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Predictors of Healthcare Demand Procrastination Among Young Adults: Perceived Access and Health Literacy

Genç Yetişkinlerde Sağlık Hizmeti Erteleme Davranışının Yordayıcıları: Erişim Algısı ve Sağlık Okuryazarlığı

Melek YAĞCI ÖZEN

Department of Gerontology, Faculty of Health Sciences, Osmaniye Korkut Ata University, Osmaniye, Türkiye

Abstract

Aim: This study aimed to examine the relationship between healthcare demand procrastination and perceived access to healthcare services and health literacy among young adults, and to determine whether these variables predict healthcare demand procrastination.

Material and Method: This cross-sectional and correlational study was conducted with 362 young adults. Data were collected using a Sociodemographic Information Form, the Healthcare Demand Procrastination Scale, the Perceived Access to Healthcare Services Scale, and the Health Literacy Scale. Descriptive statistics, Pearson correlation analysis, and multiple linear regression analyses were used for data analysis.

Results: Correlation analyses indicated no significant association between healthcare demand procrastination and health literacy or perceived access to healthcare services. In contrast, significant and positive relationships were identified between health literacy and perceived access to healthcare services and their subdimensions. Multiple linear regression analyses revealed that perceived access to healthcare services and health literacy did not significantly predict healthcare demand procrastination or its subdimensions.

Conclusion: These findings suggest that healthcare demand procrastination among young adults may occur independently of perceived access to healthcare services and health literacy. It is considered that procrastination in healthcare demand within this age group may be more strongly associated with individual and contextual factors, and that access and health literacy variables alone may not be sufficient to explain healthcare utilization.

Keywords: Health services accessibility, health literacy, young adult, procrastination, health behavior

Öz

Amaç: Bu çalışma, genç yetişkinlerde sağlık hizmeti erteleme davranışının algılanan sağlık hizmetlerine erişim ve sağlık okuryazarlığı ile ilişkisini incelemeyi ve bu değişkenlerin erteleme davranışının yordayıcıları olup olmadığını belirlemeyi amaçlamaktadır.

Gereç ve Yöntem: Kesitsel ve ilişkisel tasarıma sahip bu araştırma, 362 genç yetişkin ile yürütülmüştür. Veriler sosyodemografik bilgi formu, Sağlık Hizmeti Erteleme Ölçeği, Algılanan Sağlık Hizmetlerine Erişim Ölçeği ve Sağlık Okuryazarlığı Ölçeği kullanılarak toplanmıştır. Veri analizlerinde tanımlayıcı istatistikler, Pearson korelasyon analizi ve çoklu doğrusal regresyon analizleri kullanılmıştır.

Bulgular: Korelasyon analizleri, sağlık hizmeti erteleme davranışı ile sağlık okuryazarlığı ve algılanan sağlık hizmetlerine erişim arasında anlamlı bir ilişki olmadığını göstermiştir. Buna karşın sağlık okuryazarlığı ile algılanan sağlık hizmetlerine erişim ve erişimin alt boyutları arasında anlamlı ve pozitif ilişkiler saptanmıştır. Çoklu doğrusal regresyon analizleri, algılanan sağlık hizmetlerine erişim ve sağlık okuryazarlığının sağlık hizmeti erteleme davranışını ve ertelemenin alt boyutlarını anlamlı biçimde yordamadığını ortaya koymuştur.

Sonuç: Bu bulgular, genç yetişkinlerde sağlık hizmeti erteleme davranışının algılanan erişim ve sağlık okuryazarlığından bağımsız olarak ortaya çıkabileceğini düşündürmektedir. Erteleme davranışının bu yaş grubunda daha çok bireysel ve bağlamsal etmenlerle ilişkili olabileceği ve sağlık hizmeti kullanımını açıklamada erişim ve okuryazarlık değişkenlerinin tek başına yeterli olmayabileceği değerlendirilmektedir.

