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Reasons for self-medication among elderly patients in TIU and Erbil Infirmary House

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ABSTRACT

Background: This study investigates the factors contributing to self-medication among elderly patients in TIU (Tishk International University) and Erbil Infirmary House, utilizing a mixed-methods approach that combines qualitative interviews and quantitative surveys.

Methods: The sample includes elderly patients aged 60 years and above with diverse backgrounds, employing a mixed-methods approach consisting of qualitative interviews and quantitative surveys. The study identifies several factors contributing to self-medication, such as limited access to healthcare, financial constraints, long waiting times, lack of trust in healthcare professionals, family influence, and positive past experiences with self-medication.

The study emphasizes the necessity for targeted interventions to address self-medication in the elderly. This includes improving healthcare access, reducing financial barriers, enhancing healthcare professionals' communication skills, and educating patients on the risks and benefits of self-medication. Collaboration between providers and the elderly population is crucial for creating a safe environment for appropriate medication use.

Results: The study reveals significant differences in self-medication behavior among the elderly based on demographic factors. Males were more likely to engage in self-medication, and the prevalence was higher among single elderly individuals. Primary education was more prevalent than high school or college education. There was no significant difference in self-medication prevalence between those without medical insurance and those with insurance. The presence of drug information significantly influenced self-medication practices.

Conclusion: Further research is needed to explore the long-term consequences of self-medication and evaluate the effectiveness of intervention strategies in mitigating associated risks. Addressing self-medication among elderly patients is essential to ensure their health and well-being.

Keywords: Self-medication, elderly people, drug.

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INTRODUCTION

Self-medication, a prevalent practice worldwide, raises particular concerns in the elderly population due to their unique health issues, chronic illnesses, age-related physiological changes, and complex prescription regimens.[1] This study aims to explore the factors influencing self-medication practices among older patients in Kurdistan, Iraq, specifically within Tishk Interventional University and Erbil Infirmary House, addressing a crucial aspect of healthcare delivery.[2]

Understanding the factors that drive self-medication among older patients' is essential for healthcare professionals and policymakers. It enables the creation of effective policies, enhances patient safety, and improves medication adherence, ultimately elevating the quality of care and patient outcomes.[3]

Aims of the Study

1. Determine the root causes and driving forces behind self-medication practices among TIU and Erbil Infirmary House senior patients.
2. Analyze the information sources consulted by older individuals when engaging in self-medication.
3. Examine the beliefs and attitudes of medical professionals regarding elderly individuals who practice self-medication.

By focusing on these objectives, this study aims to contribute valuable insights to the existing body of knowledge on geriatric self-medication, explicitly focusing on TIU and Erbil Infirmary House. The study's findings are expected to provide meaningful information for healthcare policy development, treatment strategies, and educational initiatives to promote safe medication practices in elderly individuals.

This study thoroughly examines the factors influencing self-medication practices among elderly patients at TIU and Erbil Infirmary House. Its goal is to improve healthcare delivery, patient safety, and medication management techniques for the older population by identifying the underlying factors driving self-medication practices.

LITERATURE REVIEW

Self-medication, the practice of individuals consuming medications without medical professional supervision, represents a significant social, health, and economic concern globally, including in Iraq. This issue has far-reaching implications for public health, healthcare systems, and economics.[4] Self-medication introduces risks such as incorrect dosages, adverse drug interactions, delayed diagnosis, and potential exacerbation of health problems. Addressing this challenge requires a comprehensive, evidence-based approach involving healthcare stakeholders, policymakers, and the public to promote responsible and safe medication practices.[5] The review delves into the role of pharmacists in optimizing over-the-counter (OTC) analgesic use for pain management, emphasizing the importance of pharmacist guidance for responsible consumption and effective pain relief.[6]

A study reveals a high prevalence of self-medication among older European adults, with factors such as higher education, lack of insurance, and chronic conditions being predictors. Common self-treated issues include pain and digestive problems. The study underscores the need for interventions promoting responsible self-care and healthcare access, emphasizing the importance of self-care in older adults.[7]

Another study investigates self-medication practices among the elderly in Istanbul, Turkey, during the COVID-19 pandemic. It examines factors influencing this behavior and collects data through surveys or interviews. The findings aim to provide insights for healthcare professionals and policymakers to promote safe medication practices during challenging times, highlighting the impact of the pandemic on the elderly population.[8]

Additionally, an integrative review examines self-medication prevalence, patterns, and predictors in Ghana. Researchers gathered data from various sources, synthesizing qualitative and quantitative data. The review offers valuable insights into self-medication practices and identifies factors influencing it.[9] This research contributed to understanding self-medication in Ghana and can inform targeted interventions for responsible healthcare practices.

METHODS

Mixed-Methods Approach

A mixed-methods research design was employed to gather comprehensive data, combining qualitative and quantitative methods to gain a more holistic understanding of the complex phenomenon of self-medication. Qualitative interviews allowed researchers to explore the lived

experiences and perceptions of elderly patients, while quantitative surveys provided numerical data to complement the qualitative findings.

