Non-smokers have higher support from teachers (MM = 3.97; MA = 4.33) than smokers (MM = 3.36; MA = 3.68). Albanian smokers declare higher support from teachers than Macedonian smokers, a difference which is statistically significant.

Table 1

Descriptive data related to included study variables

	Macedonians					Albanians				
	Smoker		Non-smoker			Smoker		Non-smoker		
	Mean	SD	Mean	SD	T	Mean	SD	Mean	SD	t
Family support	5.19	1.89	6.17	1.37	-13.20	5.40	1.80	6.13	1.43	-7.58
Communication with father	2.71	1.08	3.17	.91	-9.75	2.82	1.04	3.18	.97	-5.50
Communication with mother	3.03	1.04	3.48 α	.77	-11.41	3.23	.90	3.57	.75	-6.72
Teacher support	3.36	1.07	3.97 α	.92	-13.27	3.68	1.00	4.33	.78	-12.40

Note: α Statistically significant difference between Albanian and Macedonian (non)smokers: teacher support (p = .000, communication with mother (p = .001)

Binary logistic regression analyses

We conducted two binary logistic regressions to examine the effect of family support, communication with father and mother, teacher support, family structure, FAS, age and sex to predict (non) smoking cigarettes.

A binary logistic regression was carried out to assess the effect of family support, communication with father and mother, teacher support, family structure, FAS, age and sex on the likelihood of smoker of Macedonian adolescents. The overall model was statistically significant when compared to the null model, (χ 2 (8) = 277.11, p < 0.001) indicating the ability of the model to distinguish between adolescents who reported smoking and those who did not reported smoking. The full model explained 16.8 % (NagelKerke R square) of the variation of smokers and correctly predicted 87.4% of cases. Family support (p<.001), communication with father (p<0.05), communication with mother (p<0.05), teacher support (p<.001), family structure (p<.001), FAS (p<.001), age (p<.001), and sex (p<.05) make a statistically significant contribution to the model (Table 2). Macedonian adolescents who report lower family support are .810 times more likely to report smoking (95% CI of .75 to .88). Also, those who report less easy communication with the father are .839 times more likely to report they are smokers (95% CI of .72 to .97), while less easy communication with the mother is reported, the adolescents are .83 times more likely to have reported being a smoker (95% CI of .71 to .98). Macedonian adolescents with low teacher support are .781 times more likely to report being smokers (95% CI of .69 to .88).

Living with one parent or in a foster family increases the likelihood of being a smoker for 2.32 times (95% CI of 1.75 to 3.09). As age increases, the odds of being a smoker increase by 1.79 (95% CI 1.53 to 2.09). Macedonian adolescents with higher

family material well-being (FAS) are 1.51 times more likely to report being smokers (95% CI of 1.29 to 1.76). Being a Macedonian boy increases the odds of being a smoker by 1.30 times (95% CI of 1.03 to 1.66).

Table 2
Binary logistic regression for smoker/nonsmoker Macedonian adolescents

	B	SE	Wald	df	p	Odds Ratio	95%CI For Odds ratio	
							Lower	Upper
Family support	-.21	.04	27.41	1	.00	.81	.75	.88
Communication with father	-.18	.08	5.45	1	.02	.84	.72	.97
Communication with mother	-.18	.08	4.76	1	.03	.83	.71	.98
Teacher support	-.25	.06	15.34	1	.00	.78	.69	.88
Family	.84	.14	33.64	1	.00	2.32	1.75	3.09
FAS	.41	.08	25.89	1	.00	1.41	1.29	1.76
Age	.58	.08	54.22	1	.00	1.79	1.53	2.09
Sex	.27	.12	4.75	1	.03	1.30	1.03	1.66
constant	-.88	.38	5.37	1	.02	.41		