Anahtar Kelimeler: Sağlık hizmeti erteleme, sağlık okuryazarlığı, algılanan sağlık hizmetlerine erişim, genç yetişkinler

Corresponding *(İletişim)*: Melek Yağcı Özen, Department of Gerontology, Faculty of Health Sciences, Osmaniye Korkut Ata University, Osmaniye, Türkiye
E-mail *(E-posta)*: melekyagciozen@hotmail.com
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INTRODUCTION

Healthcare demand procrastination is defined as a behavioral pattern characterized by individuals delaying health-related behaviors despite their need for medical assistance.[1] Procrastination is generally conceptualized as the voluntary and unnecessary postponement of actions that need to be performed, despite awareness that such delay may lead to negative consequences, and is considered a behavioral problem.[2,3] When considered in a health context, delaying health-related behaviors without any valid reason, despite having access to healthcare services and knowing that these services are necessary, is defined as healthcare-related procrastination.[4]

Studies demonstrating the negative effects of procrastination on health and well-being have been increasing in the literature. It is reported that healthcare demand procrastination is an important factor contributing to cardiovascular diseases and poor management of chronic diseases, and may lead to early complications, increased treatment costs, and a decrease in quality of life.[4,5] In addition, access barriers and procrastination are stated to constitute an important barrier to preventive healthcare services such as breast cancer screening.[6] Qualitative studies reveal that healthcare-related procrastination is a complex and multidimensional process that includes delaying healthcare services that individuals consider necessary and accessible, despite being aware of possible negative outcomes.[1,7]

The Procrastination–Health Model, developed to explain the health-related consequences of procrastination, suggests that the negative effects of chronic procrastination on health may occur through behavioral and psychosocial pathways.[5,8] This model emphasizes that procrastination is not limited to the postponement of daily tasks but represents a behavioral pattern that is also important in terms of health-related processes. Studies conducted with students and young adults show that procrastination behavior may be associated with mental health indicators, help-seeking behaviors, and unhealthy lifestyle patterns.[2,9] These findings suggest that procrastination is not unique to clinical or high-risk groups but is a common psychosocial mechanism that can influence health-related behaviors in different contexts.

In the development of healthcare demand procrastination, not only individual characteristics but also perceptions related to the healthcare system may play an important role. Studies conducted in Türkiye reveal that factors such as perceptions of unnecessary use of supply-driven healthcare services, trust in physicians, distrust in healthcare systems, and trust in telehealth services may be associated with healthcare demand procrastination.[10-13] In addition, positive relationships are reported between perceived barriers and healthcare demand procrastination.[14] Cross-sectional studies conducted in Turkish samples show that despite the need for healthcare services, procrastination behavior is common, and that young individuals constitute a more risky group in this regard.[15]

In this context, access to healthcare services is not limited to physical opportunities but is also closely related to how individuals perceive access to these services. Perceived access to healthcare services is considered a personalized evaluation developed by individuals regarding healthcare system provision in line with their life experiences.[16] It is reported that difficulties experienced in accessing healthcare services may delay treatment-seeking and reduce the utilization of preventive healthcare services.[17,18]

Health literacy is defined as individuals' ability to access health-related information and services, understand, evaluate, and use this information.[19] Previous studies show that individuals with low levels of health literacy perceive access to healthcare services as more difficult, feel less competent in interactions with healthcare professionals, and evaluate healthcare service experiences more negatively.[19,20] However, Levy and Janke (2016) emphasize that many studies examining the relationship between health literacy and access are conducted with individuals who have already interacted with the healthcare system, and that barriers encountered before reaching the clinical setting may be overlooked.[21] This situation suggests that healthcare demand procrastination may represent an early stage that is frequently overlooked in clinically based samples.

Young adulthood is a critical life stage in which individuals assume autonomy and responsibility in health-related behaviors. Although it is stated that health literacy may play a supportive role in health behaviors during this period, it is also reported that young adults do not regularly use healthcare services despite having health-related knowledge. This situation suggests that healthcare demand procrastination may be related not only to the level of knowledge, but also to perceptual and contextual factors.

Literature reviews indicate that no study has jointly examined healthcare demand procrastination together with perceived access to healthcare services and health literacy among young adults. In this context, the present study examines the relationship between healthcare demand procrastination and perceived access to healthcare services and health literacy among young adults and evaluates whether these variables predict procrastination behavior. Given the limited number of studies addressing healthcare demand procrastination together with perceived access to healthcare services and health literacy among young adults, quantitative examination of this issue is warranted. The present study aims to address this gap by examining the possible relational and predictive variables of healthcare demand procrastination among young adults.

