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ORIGINAL RESEARCH

Elder neglect in patients with frequent emergency department admissions: a cross-sectional study

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Abstract

Background: Abuse and neglect, including self-neglect, are frequent among geriatric patients and can lead to serious medical consequences. Unfortunately, these issues are often overlooked. The aim of our study was to assess the impact of elder neglect on emergency department admissions among elderly individuals who frequently present to the emergency department. **Methods**: Elderly patients aged 65 and above who visited the emergency department at least twice within one year were included in this study. We used the Elderly Self-Neglect Scale for assessment of elder neglect, a valid and reliable tool in Turkish. Physicians recorded each patient's sociodemographic characteristics, including gender, age, marital status, number of children, cohabitation status, chronic disease and living arrangements, to evaluate their association with neglect. **Results**: Self-neglect was associated with marital status ($F = 9.04$; $p < 0.05$), number of children ($F = 5.78$; $p < 0.05$) and cohabitation status ($F = 7.86$; $p < 0.05$) but not with living arrangements. **Conclusions**: Given the increasing geriatric population, emergency physicians have an ethical duty to diagnose, treat, appropriately refer and report suspected cases of neglect. It is important to consider neglect in elderly patients who frequently present to the emergency department. Among geriatric patients, factors such as abuse, neglect, affective disorders, caregiver stress and cognitive disorders should be evaluated. Physicians involved in geriatric rehabilitation must be aware of the signs and implications of elder self-neglect.

Keywords

Geriatrics; Elder self-neglect; Recurrent visits; Emergency department

1. Introduction

According to the World Health Organization (WHO) definition, old age is defined as a stage in life during which individuals encounter increasing challenges in adapting to their environment, often beyond their control. This stage begins at the transition from 64 to 65 years of age. Aging is generally categorized into three stages: early old age (65–74 years), middle old age (75–84 years) and advanced old age (85 years and above) [1]. With advancements in medicine and technology, life expectancy has significantly increased, resulting in a growing elderly population. This demographic shift has brought greater attention to various health concerns, including the issue of self-neglect, which is increasingly recognized as a critical factor affecting the well-being of older adults [2].

Neglect syndrome is a complex behavioral spectrum observed in elderly individuals, manifesting as difficulties in maintaining health and hygiene, as well as an inability or unwillingness to engage in self-care. Psychiatric and medical conditions such as dementia, depression, obsessive-compulsive disorder and alcoholism are considered causative or contributing factors. This syndrome is distinct from the self- care and behavioral problems seen in young people with mental illness. Several medical conditions including anemia, infection, obesity, malignancy, heart failure, stroke, degeneration of the skeletal system, osteoporosis and vision or hearing impairments can act as triggers for neglect syndrome. Additionally, psychiatric disorders such as depression, schizophrenia, alcoholism, and anxiety have been linked to its onset. When examining its relationship with other geriatric syndromes, neglect syndrome is notably associated with cognitive impairment and depressive symptoms.

Self-neglect, defined as the failure of elderly individuals to perform basic self-care tasks, poses a significant threat to their health and safety. It is one of the most prevalent yet underrecognized forms of elder mistreatment. Studies estimate that approximately 5% to 10% of older adults are at risk of experiencing various forms of mistreatment such as physical abuse, sexual abuse, emotional/psychological abuse, financial exploitation or neglect. These negative situations tend to remain hidden and are not adequately recognized by society [3].

Self-neglect in older adults encompasses both subjective and objective high-risk behaviors, such as neglecting physical

and mental health, limiting social interactions, disregarding their living environment and failing—whether intentionally or unintentionally—to maintain personal hygiene [4, 5]. Elder abuse victims have significantly higher mortality rates and an increased risk of negative health outcomes, such as depression, disability, hospitalization and placement in nursing homes [5–7].

Healthcare providers conducting assessments for acute injuries or illnesses play a crucial role in identifying elder abuse, as emergency medical visits may be one of the few instances when vulnerable and socially isolated older adults seek medical attention. This makes emergency departments a critical setting for detecting and intervening in cases of elder neglect and abuse [7, 8]. Emergency departments provide a significant potential opportunity for identifying elderly adults at risk of or experiencing elder abuse, reporting appropriately and intervening. Elder abuse victims often present to the emergency department more frequently than other elderly adults, while their likelihood of seeking primary care is lower [9].

