

FACTORS INFLUENCING THE PERCEPTION OF THE NEED FOR DENTAL TREATMENT AMONG THE ADULT POPULATION IN NORTHEASTERN ROMANIA

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Abstract

In the context of growing concerns regarding oral health among the adult population, the present study aims to analyze the factors that influence the perception of the need for dental treatments in northeastern Romania. The aim of study: to identify the factors that influence adults' perception of the need for dental treatment in northeastern Romania. **Materials and Methods:** This cross-sectional study was based on a self-administered questionnaire distributed online to a sample of 92 adult participants. The research instrument assessed demographic characteristics, behaviors related to oral health, and attitudes toward prevention and dental treatment. **Results:** A total of 36.96% of respondents consider it necessary to have a dental check-up every six months, while 33.7% visit the dentist only when a problem arises. The main motivation for seeing a dentist was prevention (63.04%), followed by pain (31.5%). The most frequently mentioned barriers to accessing dental treatment were high costs (31.52%), fear of pain (29.35%), and lack of time (28.26%). Education level was positively correlated with motivation for prevention and willingness to pay for quality dental services but did not significantly influence the actual frequency of visits or the perceived need for treatment. Only one-third of respondents considered the link between oral and general health to be "very important," indicating a low level of oral health literacy. **Conclusion:** The promotion of oral health requires integrated interventions focused on adapted education, the reduction of access barriers, and the inclusion of dental care in broader public health strategies, particularly for vulnerable groups.

Keywords: oral health, health literacy, health services accessibility

INTRODUCTION

The perception of the importance of dental care is a crucial indicator of oral health and significantly influences adults' behavior in accessing dental services. Recent studies in Romania highlight a significant gap between the objective need for dental treatment and the subjective way in which this need is perceived, especially in socio-economically vulnerable regions such as the northeastern part of the country. The high prevalence of dental caries—reported in over 96% of the adult population—points to a serious need for medical intervention. Nevertheless, the low frequency of dental visits among adults suggests a diminished perception of the need for treatment (1).

From a psychosocial perspective, the perception of the necessity for dental treatment is influenced not only by symptoms or clinical problems but also by factors such as personal health values, education level, and health literacy. A study conducted by Edwards et al. (2022), using an adapted version of the Oral Health Values Scale (OHVS), emphasizes that attitudes toward oral hygiene, dental aesthetics, and regular dental visits are strongly shaped by individual and social values. Even in the absence of obvious symptoms or serious oral health issues, individuals who are attentive to early signs and aware of oral health importance may still perceive a need for dental intervention (2).

In northeastern Romania, access to dental care is often limited due to various demographic and behavioral factors. For instance, women tend to avoid dental treatment more frequently due to anxiety and financial concerns, while men more often cite lack of time as a reason (1). The perception of the need for treatment is also shaped by previous experiences with dental care, levels of trust in professional competence, and the degree of access to health information (3). These observations support the need for a thorough investigation of how such factors interact and influence adults' perceptions of the need for dental treatment.

This research aims to identify and analyze the factors that influence adults' perception of the need for dental care in northeastern Romania.

MATERIALS AND METHODS

This cross-sectional descriptive study was conducted through the administration of an anonymous, self-administered questionnaire targeting adult residents from the northeastern region of Romania. The purpose was to analyze the socio-economic and behavioral factors that influence individuals' perception of the need for dental treatment.

The questionnaire consisted of 20 items, structured into two main sections:

(1) demographic and social data (age, sex, education level, employment status, socio-economic level, and place of residence); and

(2) specific items regarding oral health perception, frequency of dental visits, perceived barriers in accessing services, the perceived importance of dental treatment in the context of general health, and attitudes toward prevention.

The questionnaire was designed to support quantitative analysis and included only closed-ended items, using a four-point Likert scale. It was distributed online via the Survio platform to a total of 100 participants. Out of these, 92 individuals agreed to participate and completed the questionnaire.

The inclusion criteria were: adults aged 18 years and older, residing in northeastern Romania, and who provided informed consent to participate in the study.

Statistical analysis was performed using SPSS software, version [insert version here]. Descriptive statistics (frequencies, means, percentages) and inferential tests (Chi-square test, t-test, logistic regressions) were applied, depending on the nature of the variables. The level of statistical significance was set at $p < 0.05$.

RESULTS

The age of respondents ranged from 20 to 73 years, with a mean of 39.3 years (± 14.56), indicating a balanced distribution between younger adults and middle-aged or older individuals. This offers a diverse perspective on how the need for dental treatment is perceived (Table 1).