Accordingly, the following research questions were addressed in this study:

Q1. Is there a significant relationship between healthcare demand procrastination and health literacy among young adults?

Q2. Is there a significant relationship between healthcare demand procrastination and perceived access to healthcare services among young adults?

Q3. Are there significant relationships between health literacy and perceived access to healthcare services and their subdimensions (availability, acceptability, accommodation, accessibility)?

Q4. Do health literacy and perceived access to healthcare services significantly predict healthcare demand procrastination among young adults?

MATERIAL AND METHOD

Research Design

The study, which was planned with a cross-sectional and quantitative research design, was conducted with young adults aged 18–35 years in Türkiye. Data were collected using face-to-face surveys and online questionnaires administered via Google Forms.

Population and Sample

The population of the study consisted of individuals aged 18–35 years living in Türkiye. According to 2025 population data, the number of individuals within this age group in Türkiye is 23,034,988.[22] The sample consisted of participants selected from this population using the convenience sampling method. Data were collected through an online survey from individuals who were between 18 and 35 years of age, residing in Türkiye, and who voluntarily agreed to participate in the study. Participants who were outside the specified age range or who provided incomplete or invalid questionnaire data were excluded from the analyses. Accordingly, analyses were conducted based on data obtained from 362 valid participants.

Sample adequacy was evaluated by taking into account the statistical analyses used in the study and statistical power. In the literature, it is stated that a statistical power of 80% is considered sufficient under the assumption of a medium effect size, and that samples larger than 300 are adequate for correlation- and regression-based analyses.[23,24]

Data Collection Instruments

In the study, an information form, the healthcare demand procrastination scale, the perceived access to healthcare services scale, and the health literacy scale were used.

Personal Information Form (Sociodemographic Data)

In the demographic information form administered to participants within the scope of the study, questions aimed at determining basic sociodemographic characteristics such as gender, educational level, employment status, perceived income level, and general health status were included.

Healthcare Demand Procrastination Scale

The Healthcare Demand Procrastination Scale developed by Söyler et al. (2022) was used.[25] The scale, developed using a five-point Likert method, consists of 11 items and three dimensions. The first factor, "self-management/individual remedy-seeking behavior," consists of three items; the second factor, "avoidance behavior," consists of four items; and the third factor, "inaction," consists of four items.

Perceived Access to Healthcare Services Scale

In this study, the Turkish version of the Perceived Access to Healthcare Services Scale was used. The validity and reliability of the Turkish version were established by Yılmaz et al. (2025), and the final version of the scale consists of 23 items.[26]

Health Literacy Scale

In this study, the Turkish version of the Health Literacy Scale–Short Form was used. The validity and reliability of the Turkish version were established by Karahan Yılmaz and Eskici (2021).[27] Scale scores were calculated by computing item means and subsequently transformed into an index score ranging from 0 to 50 using the formula (mean − 1) × (50/3), in line with the HLS-EU approach. The mean health literacy index score was 33.17 (SD=7.68), indicating that participants' health literacy levels were at the borderline between problematic/limited and sufficient categories according to the HLS-EU classification.

Ethical Considerations

Ethical approval for the study was obtained from the Health Sciences Research Ethics Committee of a state university with decision number (E.242998, 5 August 2025).

Statistical Analysis

The data obtained in the study were analyzed using the Statistical Package for the Social Sciences (SPSS) version 25.

RESULTS

Information on young adults aged 18–35 years included in the study is presented in **Table 1**.

Table 1. Sociodemographic Characteristics of the Participants (n=362)

Variable	Category	n	%
Gender			
	Female	306	84.5
	Male	56	15.5
Employment status			
	Student	187	51.7
	Employed	75	20.7
	Unemployed	100	27.6
Educational level			
	Primary education	10	2.8
	High school	80	22.1
	Associate degree	59	16.3
	Bachelor's degree	210	58.0
	Postgraduate	3	0.8
Income level			
	Very low	30	8.3
	Low	64	17.7
	Medium	250	69.1
	High	16	4.4
	Very high	2	0.6
General health status			
	Very poor	18	5.0
	Poor	48	13.3
	Moderate	161	44.5
	Good	127	35.1
	Very good	8	2.2

Of the participants, 84.5% were female, 51.7% were students, and 58.0% had a bachelor's degree level of education. The majority of the participants reported their income level as moderate (69.1%), and 75.1% stated that they did not attend regular health check-ups (**Table 1**).