Slankamenac and colleagues have noted that various studies define frequent emergency department visits differently, with criteria ranging from three to twelve or more visits per year, often without a clear justification for the specific threshold [10, 11]. In our study, we classified patients who visited the emergency department three or more times within a year were classified as "repeat visits". While the exact factors influencing patient volume and repeat visits remain unclear, evidence suggests that frequent visits contribute to increased emergency department crowding [10, 12]. The aim of our study was to evaluate the impact of elder neglect on frequent emergency department visits among elderly patients.

2. Materials and methods

2.1 Study design and patient selection

This study was cross-sectional and patients aged 65 and over who presented to the emergency department between February 2022 and February 2023 were evaluated. The study was conducted in accordance with the Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) guidelines for observational research. Data were retrospectively collected from the emergency department of a tertiary care hospital. The hospital information system is equipped with a feature that allows the retrieval of previous visit records for patients presenting to the emergency department. Patients were included in the study based on their visit frequency and eligibility criteria. The exclusion criteria were as follows: (i) Patients who presented to the emergency department fewer than once a year, (ii) patients under the age of 65, (iii) patients with any psychiatric diagnosis, receiving psychiatric treatment or with cognitive impairment including dementia who could not understand the questionnaires. The sociodemographic characteristics of the patients (gender and age), marital status, number of children, living arrangements, chronic disease and places of residence were evaluated and recorded.

2.2 Assessment scales

Elderly Self-Neglect Scale (ESNS) was utilized to assess the extent of self-neglect among elderly individuals, aiming to evaluate their self-care and their ability to meet essential needs. This scale was developed by Iris and colleagues with the purpose of establishing a conceptual model for professionals working with the elderly. The original version comprises 77 items and six factors [13]. However, the shortened version of 60 items is divided into four main factors: social network, physical health, environmental health and mental health. A 5-point Likert-type rating system is employed for assessment, where "very much" represents 1 point and "not at all" represents 5 points. In total, the highest score is 300 and the lowest score is 60. Higher scores indicate an increased risk of self-neglect in elderly individuals [13]. Reliability studies of the ESNS reported a Cronbach's α of 0.964 [14], indicating strong internal consistency. In this study, the internal consistency coefficient was 0.95, closely aligning with the reliability of the original version, demonstrating good internal consistency across the study group.

2.3 Sample size

The sample size was calculated using the program G*power (V3.1.9.2, Heinrich-Heine-Universität, Düsseldorf, NRW, Germany), with a minimum sample size of 223 participants at an $\alpha = 0.05$ and a power of 80% [15].

2.4 Statistical analysis

The research data were analyzed using IBM SPSS 23 (Statistical Package for Social Sciences) software (IBM, Chicago, IL, USA). Descriptive statistics including mean, standard deviation and percentage distributions were used to summarize the data. For parametric comparisons, the independent samples *t* test was applied to analyze differences between binary variables, while the one-way Analysis of variance (ANOVA) test was applied for variables with more than two parameters. Levene's test analysis was conducted to determine whether the homogeneity assumption was met, and Tukey's *post hoc* test was used to identify differing groups. Pearson correlation analysis was utilized to assess relationships between numerical variables. All statistical analyses were conducted at a 95% confidence level, with ($p < 0.05$) considered statistically significant.

3. Results

In this study, the relationship between self-neglect and sociodemographic characteristics among elderly patients aged 65 and above who frequently visit the emergency department was investigated. Over the course of one year, a total of 118,968 patient visits were recorded in the emergency department. Among these, 19,872 patients were aged 65 and older. Of this elderly patient group, 261 individuals had multiple emergency department visits (Fig. 1).

Out of these patients, 54.7% (N = 143) were in the age group of 65–75, 32.6% (N = 85) were in the age group of 75–85 and 12.7% (n = 33) were aged 85 and above. The proportion

of females in the group with repeated visits to the emergency department within one year was found to be high ($p < 0.001$) (Table 1).

The analysis of the marital status of the patients included in the study revealed that 59.8% (n = 156) were married, and 50.2% (n = 131) had three children. Regarding living arrangements, 73.2% (n = 191) of the patients lived with their families, and 62.1% (n = 161) resided in urban areas. Additionally, it was found that 99.6% (n = 251) of the elderly patients had chronic diseases (Table 1).

The mean score of the Elderly Self-Neglect Scale used in the study was 107.51 ± 28.19, with the lowest score being 61 and the highest score being 235. Among the subscales of the scale, the mean score for the social network subscale was 10.47 ± 3.89, for the physical health subscale was 32.53 ± 9.78, for the environmental health subscale was 41.72 ± 11.97, and for the mental health subscale was 23.51 ± 7.16 (Table 2).