Table 1. Age distribution of the study sample

N	Valid	92
	Missing	0
Mean		39.3370
Std. Deviation		14.55741
Minimum		20.00

Maximum		73.00
Procent iles	100	73.0000

The majority of respondents were female (71.7%), while only 28.3% were male, suggesting a predominant participation of women in this study on the perception of the need for dental treatment (Table 2).

Table 2. Distribution of participants by gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	66	71.7	71.7	71.7
	Male	26	28.3	28.3	100.0
	Total	92	100.0	100.0	

More than half of the respondents (60.9%) reported having post-secondary or higher education, while 33.7% had completed high school, and only a small minority (5.4%) had a low educational level (no formal education or only secondary school). This indicates a predominantly educated sample, potentially more aware of the importance of oral health (Table 3).

Table 3. Distribution of participants by education level

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No formal education	4	4.3	4.3	4.3
	Secondary school	1	1.1	1.1	5.4
	High school	31	33.7	33.7	39.1
	Post-secondary/higher education	56	60.9	60.9	100.0
	Total	92	100.0	100.0	

The majority of respondents are professionally active individuals, with 54.3% being employed and 44.6% students, while only one participant (1.1%) is unemployed. This reflects a sample predominantly composed of socially and economically integrated individuals (Table 4).

Table 4. Distribution of participants by occupational status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Employed	50	54.3	54.3	54.3
	Unemployed	1	1.1	1.1	55.4
	Student	41	44.6	44.6	100.0
	Total	92	100.0	100.0	

The largest proportion of respondents comes from urban areas (64.1%), while 35.9% are from rural areas. This indicates a higher participation rate of the urban population, which may influence perceptions of access to dental treatment and the importance of prevention (Table 5).

Table 5. Distribution of participants by area of residence

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Urban	59	64.1	64.1	64.1
	Rural	33	35.9	35.9	100.0
	Total	92	100.0	100.0	

The perceived frequency of dental visits is significantly influenced by gender ($p = 0.012$; $r = 0.301$), with a higher proportion of women reporting that a check-up is necessary every 6 months (85.3%) or once a year (76.9%) compared to men, who tend to visit the dentist only when a problem arises (46.9%). In contrast, no statistically significant differences were found between education level and the perceived frequency of dental visits ($p = 0.317$; $r = -0.131$), although respondents with higher education more frequently reported regular visits (Table 6).

Table 6. Frequency of dental visits by gender and education level

		How often do you think it is necessary to visit the dentist?			p	R
		Every 6 months	Once a year	Only when a problem occurs		
Gender	Female	85.3%	76.9%	53.1%	.012	.301
	Male	14.7%	23.1%	46.9%		
Education level	No formal education	2.9%	3.8%	6.3%	.317	.131
	Secondary school			3.1%		
	High school	35.3%	19.2%	43.8%		
	Post-secondary/higher education	61.8%	76.9%	46.9%		

The perception of the importance of preventive dental check-ups is not significantly influenced by gender ($p = 0.097$; $r = 0.237$), although a larger proportion of women consider them “very important” (77.6%) compared to men (22.4%). Likewise, no significant correlation was observed between education level and this perception ($p = 0.460$; $r = 0.071$), even though individuals with post-secondary or higher education most frequently stated that such check-ups are important or very important (Table 7).

Table 7. Perception of the importance of preventive dental check-ups by gender and education level

		How important do you think preventive dental check-ups are?	p	R

		Very important	Important	Less important	Irrelevant		
Gender	Female	77.6%	71.4%	50.0%		.970	.237
	Male	22.4%	28.6%	50.0%	100.0%		
Education level	No formal education	5.2%		8.3%		.460	.071
	Secondary school		4.8%				
	High school	27.6%	47.6%	41.7%			
	Post-secondary/higher education	67.2%	47.6%	50.0%	100.0%		

The motivation to attend a dental consultation is not significantly influenced by gender ($p = 0.425$; $r = 0.077$), although women more frequently indicated prevention (72.4%) and pain (75.0%) as determining factors. Regarding education level, although the correlation is weak ($r = 0.052$), the differences are statistically significant ($p = 0.044$): individuals with post-secondary or higher education are more likely to be motivated by prevention (72.4%) or by a recommendation from the doctor (66.7%), while respondents with high school or lower education more frequently cite pain as the main reason (Table 8).