Table 2. Descriptive Statistics and Reliability Coefficients of the Study Variables (N=362)

Variables	Mean	SD	Min	Max	Skewness	Kurtosis	Cronbach's α
Procrastination	2.62	0.65	1.00	4.27	0.14	−0.24	0.838
Health literacy	2.99	0.46	1.00	4.00	−0.53	3.10	0.867
Perceived access	3.44	0.58	1.04	4.96	−0.29	1.23	0.919

SD=Standard deviation. A Cronbach's alpha coefficient of 0.70 or above indicates acceptable reliability. Scale scores were calculated by taking item means.

Table 2 presents the descriptive statistics of the variables examined within the scope of the study and the internal consistency coefficients of the scales. The mean score of the procrastination variable was 2.62 (SD=0.65), the mean score of the health literacy variable was 2.99 (SD=0.46), and the mean score of the perceived access variable was 3.44 (SD=0.58). The fact that the skewness and kurtosis values fall within acceptable limits (±1.5) indicates that the variables exhibit an approximately normal distribution. In addition, the Cronbach's alpha coefficients of the scales ranging between 0.838 and 0.919 indicate that the measurement instruments used have a high level of internal consistency.

Table 3. Correlation Analysis of the Healthcare Demand Procrastination, Perceived Access, and Health Literacy Scales

Variables	1	2	3
1. Health literacy	1		
2. Perceived access	0.349**	1	
3. Procrastination	0.013	0.052	1

Table 3 presents the results of the Pearson correlation analysis between the study variables. Accordingly, a moderate, positive, and statistically significant relationship was found between health literacy and perceived access (r=0.349, p<0.01). In contrast, no statistically significant relationship was found between healthcare demand procrastination and health literacy (r=0.013, p>0.05) or perceived access (r=0.052, p>0.05).

Although no significant relationships were identified between healthcare demand procrastination and health literacy or perceived access in the correlation analyses, the potential of these variables to predict healthcare demand procrastination when considered together was evaluated using regression analysis.

Table 4. Multiple Linear Regression Analysis of the Predictors of Healthcare Demand Procrastination (N=362)

Variables	B	SE	β	t	p
Constant	2.434	0.261	–	9.312	< 0.001
Perceived access	0.061	0.063	0.054	0.968	0.334
Health literacy	−0.009	0.079	−0.006	−0.114	0.910

R=0.053, R^2=0.003, Adjusted R^2=−0.003, F(2,359)=0.497, p=0.609, VIF=1.138 (for all variables) B=unstandardized regression coefficient; SE=standard error; β=standardized regression coefficient; VIF=variance inflation factor; R=multiple correlation coefficient; R^2=coefficient of determination; Adjusted R^2=adjusted coefficient of determination.

In the multiple linear regression analysis conducted to determine the predictors of healthcare demand procrastination (**Table 4**), it was observed that the model in which perceived access and health literacy variables were included together was not statistically significant (F(2,359)=0.497, p=0.609). The model explained only 0.3% of the variance in healthcare demand procrastination (R^2=0.003). It was determined that perceived access (β=0.054, p=0.334) and health literacy (β=−0.006, p=0.910) did not significantly predict healthcare demand procrastination. Since no significant relationship was found between healthcare demand procrastination and perceived access or health literacy in the correlation analyses, additional correlation analyses were conducted to examine possible relationships at the subdimension level.

Table 5. Pearson Correlations Between the Subdimensions of Healthcare Demand Procrastination and Perceived Access and Health Literacy (N=362)

Variables	1	2	3	4	5
1. Self-management / Individual remedy-seeking	1				
2. Avoidance	0.486**	1			
3. Inaction	0.427**	0.646**	1		
4. Perceived access	0.101	−0.010	0.059	1	
5. Health literacy	0.036	−0.046	0.065	0.349**	1

Values represent Pearson correlation coefficients. ** p<0.01 (two-tailed).