A binary logistic regression was carried out to assess the effect of family support, communication with father and mother, teacher support, family structure, FAS, age and sex on the likelihood of smoker of Albanian adolescents. The full model as a whole was statistically significant (χ 2 (8) = 213.30, $p < 0.001$) indicating that the model distinguished between Albanian adolescents who reported smoking and adolescents who did not report smoking. The model as a whole explained 24.6 % (NagelKerke R square) of the variation of smoker status and correctly classified 85.4% of cases. Communication with father ($p<0.05$), teacher support ($p<.001$), age ($p<.001$), and sex ($p<.001$) make a statistically significant contribution to the model, but family support ($p = .083$), communication with mother ($p = .12$), family structure ($p = .08$) and FAS ($p = .07$) did not (Table 3). As age increases, the odds of being a smoker among Albanian adolescents also increase by 2.60 times (95% CI from 2.10 to 3.21). Being an Albanian boy increases the odds of being a smoker by 1,867 times (95% CI of 1.34 to 2.60). Albanian adolescents who report less easy communication with their father are .82 times more likely to report being smokers (95% CI of .69 to .99). Adolescents who perceive that they have less

support from teachers are .56 times more likely to report being smokers (95% CI of .46 to .67).

Table 3

Binary logistic regression for smoker/nonsmoker Albanian adolescents

	B	SE	Wald	df	p	Odds Ratio	95%CI For Odds ratio	
							Lower	Upper
Family support	-.10	.06	2.99	1	.08	.91	.82	1.01
Communication with father	-.20	.09	4.47	1	.04	.82	.69	.99
Communication with mother	-.17	.11	2.45	1	.12	.84	.68	1.04
Teacher support	-.58	.10	37.15	1	.00	.56	.46	.67
Family	.31	.18	3.06	1	.08	1.36	.96	1.92
FAS	-.20	.11	3.39	1	.07	.82	.67	1.01
Age	.96	.11	77.52	1	.00	2.60	2.10	3.21
Sex	.62	.17	13.49	1	.00	1.87	1.34	2.60
constant	.44	.56	.60	1	.44	1.55		

Discussion

Based on the initial findings obtained from this study, it was determined that family support, mother and father communication, and support from teachers are pivotal factors influencing smoking among teenagers, with variations depending on the ethnic group. It was also highlighted that, as adolescents age, the prevalence of smokers increases, particularly noticeable in boys (Pförtner, 2016). Additionally, living with both parents emerged as a significant factor in preventing smoking, contrasting with living in a single-parent household or foster family.

In North Macedonia, adolescents exhibit a higher smoking prevalence compared to the European Union average of 14% (OECD/EU, 2016). Notably, Albanian teenagers report a higher prevalence of smoking weed (17.9%) in contrast to their Macedonian peers (14.5%). Non-smokers report higher levels of family support, easier communication with both mother and father, as well as higher support from teachers, observed in both ethnic groups. Non-smoking Albanian adolescents report higher support from teachers and easier communication with mothers, unlike their non-smoking Macedonian counterparts. Conversely, no significant differences were observed in communication with fathers and family

support among Macedonian and Albanian smokers and non-smokers. This study underscores the importance of sociodemographic factors such as gender, age, ethnicity, and family structure in adolescent smoking, reflecting the cultural heterogeneity of the population and the relatively underdeveloped social security system in the research context. Our findings are contrary to the study by Kristjansson et.al. (2008), this difference might be explained by the homogenous sample of the study, as well as the developed social system against smoking in Iceland.

Furthermore, this study, employing the binary logistic regression model on Macedonian adolescents, shows that family support persists in being a significant factor of smoking. The lower the perception among Macedonian teenagers that they receive emotional support from their family and assistance in decision-making, the greater the risk of being a smoker. Similar results emphasizing the critical role of family support in the development of risky behaviors are echoed in the findings of other studies (Tebb, 2023; Evans et al., 2023; Romero, Dominguez & Castro, 2017). In contrast, family support did not emerge as a significant predictor of smoking among Albanian adolescents. Given the cross-sectional design of this study and considering the Albanian cultural and traditional context where smoking symbolizes power, these results may indicate that Albanian families are perceived as tolerant of adolescent smoking rather than acting as a protective factor against smoking initiation (Simons-Morton, 2004). The absence of smoking restrictions at home is linked to a heightened risk of early smoking initiation (Andreeva et.al., 2007).