Table 8. Main reasons for visiting the dentist by gender and education level

		What would motivate you to visit the dentist?				p	R
		Prevention of oral health problems	Pain/discomfort	Doctor's recommendation	Prevention of oral health problems		
Gender	Female	72.4%	75.0%	66.7%		.425	.077
	Male	27.6%	25.0%	33.3%	100.0%		
Education level	No formal education	5.2%	4.2%			.044	.052
	Secondary school		4.2%				
	High school	22.4%	62.5%	33.3%			
	Post-secondary/higher education	72.4%	29.2%	66.7%	100.0%		

The frequency of dental pain is not significantly influenced by gender ($p = 0.859$; $r = 0.021$), although women slightly more often reported symptoms such as pain or discomfort. Also, no significant correlations were found between education level and the frequency of dental pain ($p = 0.376$; $r = 0.127$), even though respondents with post-secondary or higher education reported rare or occasional symptoms more frequently, while those with only high school education appeared more prone to frequent pain (Table 9).

Table 9. Frequency of dental discomfort by gender and education level

		How often do you experience dental pain or discomfort?			p	R
		Frecvent	Ocazional	Rareori		
Gender	Female	71.4%	74.3%	66.7%	.859	.021
	Male	28.6%	25.7%	33.3%		

Education level	No formal education	7.1%	2.9%		.376	.127
	Secondary school		2.9%			
	High school	31.0%	42.9%	20.0%		
	Post-secondary/higher education	61.9%	51.4%	80.0%		

Gender significantly influences the perception of barriers to accessing dental treatment ($p = 0.021$; $r = 0.290$), with women reporting a significantly higher proportion of fear of pain (85.2%) and lack of time (80.8%) as main obstacles. In contrast, men more frequently stated that they do not consider it necessary to visit the dentist (60.0%). However, no significant correlation was found between education level and perceived barriers ($p = 0.355$; $r = 0.170$), although individuals with post-secondary or higher education more often cited high costs and lack of time, whereas those with high school education were more evenly distributed across all options (Table 10).

Table 10. Barriers to accessing dental treatment by gender and education level

		What is the main barrier preventing you from visiting the dentist regularly?				p	R
		High costs	Fear of pain	Lack of time	I don't think it's necessary		
Gender	Female	62.1%	85.2%	80.8%	40.0%	.021	0.29
	Male	37.9%	14.8%	19.2%	60.0%		
Education level	No formal education		3.7%	11.5%		.355	.170
	Secondary school		3.7%				
	High school	27.6%	29.6%	42.3%	40.0%		
	Post-secondary/higher education	72.4%	63.0%	46.2%	60.0%		

The perception of past dental treatment experiences is not significantly influenced by gender ($p = 0.446$; $r = 0.112$), although women more frequently reported positive experiences (“very good” – 75.9%; “good” – 73.3%) compared to men, who were equally represented among those rating their experience as “unsatisfactory” (50%). The correlation with education level is weak and not statistically significant ($p = 0.370$; $r = 0.089$), but it can be observed that respondents with post-secondary or higher education were found both among those who rated their experience as very good (69.0%) and among those with negative evaluations (80.0%). This may reflect higher expectations regarding the quality of dental care among more educated individuals (Table 11).

Table 11. Previous dental treatment experiences by gender and education level

		How would you rate your past dental treatment experiences?				p	R
		Very good	Good	Neutral	Unsatisfactory		
Gender	Female	75.9%	73.3%	73.7%	50.0%	.446	.112
	Male	24.1%	26.7%	26.3%	50.0%		
Education level	No formal education		6.7%	7.9%		.370	.089
	Secondary school	3.4%					
	High school	27.6%	26.7%	44.7%	20.0%		

	Post-secondary/higher education	69.0%	66.7%	47.4%	80.0%		
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Willingness to pay for quality dental services is not significantly influenced by gender ($p = 0.290$; $r = 0.042$), although women more frequently reported a favorable attitude toward investing in oral care, being the majority in the “very willing” (66.7%) and “willing” (77.8%) categories. In contrast, education level is significantly correlated with this attitude ($p = 0.024$; $r = -0.317$), indicating that individuals with lower education levels are less willing to pay. Respondents without formal education were overrepresented in the “slightly willing” (6.3%) and “not willing at all” (23.1%) categories, whereas those with higher education were predominant in the “very willing” (63%) and “willing” (72.2%) categories (Table 12).