The Study Sample

The study comprised elderly patients aged 60 years and above who sought medical assistance at TIU and Erbil Infirmary House. A purposive sampling technique ensured a diverse representation of participants, deliberately selecting individuals from various age groups, genders, and socio-economic backgrounds. This approach aimed to capture a comprehensive range of perspectives and experiences related to self-medication among elderly patients in specified healthcare settings.

Data Collection

Qualitative data collection involved conducting in-depth interviews with selected elderly patients, allowing researchers to delve into the motivations and perspectives behind self-medication. Quantitative data were collected through structured surveys capturing specific self-medication behaviors and related factors among the elderly in Erbil Infirmary House and Tishk International University-Kurdistan Region-Iraq. A sample size of 300 patients from both genders was recruited from the prosthodontic department. A questionnaire focused on reasons for self-medication and data were collected from 1 October 2021 to 30 June 2022. The data were categorized based on patients' age and gender.

Tools Used

The Statistical Package for the Social Sciences (SPSS) version 25, a widely used software tool for statistical analysis, data management, and visualization, was employed. Cross-tabulation, or a contingency table, was utilized to summarize the data and simultaneously display the frequencies or counts of different categories for two categorical variables. This table allowed the observation of patterns and identification of potential relationships between the variables.[10]

The Chi-square test was used with categorical data to assess whether the observed frequency distribution differs significantly from the expected frequency distribution. It helped determine whether there is a statistically significant association between the two variables or if any observed relationship is merely due to chance.[11]

RESULTS

The study's findings indicate notable differences in self-medication behavior among the elderly based on various demographic factors. Specifically, it was observed that male elderly individuals were more inclined to engage in self-medication compared to their female counterparts. Additionally, the prevalence of self-medication was significantly higher among single elderly individuals than those who were married.

Moreover, a significant discrepancy in self-medication rates was identified between individuals with different educational backgrounds. Those with primary education exhibited a higher tendency towards self-medication compared to individuals who had completed high school or college education.

Furthermore, the study examined the association between medical insurance status and self-medication behavior. Surprisingly, the results did not demonstrate a statistically significant difference in self-medication prevalence between elderly individuals with and without medical insurance.

Lastly, the presence of drug information was found to influence self-medication practices significantly. Elderly individuals who lacked access to drug information were observed to have a significantly higher prevalence of self-medication compared to those who had access to such information ($p = 0.007$, Table 1).

This table presents the results of a statistical analysis, specifically a Chi-squared test, to investigate the relationship between self-medication and various categorical variables. The variables examined in the table are: GENDER: This variable has two categories, "Male" and "Female." The table shows the number and percentage of individuals who self-medicate and those who do not based on their gender. MARITAL STATUS: This variable has several categories, including "Single," "Married," "Divorced," and "Widow." The table displays the number and percentage of individuals in each category who self-medicate and those who do not. EDUCATIONAL LEVEL: This variable has three categories, "Primary," "High school," and "College." The table shows the number and percentage of individuals in each educational level who self-medicate and those who do not. INSURANCE: This variable has two categories, "Yes" and "No," indicating whether individuals have insurance or not. The table presents the number and percentage of individuals with and without insurance who self-medicate and those who do not.

Table 1. Factors affecting self-medication behavior: Self-medication rates and chi-squared analysis.

Variables		Self-medication				Total	Chi-squared	p-value
		Yes		No				
		No.	%	No.	%			
GENDER	**Male**	103	34.33	69	23.00	172	1.072	0.301
	Female	69	23.00	59	19.67	128		
MARITAL STATUS	**Single**	123	41	105	35	228	13.743	0.003*
	Married	39	13	11	3.67	50		
	Divorced	8	2.67	12	4	20		
	Widow	2	0.67	0	0	2		
EDUCATIONAL LEVEL	**Primary**	98	32.67	46	15.33	144	32.789	< 0.001*
	High school	54	18	31	10.33	85		
	Collage	20	6.67	51	17	71		
INSURANCE	**Yes**	39	13	23	7.67	62	0.991	0.319
	No	133	44.33	105	35	238		
DRUG INFORMATION	**Yes**	79	26.33	39	13	118	7.352	0.007*
	No	93	31	89	29.67	182		

* Significant under p-value < 0.05.

DRUG INFORMATION: The table presents a data set indicating the prevalence of self-medication among individuals with and without drug information. It shows the percentages of those who self-medicate and those without, as well as the Chi-squared test results for independence. The test measures the difference between observed and expected frequencies to determine if there is a statistically significant relationship between the two variables. A p-value less than 0.05 indicates a statistically significant relationship, indicating that the two variables are likely associated. The data is categorized as "Yes" and "No" to indicate access to drug information. In this table, asterisks (*) are used to denote statistical significance levels. For example, "0.003" indicates that the p-value for the relationship between marital status and self-medication is less than 0.003, which is highly significant. Table 2 illustrates the self-medication rates and Chi-Squared Analysis.