Table 5 presents the correlations between the subdimensions of healthcare demand procrastination and perceived access and health literacy. It was observed that there were moderate to high positive relationships among the subdimensions of procrastination behavior (r=0.427–0.646; p<0.01). In contrast, no statistically significant relationships were found between the subdimensions of avoidance, inaction, self-management and perceived access or health literacy (p>0.05). In addition, a moderate, positive, and statistically significant relationship was identified between health literacy and perceived access (r=0.349; p<0.01).

Table 6. Multiple Linear Regression Analyses of the Prediction of Healthcare Demand Procrastination and Its Subdimensions by Perceived Access and Health Literacy (N=362)

Dependent variable (DV)	R	R^2	Adj. R^2	F (df)	p	Perceived access β (p)	Health literacy β (p)
Healthcare demand procrastination (total)	0.053	0.003	−0.003	0.497 (2,359)	0.609	0.054 (0.334)	−0.006 (0.910)
Subdimensions							
Self-management / Individual remedy-seeking	0.101	0.010	0.005	1.865 (2,359)	0.156	0.101 (0.071)	0.000 (0.995)
Avoidance	0.047	0.002	−0.003	0.393 (2,359)	0.675	0.007 (0.898)	−0.049 (0.387)
Inaction	0.076	0.006	0.000	1.039 (2,359)	0.355	0.041 (0.463)	0.051 (0.366)

β=standardized coefficient. No multicollinearity problem was observed in any of the models (Tolerance=0.878; VIF=1.138).

Multiple linear regression analyses were conducted to evaluate whether perceived access and health literacy predicted healthcare demand procrastination (Table 6), and the established model was not found to be statistically significant ($F(2,359)=0.497$; $p=0.609$). Similarly, the models established for the subdimensions of procrastination were also not significant (avoidance: $p=0.675$; self-management: $p=0.156$; inaction: $p=0.355$). At the subdimension level, only the perceived access variable for individual care showed a borderline trend ($\beta=0.101$; $p=0.071$); however, this effect did not reach statistical significance. In conclusion, in this sample, perceived access and health literacy did not significantly predict healthcare demand procrastination or its subdimensions.

DISCUSSION

The health literacy index score obtained in this study indicates that the participants had a certain level of competence in accessing and using health-related information; however, this competence may remain below the ideal level.

Although interest in the effects of procrastination on health-related outcomes has increased in recent years, studies identifying the factors that predict this behavior remain limited.[8] Existing research suggests that healthcare demand procrastination cannot be explained solely by structural factors such as access to healthcare services; perceptions of time, motivation, individual characteristics, and contextual factors also play a role in this behavior.[1] This indicates that healthcare demand procrastination has a multidimensional and complex pattern.

Previous studies have shown that young individuals, in particular, exhibit healthcare demand procrastination more frequently and that this age group may be more vulnerable in terms of procrastination.[15] The fact that young adults are generally healthy and have more limited contact with the healthcare system may lead healthcare demand procrastination to become a less visible but widespread problem in this group. Studies conducted in Turkish samples also report that younger age groups are at higher risk of healthcare demand procrastination and that structural difficulties may increase this behavior.[15] In this context, the present study contributes to the literature by examining potential predictors of healthcare demand procrastination among young adults.

Recent studies indicate that procrastination should be considered a behavioral risk factor for health and that this effect is not limited to young or middle-aged groups.[28] Meta-analyses reveal moderate positive relationships between procrastination and negative health outcomes.[29] These findings emphasize the importance of procrastination in relation to health behaviors and health outcomes; however, they also indicate that questions regarding the mechanisms through which this behavior emerges have not yet been fully clarified.

In the present study, no significant relationship was found between healthcare demand procrastination and health literacy or perceived access to healthcare services. This finding suggests that healthcare demand procrastination among young adults may not be explained solely by knowledge level or perceptions related to access. In contrast, the significant and positive relationships identified between health literacy and perceived access to healthcare services and its subdimensions indicate that the level of understanding and using health-related information is closely related to how individuals evaluate their access to healthcare services. Multiple linear regression analyses also revealed that health literacy and perceived access were not direct predictors of healthcare demand procrastination.