Table 12. Willingness to pay for quality dental services by gender and education level

		Willingness to pay for quality dental services by gender and education level				p	R
		Very willing	Willing	Slightly willing	Not at all willing		
Gender	Female	66.7%	77.8%	81.3%	53.8%	.29	.042
	Male	33.3%	22.2%	18.8%	46.2%		
Education level	No formal education			6.3%	23.1%	.024	-
	Secondary school		2.8%				
	High school	37.0%	25.0%	50.0%	30.8%		
	Post-secondary/higher education	63.0%	72.2%	43.8%	46.2%		

Gender significantly influences perceptions of whether dental services should be covered by health insurance ($p = 0.041$; $r = 0.370$), with women more strongly supporting public coverage—69.8% of women favor full coverage, compared to only 30.2% of men. Although differences by education level are not statistically significant ($p = 0.088$; $r = 0.055$), there is a tendency for those with higher education to be most in favor of treatment coverage (62.3%) and least in favor of the idea that patients should pay for treatments themselves (33.3%) (Table 13).

Table 13. Opinion on coverage of dental services by health insurance by gender and education level

		Do you think dental visits should be covered by health insurance?				p	R
		Yes, all treatments	Yes, emergencies only	Partially, depending on treatment	No, everyone has to pay for themselves		
Gender	Female	69.8%	74.2%	80.0%	66.7%	.041	037
	Male	30.2%	25.8%	20.0%	33.3%		
Education level	No formal education	3.8%	3.2%	20.0%		.088	.055
	Secondary school	1.9%					
	High school	32.1%	38.7%		66.7%		
	Post-secondary/higher education	62.3%	58.1%	80.0%	33.3%		

Perceptions of the importance of dental treatment for general health are not significantly influenced by gender ($p = 0.547$; $r = 0.113$), although women more frequently rated it as “very important” (79.3%) compared to men (20.7%). Similarly, no significant correlation was found with education level ($p = 0.241$; $r = 0.138$), though respondents with post-secondary or higher education more often recognized the link between oral and general health (58.6% selected “very important”), while those with high school education were mostly in the “important” category (75%) (Table 14).

Table 14. Perception of the importance of dental treatment for general health by gender and education level

		How important do you perceive dental treatment to be for general health?				p	R
		Very important	Important	Moderately important	Unimportant		
Gender	Female	79.3%	62.5%	70.6%	50.0%	.547	.113
	Male	20.7%	37.5%	29.4%	50.0%		
Education level	No formal education	6.9%		3.9%		.241	.138
	Secondary school	3.4%					
	High school	31.0%	75.0%	31.4%			
	Post-secondary/higher education	58.6%	25.0%	64.7%	100.0%		

No significant correlation was found between education level and perceptions of oral hygiene ($p = 0.093$; $r = 0.054$). However, the data shows an interesting distribution: individuals with post-secondary or higher education predominate among those who consider hygiene “essential” (65.9%) but also make up a large share of those who see it as “just a formality” (76.9%). This polarization may suggest that within the higher-educated group, there exists both a highly prevention-oriented segment and another that, although informed, may neglect or minimize the role of hygiene in oral health (Table 15).

Table 15. Perception of oral hygiene as a preventive measure by gender and education level

		What is your opinion on oral hygiene as a preventive measure?			p	R
		Essential	Useful but not necessary	Just a formality		
Gender	Female	75.6%	65.8%	76.9%	.566	.031
	Male	24.4%	34.2%	23.1%		
Education level	No formal education	7.3%		7.7%	.093	.054
	Secondary school	2.4%				
	High school	24.4%	50.0%	15.4%		
	Post-secondary/higher education	65.9%	50.0%	76.9%		

Differences in satisfaction with dental appearance are not statistically significant by gender ($p = 0.070$; $r = 0.240$), although women more frequently reported high satisfaction (“very satisfied” – 74.4%), while men were more often found in the “satisfied” (60%) and

“dissatisfied” (100%) categories. Education level does not significantly influence this perception either ($p = 0.460$; $r = -0.011$), although those with post-secondary or higher education reported high satisfaction more frequently. At the same time, all respondents who reported dissatisfaction also had higher education, suggesting a potentially elevated aesthetic standard (Table 16).

Table 16. Satisfaction with dental appearance by gender and education level

		How satisfied are you with the appearance of your teeth?			p	R
		Very satisfied	Satisfied	Dissatisfied		
Gender	Female	74.4%	40.0%		.070	.240
	Male	25.6%	60.0%	100.0%		
Education level	No formal education	4.7%			.460	-.011
	Secondary school	1.2%				
	High school	31.4%	80.0%			
	Post-secondary/higher education	62.8%	20.0%	100.0%		

Gender does not significantly influence the perception of the need for dental treatments ($p = 0.131$; $r = 0.157$), although women more often stated that they do not need treatment (75.7%), while men were more frequently found among those who believed they do need it (40.9%) (Table 17).