The findings for each variable are summarized as follows:

A. Prior Experience with the Drug:
Individuals who had no prior experience with the drug showed a higher percentage of self-medication (30.67%) compared to those with previous experience (26.67%). The p-value was less than 0.001, suggesting a strong association between prior experience with the drug and self-medication.

B. No Medical Insurance:
Individuals without medical insurance had a higher percentage of self-medication (48%) compared to those with insurance (9.22%). The p-value was 0.029, indicating a significant association between lack of medical insurance and self-medication.

C. Advice from Friends, Family, and Neighbors:
There was no significant difference in self-medication between individuals who received advice from friends, family, and neighbors and those who did not. The p-value was 0.393, which is not statistically significant.
D. Certainty of its Safety:
Individuals who were not confident about the safety of the drug had a higher percentage of self-medication (49%) compared to those who were certain (8.33%).

The Chi-squared test showed a statistically significant p-value of 0.012, indicating an association between the drug's safety and self-medication uncertainty.

Table 2. Factors influencing self-medication.

Variables		Self-medication				Chi-squared	p-value
		Yes		No			
		No.	%	No.	%		
A = prior experience about the drug	No	92	30.67	118	39.33	52.50	< 0.001*
	Yes	80	26.67	10	3.33		
B = no medical insurance	No	144	48	118	39.33	4.755	0.029*
	Yes	28	9.22	10	3.33		
C = advice by friends, family and neighbors	No	152	50.67	117	39	0.729	0.393
	Yes	20	6.67	11	3.67		
D = certainty of its safety	No	147	49	121	40.33	5.415	0.012*
	Yes	25	8.33	7	2.33		
E = availability in drugstores	No	160	53.33	128	42.67	9.302	0.002*
	Yes	12	4	0	0		
F = saving money	No	168	56	128	42.67	3.017	0.082
	Yes	4	1.33	0	0		
G = saving time	No	168	56	128	42.67	3.017	0.082
	Yes	4	1.33	0	0		
H = lack of trust in doctors for diagnosis and treatment	No	168	56	128	42.67	1.508	0.082
	Yes	4	1.33	0	0		
I = inadequate time to attend the doctor's office	No	166	55.33	128	42.67	4.556	0.033*
	Yes	6	2	0	0		
J = non-seriousness of the illness	No	163	54.33	128	42.67	6.905	0.022*
	Yes	9	3	0	0		

* Significant under p-value < 0.05.
No.: number of persons for each case, Total number of the sample size is 300.
%: No./Total number (300).
The yellow cells are.: number of persons for each case.
While the green ones are No./Total number.
If we collect all the yellow cells, we will find the total number is 300.
If we collect all the green cells, we will find the total percentage is 100%.

E. Availability in Drugstores:
Individuals who reported that the drug was not available in drugstores had a higher percentage of self-medication (53.33%) compared to those who found it available (4%). The Chi-squared test yielded a significant p-value of 0.002, indicating a strong association between drug availability and self-medication.

F, G, H, I, J:
The variables F, G, H, I, and J, which represent reasons or factors for self-medication, all had a p-value of approximately 0.082, above the typical significance level of 0.05. This value suggests no statistically significant association between these factors and self-medication in the analyzed population.

DISCUSSION

It is essential to interpret these results with caution and acknowledge potential limitations. The observed associations between self-medication and demographic factors do not necessarily establish causation. Further research may be required to explore the underlying reasons and mechanisms driving these relationships. Additionally, the study's scope and methodology may impact the generalizability of the findings to broader populations. Therefore, replication of the study in diverse settings and populations would be beneficial to corroborate the results and enhance the understanding of self-medication behavior among the elderly.

The observation that male elderly individuals were more inclined to engage in self-medication compared to their female counterparts aligns with a study among Iraqi patients in Baghdad city[12] and is consistent with the results of another study.[13]

Lastly, the presence of drug information was found to influence self-medication practices significantly. Elderly individuals who lacked access to drug information were observed to have a significantly higher prevalence of self-medication compared to those who had access to such information.

Those with primary education exhibited a higher tendency towards self-medication than individuals who had completed high school or college education, which disagrees with the study in Ghana, where participants with tertiary education were found to have higher odds of self-medication.[9] This discrepancy underscores the importance of considering contextual factors and variations in educational systems when interpreting findings across different regions.

CONCLUSION

- Interpreting the p-values for each variable allows for drawing specific conclusions from the table. Variables with low p-values suggest a significant association with self-medication, while high p-values indicate a lack of significant association. The results can be used to gain insights into the factors that might influence self-medication behaviors among the studied population. However, to make accurate interpretations, additional context and knowledge of the research question and data collection methods are essential.
- It highlights significant associations with prior experience with the drug, medical insurance, certainty of drug safety, and availability in drugstores. However, it does not show significant associations with other factors, such as advice from friends and family or various reasons for self-medication.

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