ANOVA analysis revealed a statistically significant differ-

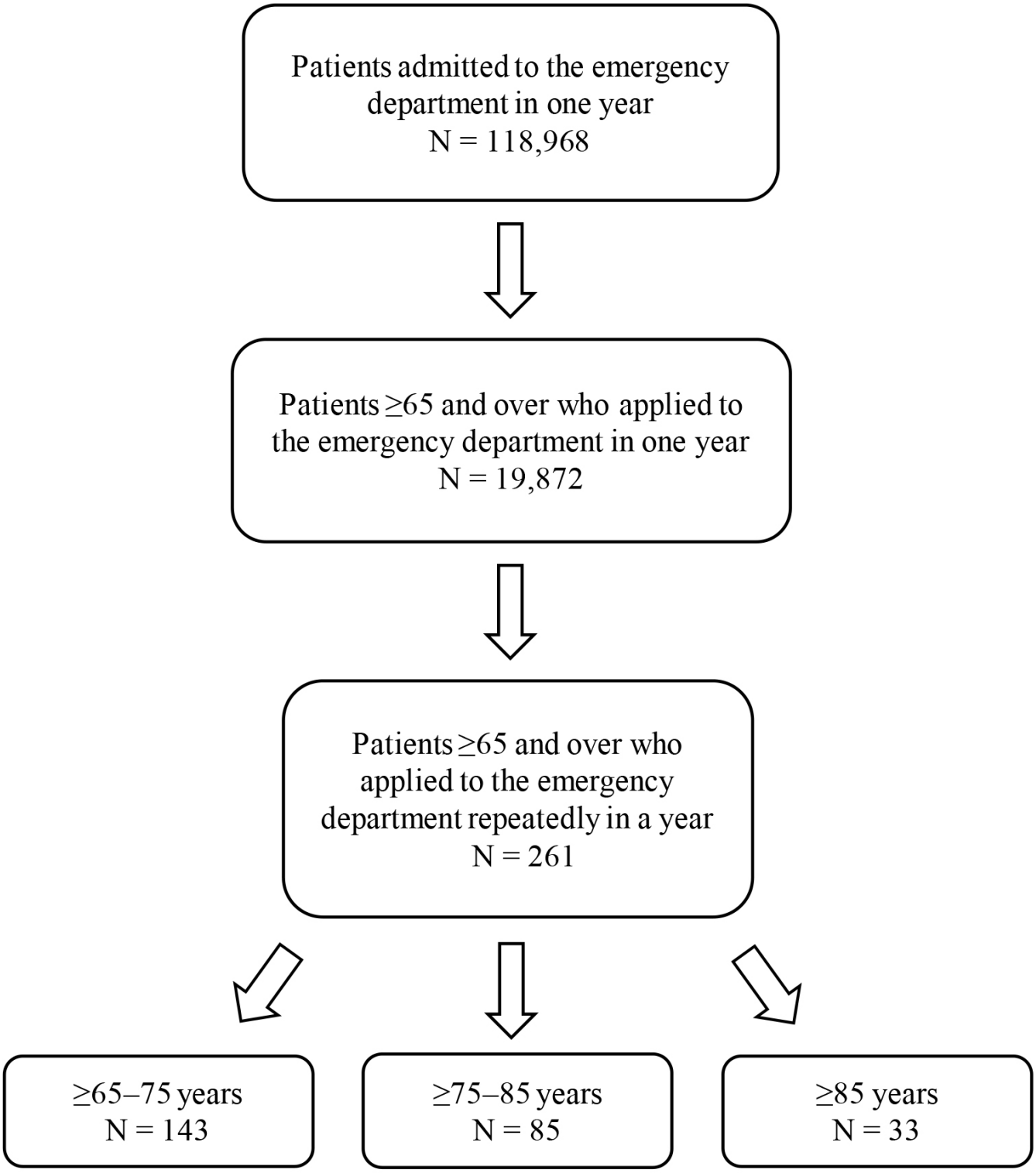

FIGURE 1. The participant recruitment scheme.

TABLE 1. Distribution of characteristics of patients with repeated visits to the emergency department within one year.