Communication with father and mother turns out to be an important factor in terms of predicting smoking among Macedonian teenagers, which is also in line with research findings by Henriksen (1998), Evans et al, (2023). In Albanian teenagers, communication with the mother turned out to be insignificant, while the low level of easy communication with the father presents a higher risk for smoking. The inconsistency of the data with other studies such as Luk et al. (2009) with teenagers in the US, where communication with fathers was insignificant in predicting smoking, while communication with mothers was a protective factor against smoking only for boys, which is an indicator of the parents' specific role in relation to children in different cultures. In this regard, the fact that Albanian teenagers' communication with their mothers does not have an important role in relation to smoking may be due to the passive traditional cultural role that is assigned to women, giving them more responsibility for cooking and maintenance, than active presence in children upbringing. It should also be mentioned that during this research, no other mediating variable was taken into consideration, such as smoking by the parents themselves. Albanian mothers may be smokers

and do not perceive smoking as a concern even in their children. This contextualization is consistent with some other studies, which accentuate that children who do not have sufficient communication with one of their parents is smoker, perceive less socialization against smoking than their peers from non-smoking families (Henriksen, 1998). Additionally, similar to our results, the low quality of communication between parents and children showed insignificant effects on their adolescent children smoking (Hiemstra, 2017).

According to the binary logistic regression model, support from teachers continues to be an important determinant of smoking among Macedonian and Albanian adolescents. This support is more emphasized between Albanian adolescents and teachers, a relationship which is claimed to fill the gaps that were found in the communication of these adolescents with their mothers. Similar results on the importance of teacher support have been argued by Pfiffner et.al. (2023), in the study conducted with Swiss students, where they point out that the perception of students that they have the support of teachers at school has contributed to the increase of their positive experiences, overcoming difficulties and staying away from unhealthy behaviors. According to Franklin et al. (2012), the involvement of teachers in the well-being of adolescents in addition to the educational process has increased the likelihood of distancing adolescents from smoking.

Regarding family structure, the study findings show that this factor continues to be an important predictor of smoking only in Macedonian adolescents. Living with only one parent or foster family increases the odds in Macedonian adolescents to engage in negative habits, such as smoking (Dick et al., 2007). Family structure did not prove to be statistically significant in Albanian adolescents. Similar to these data, most studies have ignored family structure as an important environmental context in determining smoking. This is surprising, given that the separation of parents is a major explanation for adolescent health risk behavior (Griesbach et al., 2003; Kirby, 2002).

Socio-economic factors also show that they are predictors of smoking among Macedonian adolescents with higher material well-being, but economic well-being did not turn out to be important in predicting smoking among Albanian adolescents. Other studies have also shown the same pattern, finding that low socio-economic status is not always related to smoking, but the opposite is often proven, teenagers who have higher material well-being show higher addiction to smoking (Hiscock, 2012). This can also be justified by the fact that young people with high material well-being have more opportunities to try to experiment with different flavors and types of tobacco; this is proven by numerous studies concluding that the prevalence of smoking has increased dramatically in young people in

high-income countries (Freeman et. al., 2014). Not all studies have this linear line of reasoning; some of them contradict our findings. According to Hanson (2007), in a literature review comparing socio-economic differences in smoking behavior among young people, he identified 21 high quality studies that showed a higher prevalence of smoking among adolescents who had lower material well-being compared to groups of adolescents with higher material well-being.