Although studies conducted in clinical and acute illness samples have reported that health literacy is associated with delays in decision-making, no significant relationship was found between healthcare demand procrastination and health literacy among young adults in this study.[30] This discrepancy suggests that while health literacy may play a more decisive role in decision-making processes in acute and life-threatening situations, healthcare demand procrastination among young and relatively healthy individuals may be shaped by different mechanisms.

Qualitative studies conducted with patients with type 2 diabetes have shown that healthcare-related procrastination is a multidimensional, context-sensitive process that may vary over time.[4] Similarly, previous qualitative research has demonstrated that individuals may delay healthcare-seeking behavior despite having health-related knowledge due to perceived lack of control, the nature of their relationship with the healthcare system, and non-structural barriers.[31] These findings may help explain why health literacy and perceived access did not directly predict healthcare demand procrastination in the present study.

Some studies conducted with young adults report that neglect and irregularities in healthcare utilization may be observed even among individuals with high levels of health literacy.[32] This suggests that healthcare demand procrastination among young adults may be shaped by daily life priorities, perceived access, and contextual factors beyond knowledge level. These findings are consistent with the results of the present study and support the view that healthcare demand procrastination cannot be explained by single cognitive factors alone.[19]

The positive relationship identified between health literacy and perceived access to healthcare services in this study is consistent with previous research and indicates that health literacy plays an important role in individuals' understanding and evaluation of the healthcare system.[21] However, as also emphasized by Levy and Janke (2016), a large proportion of empirical studies on health literacy consist of individuals who have already interacted with the healthcare system.

This methodological characteristic may lead to a different evaluation of the effect of health literacy on behaviors that are shaped prior to seeking clinical care. The fact that health literacy and perceived access did not predict healthcare demand procrastination in a sample consisting largely of non-clinical young adults in the present study may be explained by this difference.[21]

Previous research indicates that health literacy may influence health-related outcomes, but that this effect does not always manifest through health behaviors or patterns of healthcare utilization.[33] Similarly, although individuals with low health literacy have been shown to report more barriers to accessing care,[34] these perceptual difficulties do not always translate into healthcare demand procrastination. In this context, the present study makes an original contribution to the literature by demonstrating that healthcare demand procrastination among young adults may occur independently of perceived access and health literacy.

Limitations

This study has several limitations. The cross-sectional design limits causal interpretations of the relationships between healthcare demand procrastination, perceived access to healthcare services, and health literacy. Data were collected using self-report measures, which may be subject to recall and social desirability biases. In addition, the use of convenience sampling and a sample predominantly composed of young adults in Türkiye may limit the generalizability of the findings.

CONCLUSION

This study examined the relationship between healthcare demand procrastination and perceived access to healthcare services and health literacy among young adults and evaluated whether these variables predict procrastination behavior. The findings indicate that healthcare demand procrastination among young adults may occur independently of health literacy and perceived access to healthcare services. This result suggests that procrastination behavior in this age group may be more strongly associated with individual and contextual factors.

Nevertheless, the positive relationship identified between health literacy and perceived access to healthcare services indicates that health literacy plays an important role in individuals' processes of understanding and evaluating the healthcare system. However, it is observed that these perceptual and cognitive processes do not always directly translate into healthcare-seeking or procrastination behavior.

These findings suggest that interventions aimed at reducing healthcare demand procrastination among young adults may not be sufficient if they focus solely on improving health literacy or access conditions. Future studies are recommended to address the psychosocial determinants of procrastination behavior, perceptions of time, motivational processes, and daily life priorities in a more comprehensive manner.

In conclusion, this study demonstrates that healthcare demand procrastination among young adults has a multidimensional structure and makes an original contribution to the literature aimed at understanding this behavior.

ETHICAL DECLARATIONS

Ethics Committee Approval: Ethical approval for this study was obtained from the Health Sciences Research Ethics Committee of a state university (Decision No: E.242998, 5 August 2025).
Informed Consent: Informed consent was obtained from all participants prior to data collection.
Referee Evaluation Process: Externally peer-reviewed.
Conflict of Interest Statement: The authors have no conflicts of interest to declare.
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