Characteristics of patients		N	%	*p*
Gender				
	Female	140	53.6	<0.001
	Male	121	46.4	
Age group (yr)				
	≥65–75	143	54.7	
	≥75–85	85	32.6	<0.001
	≥85	33	12.7	
Marital status				
	Single	9	3.4	
	Married	156	59.8	<0.001
	Widow	96	36.8	
Number of children				
	No children	7	2.7	
	1 child	15	5.8	
	2 children	51	19.5	<0.001
	3 children	131	50.2	
	≥4 children	57	21.8	
Cohabitation status				
	Alone	43	16.5	
	With family	191	73.2	<0.001
	Nursing home	17	6.5	
	Caregiver	10	3.8	
Living arrangements				
	Rural	99	37.9	<0.001
	Urban	162	62.1	
Chronic disease				
	Yes	251	99.6	<0.001
	No	10	0.4	

N: Number of patients; %: Percentage; $p < 0.05$: Statistically significant.

TABLE 2. Mean and standard deviation values of elder self-neglect scale (ESNS) scores.

Variables	$\bar{x} \pm SD$	Minimum	Maximum
Elder self-neglect scale	107.51 ± 28.19	61	235
Social network	10.47 ± 3.89	4	18
Physical health	32.53 ± 9.78	17	67
Environmental health	41.72 ± 11.97	26	98
Mental health	23.51 ± 7.16	14	52

$\bar{x}$: mean; SD: standard deviation.

ence in the level of self-neglect among older people based on marital status ($F = 9.04$; $p < 0.05$), number of children ($F = 5.78$; $p < 0.05$) and living arrangements ($F = 7.86$; $p < 0.05$). However, no statistically significant difference was observed based on the place of residence. *Post hoc* Tukey test was conducted for intergroup comparisons. According to the analysis results, the level of self-neglect was significantly higher among elderly individuals who were widowed or single compared to those who were married. Elderly individuals without children or with only one child had significantly higher levels of self-neglect compared to those with two or more children. Moreover, elderly individuals living alone or in nursing homes had significantly higher levels of self-neglect compared to those living with their families (Table 3).

TABLE 3. Comparison of self-neglect levels based on patient characteristics.

Characteristics of patients	N	$\bar{x}$	SD	*F*/*t*	*p*
Gender					
Female	140	102.9	26.9	1.47*	0.287*
Male	121	104.6	27.8		
Age group (yr)					
≥65–75	143	102.6	27.54		
≥75–85	85	106.5	34.68	1.93**	0.205**
≥85	33	104.8	26.23		
Marital status					
Single	9	129.2	38.9		
Married	156	102.3	27.2	9.04**	0.001**
Widow	96	122.7	37.6		
Number of children					
No children	7	137.8	40.2		
1 child	15	126.2	43.3		
2 children	51	96.9	30.3	5.78**	0.001**
3 children	131	106.3	29.2		
≥4 children	57	98.4	22.7		
Cohabitation status					
Alone	43	127.20	41.84		
With family	191	97.63	24.42	7.86**	0.001**
Nursing home	17	117.14	35.54		
Caregiver	10	108.60	33.78		
Living arrangements					
Rural	99	102.26	27.3	3.89*	0.692*
Urban	162	103.40	26.66		

**: Independent Samples t Test; **: One Way ANOVA; N: number of patients; $\bar{x}$: arithmetic mean; SD: standard deviation; F: ANOVA test variation between means; t: Independent Samples t Test, $p < 0.05$.*

4. Discussion

Globally, the rapid aging of the population, declining fertility rates and increased life expectancy have become significant social phenomena. As the elderly population continues to grow, concerns regarding self-care neglect among older individuals are becoming increasingly prominent [16]. The World Health Organization (WHO) defines elder abuse as any act or omission within a relationship of trust that causes harm or distress to an older person, whether occurring as a single incident or repeatedly [17]. It is estimated that approximately 33% of elder maltreatment cases are attributed to self-neglect [18].

Our study aimed to evaluate whether elderly patients presenting with recurrent visits to the emergency department exhibited signs of self-neglect. The findings indicate that self-neglect is a prevalent issue among this patient group. The study also observed that sociodemographic characteristics and social life factors play a significant role in influencing self-neglect. The frequent use of emergency services by elderly individuals may potentially serve as an escape mechanism, highlighting the need for further exploration of the underlying causes of self-neglect in this population.

The results of this study indicate that there is no significant difference in the level of self-neglect among elderly individuals based on gender. A review of the existing literature reveals mixed findings, with some studies emphasizing higher self-neglect in women and others in men. The lack of a significant gender-based difference in our study is consistent with and supports these previous findings [19].