Table 17. Perceived need for dental treatment by gender and education level

		Do you believe you need dental treatment?		p	R
		Yes	No		
Gender	Female	59.1%	75.7%	.131	.157
	Male	40.9%	24.3%		
Education level	No formal education	4.5%	4.3%	.115	.123
	Secondary school		1.4%		
	High school	54.5%	27.1%		
	Post-secondary/higher education	40.9%	67.1%		

Similarly, education level does not show a significant correlation ($p = 0.115$; $r = 0.123$), but those with high school education more often reported needing treatment (54.5%), whereas those with higher education tended not to perceive a need (67.1%). This may reflect better preventive control or a subjective underestimation of risks

DISCUSSION

Oral health is an essential component of overall health, impacting both quality of

life and psychosocial well-being. Nevertheless, oral hygiene and preventive care are often neglected among the general population. Perceptions of oral health and preventive behaviors are influenced by various factors such as education level, economic status, fear of dental treatment, and time availability.

In our study, only 36.96% of participants reported visiting the dentist every six months, while one-third sought dental care only in case of problems. This pattern aligns with recent international

literature, which shows a link between infrequent dental check-ups and low levels of oral health literacy (4, 5).

Data also indicate that women are generally more prevention-oriented, confirming previous findings showing that they tend to access dental services more frequently than men (6, 7). However, in our sample, gender differences were not statistically significant across all behavioral indicators.

No significant association was found between educational level and the frequency of dental visits, although individuals with higher education more often reported preventive behaviors. Other studies have found a stronger link between education and routine dental attendance (8).

The primary motivation for dental visits was preventive (63.04%), especially among those with higher education. Those with lower education levels were more often motivated by pain. These findings are consistent with the conclusions of Ghanbarzadegan et al. (2023), who highlighted the influence of education on dental health behaviors (9, 10).

Reported barriers to accessing dental care included cost (31.52%), fear (29.35%), and lack of time (28.26%). Similar barriers were identified in recent studies, underlining the need for policies aimed at addressing these systemic issues (11, 12).

Toothache was frequently reported (approx. 46%), with no significant differences observed based on gender or education level—a finding also supported by previous research (13).

Previous experiences with dental care were evaluated variably: one-third of participants rated their experiences as very good, while nearly half considered them neutral. Women tended to rate experiences more positively, while individuals with higher education may have had higher expectations.

Most participants expressed a willingness to invest in quality dental services, which is consistent with the

findings of Lee et al. (2022). However, participants with lower education levels were less willing to pay (14).

Finally, only one-third of respondents viewed the connection between oral and general health as “very important,” despite well-established scientific evidence supporting this relationship (15). This highlights a gap in oral health literacy, which could be addressed through targeted educational campaigns and personalized interventions.

Although there is a moderate level of awareness regarding the importance of oral health, preventive behaviors continue to be influenced by social, educational, and emotional factors. Therefore, the development of integrated educational strategies and institutional support is essential to improve access to regular dental care, especially among vulnerable groups.

CONCLUSIONS

The results of this study highlight several essential aspects regarding awareness and behaviors related to oral health, while also pointing to the need for interventions tailored to the specific socio-economic and educational context. Although most respondents recognize the importance of regular dental check-ups, preventive behaviors remain insufficiently implemented, with many individuals seeking care only in symptomatic situations. This reflects a lack of adequate information and a limited sense of responsibility toward one’s own oral health. Education level plays an important role in preventive motivation and willingness to invest in dental care, but it does not always correlate with actual visit frequency or with awareness of the link between oral and general health. This discrepancy suggests limitations related to oral health literacy and contextual factors that influence health behaviors.

The main barriers identified in accessing dental services were high costs, anxiety about treatment, and lack of time.

These obstacles disproportionately affect individuals with lower socio-economic status and should be addressed through public compensation schemes, campaigns to reduce dental anxiety, and improved access to preventive care. Gender has a partial influence on oral health behaviors, with women more frequently motivated by prevention and tending to evaluate past dental experiences more positively. However, perceptions and motivations

related to oral care are shaped by a complex interplay of psychosocial, cultural, and economic factors, regardless of gender.

In conclusion, the promotion of oral health cannot rely solely on the dissemination of information. It requires an integrated approach that includes education adapted to comprehension levels, removal of access barriers, and the incorporation of oral care into the broader management of chronic disease.

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