Age and gender play pivotal roles, as significant contributors to predicting smoking among Macedonian and Albanian adolescents. According to our findings, both in Macedonian and Albanian adolescents, the prevalence of smoking increases as the age progresses from 11 to 15 years. While this increase is evident in both boys and girls, the results indicate that Macedonian and Albanian boys exhibit higher consumption than girls do of both ethnicities. This underscores the gender role stereotypes in the country, where boys tend to express greater freedom in embodying the cultural expectations associated with a prototype of a future man, including the expectation of smoking. Harakeh et al. (2012) have also identified the relevance of sociodemographic factors such as gender and age and their influence on smoking.

This research may have some weaknesses, as the data is based on self-reported questionnaires and a variable such as smoking tends to be underestimated by adolescents despite the attempt to include this variable in some more stable categories up to daily smoking. The current study also did not include a number of known determinants of adolescent smoking, such as family smoking or peer smoking. These variables were not collected in the international HBSC survey and one consequence may be that analyzes are biased by some enduring confusions. This can also serve as an orientation for other researchers who are interested in scrutinizing this issue more deeply.

One of the strengths of this study lies in the generalization of its findings, stemming from the representative number of adolescents participating, rendering the research nationally representative and facilitating cross-country comparisons.

For all researchers and scientific contributions, the findings of the study will serve as a kind of monitoring to confirm that family support, communication with both parents, support from teachers, and sociodemographic factors stand as vital predictors of smoking among adolescents.

The practical implications of this valuable information extend to crucial resources for relevant institutions, schools, providers, and practitioners related to healthy behaviors among young individuals, offering valuable insights for the development of targeted adolescent smoking prevention programs, particularly tailored to male adolescents.

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КУЛТУРОЛОШКИ НИЈАНСИ ВО ПУШЕЊЕТО КАЈ АДОЛЕСЦЕНТИТЕ: УЛОГАТА НА СЕМЕЈСТВОТО, НАСТАВНИЦИТЕ И ЕКОНОМСКАТА БЛАГОСОСТОЈБА ВО СЕВЕРНА МАКЕДОНИЈА

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Апстракт

Пушењето носи сериозни импликации за здравјето на поединците, зголемувајќи ја стапката на смртност со алармантни бројки на глобално ниво. Оваа околност ги принуди институциите и креаторите на политиките да имплементираат различни стратегии за да го ублажат ова предизвикувачко прашање. Истовремено, истражувачите се фокусирани на идентификување на различните социјални и лични фактори за да се зголеми ефикасноста на овие стратегии, особено за време на адолесценцијата – возраст подложна на ризично однесување. Поддршката од семејството и наставниците, како и комуникацијата со родителите, се појавуваат како предиктори на пушењето, иако наодите се различни во истражувањето спроведено во различни земји. Ова истражување има за цел да го предвиди пушењето врз основа на поддршката од семејството и наставниците, комуникацијата со таткото и мајката и семејната финансиска состојба кај адолесцентите Македонци и Албанци. Примерокот опфаќа 5.144 адолесценти на возраст од 11, 13 и 15 години од Северна Македонија, од кои 48,4 % се момчиња и 51,6 % се девојчиња. Презентираните податоци се дел од Студијата за однесувањето поврзано со здравјето кај децата од училишна возраст, собрани во текот на 2022 година.

Наодите добиени од бинарна логистичка регресија укажуваат дека комуникацијата со таткото и поддршката од наставниците служат како предиктори за пушењето кај адолесцентите од двете етнички групи. Поддршката од семејството, комуникацијата со мајката, структурата на семејството и економската состојба резултираа како предиктори за пушењето кај македонските адолесценти, но не и кај нивните албански врсници. Дополнително се дискутира за разликите во пушењето во однос на полот и возраста на адолесцентите. Смислувањето политики за намалување на пушењето мора да се однесува на културните специфичности на различните етнички групи во земјите.

Клучни зборови: *пушење, семејна поддршка, поддршка од училиштето, материјална добросостојба, адолесценти*