However, marital status was found to significantly influence self-neglect, with elderly individuals living alone exhibiting higher levels of neglect. Aging is associated with numerous challenges, and studies suggest that loneliness during this stage leads individuals to pay less attention to their self-care [20]. Being married provides a sense of relief from loneliness and contributes positively to their mental well-being by enabling them to be in the company of peers. Increased levels of mental well-being in older adults are associated with a decrease in self-neglect. Mental well-being significantly influences individuals' health-related behaviors and adherence to medical recommendations [21, 22]. Loneliness and depression can

amplify feelings of hopelessness and pessimism in the later stages of life, a situation that may worsen living alone. As the average age increases, the level of neglect also tends to rise [20]. In our study, a higher level of neglect was observed in elderly individuals aged 85 years and older. Various studies have shown that the level of self-neglect in older adults does not significantly vary based on their place of residence. However, the increase in self-neglect with advancing age is believed to be influenced not only by social factors but also by physical limitations. Factors such as reduced muscle strength, weakened reflexes and diminished cognitive perception may contribute to self-neglect [23–25].

Self-neglect is a widespread issue among the older adults globally, with its prevalence being relatively consistent across different populations [21]. Visits to emergency departments have been steadily increasing over the years, with a notable rise in the frequency of visits by older adults experiencing functional decline [26]. Developing stronger community connections can provide emotional, social and practical support while also offering immediate assistance and referral services for older adults who experience abuse. Consequently, such initiatives can help reduce psychological distress and the risk of elder abuse among older adults [27].

This study has certain limitations, primarily due to its retrospective design. One major limitation is the relatively small sample size. Additionally, the study was conducted at a single center, which may limit the applicability of the results to broader populations. Attitudes toward older adults are often influenced by societal perceptions across various domains, including general attitudes, work, family, employment, social interaction and healthcare. These perceptions tend to associate aging with rigidity, resistance to change, irritability and stubbornness. Over time, these expectations may be internalized by older adults, influencing their behaviors and self-perception. The issue of loneliness among older adults is deepening, and they often struggle to adapt to rapid societal changes. Among elderly patients, those who cannot or choose not to express themselves may attempt to draw attention by emphasizing their illnesses. This behavior could manifest as repeated visits to emergency departments, potentially indicating a desire for attention.

Elderly individuals who neglect themselves may face chronic illnesses and physical limitations. Within the geriatric population, the evaluation of emotional disorders, caregiver stress and cognitive impairments is essential in identifying cases of abuse and neglect. Physicians involved in geriatric rehabilitation must remain vigilant in recognizing self-neglect, as it is a critical factor affecting the overall well- being and quality of life of older adults.

5. Conclusions

Enhancing educational efforts and raising societal awareness are essential for improving the detection and reporting of elder abuse and neglect by healthcare providers. Emergency department physicians hold an ethical responsibility to identify, treat, appropriately refer and report suspected cases of neglect. Physicians who are well-informed about reporting requirements and available support resources can significantly impact the lives of elderly individuals. Although the use of standardized assessment scales may be challenging in high-volume emergency settings, it remains crucial to consider neglect in elderly patients who frequently visit the emergency department. Increased levels of mental well-being in older adults are associated with a decrease in self-neglect. Mental well-being significantly influences individuals' health-related behaviors and adherence to medical recommendations Furthermore, healthcare professionals involved in geriatric rehabilitation should be aware of instances where elderly individuals may engage in self-neglect, which can improve treatment approaches and support services in this field.

AVAILABILITY OF DATA AND MATERIALS

The datasets used and/or analyzed during the current study are available from the corresponding author on reasonable request.

AUTHOR CONTRIBUTIONS

HS—Conceptualization; methodology; software; data curation; writing—original draft preparation; writing—reviewing and editing. TES—Data curation; writing—original draft preparation; writing—reviewing and editing, visualization; investigation. Both authors read and approved the final manuscript.

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

This study was initiated in the emergency department of a university hospital following the Duzce University Non-Invasive Health Research Ethics Committee approval with decision number 2023/65, Date: 17 April 2023. Informed consent was waived owing to the retrospective nature of the study. All procedures involving human participants adhered to the ethical standards set by the Institutional Research Commission and were in accordance with the principles outlined in the 1964 Declaration of Helsinki and its subsequent amendments, or similar ethical standards.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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