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Impact of gender and age of patients with a diagnosis of depression on the prescription of SSRI and SNRI drugs

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Abstract

Compliance with pharmacological treatment is a vital element in the effective management of depression. Nonetheless, the impact of patients' gender and age on treatment adherence and prescription compliance remains underinvestigated. This study aims to examine the correlation between gender, age, and the prescription of selective serotonin reuptake inhibitors (SSRIs) and selective norepinephrine reuptake inhibitors (SNRIs) in patients diagnosed with depressive episodes (F32) or recurrent depressive disorder (F33) according to the ICD-10. Data from 526 patient visits were examined, concentrating on antidepressant prescriptions acquired via the MyDr EDM system (January 1, 2023 – August 15, 2024). The research evaluated prescription fulfillment by gender and age, using statistical techniques like the $\chi 2$ test and Kruskal-Wallis test to determine significant disparities. Most patients complied with their recommended treatment, with 61.6% completely adhering to their prescriptions, 3.2% somewhat adhering, and 35.2% not adhering at all. No statistically significant differences were detected between males and females for prescription fulfillment ($p=0.722$). Age was a crucial determinant affecting adherence. It was revealed that older individuals had superior adherence, but younger patients were less inclined to comply with recommended medications. Understanding the age-related determinants affecting prescription adherence may inform the creation of more focused initiatives to enhance patient compliance, especially among younger demographics who may need heightened motivation as well as awareness of the significance of consistent treatment.

treatment adherence; economic barriers; access to medications; problems of drug therapy; motivational factors

1. INTRODUCTION

Depression is one of the most common mental disorders that have a substantial impact on the quality of life in the population. Depressive disorders occupy a leading position among the causes of disability, which puts this problem among the priorities in the field of mental health. Despite the availability of a wide range of effective medications for the treatment of depression, patients' adherence to prescriptions remains one of the main problems in psychiatric practice and psychopharmacology.

According to a report by the National Health Fund [1] published in 2023, depression is becoming an increasingly serious public health and social problem. It is estimated that about 1.2 million people in Poland suffer from depressive disorders. Over the past 10 years, sales of antidepressants in the country have increased by 59%.

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Despite the availability of many effective drugs, 50% of patients do not achieve full recovery and even experience relapses of the disease. Following the doctor's instructions regarding taking antidepressants plays a key role in achieving the desired therapeutic result.

Drug therapy remains the main method of treating depression, especially with the use of selective serotonin reuptake inhibitors (SSRIs) and selective norepinephrine reuptake inhibitors (SNRIs) antidepressants. SSRIs and SNRIs are distinct kinds of antidepressants that operate via separate processes. SSRIs typically elevate serotonin levels, a neurotransmitter linked to mood regulation, by obstructing its reuptake in the brain. This process enhances mood and mitigates symptoms of despair and anxiety. SNRIs function by obstructing the reabsorption of both serotonin and norepinephrine, a neurotransmitter that influences mood, energy, and focus [2]. By targeting both neurotransmitters, SNRIs may effectively treat depression, anxiety, and certain pain conditions, offering wider therapeutic advantages than SSRIs. Nevertheless, there is increasing evidence that one of the main reasons for the low effectiveness of treatment is the lack of commitment of patients to follow the recommendations of doctors. This includes late receipt of prescribed prescriptions, premature discontinuation of therapy, taking less or more of the drug than prescribed by the doctor, non-compliance with the regimen, and failure to make recommended lifestyle changes such as diet and physical activity.

Previous studies have confirmed that prescription fulfillment depended on the demographic characteristics of patients. Seifert et al. [3] performed a comprehensive analysis of pharmacological treatment trends for major depressive disorders over a 16-year span. Their research explicitly investigated sex variations in antidepressant prescriptions and found that while prescribing practices sometimes varied between men and women, these differences did not result in substantial discrepancies in adherence or treatment results. Schwalsberger et al. [4] conducted a supplementary investigation of gender-specific treatment paths in individuals with serious depression. Their research highlighted the impact of structural healthcare factors, such as unequal access to psychiatric consultations and disparities in medication tolerability, over biological sex. The authors suggested that sociodemographic and systemic factors, rather than sex-based pharmacodynamics alone, may explain any observed treatment discrepancies.

Age has become a more reliable indicator of adherence behavior. Strawn et al. [5] conducted a mega-analysis of antidepressant efficacy over a broad age spectrum, revealing that older individuals had a decreased likelihood of exhibiting a strong therapeutic response and an increased propensity to discontinue medication. This decline was ascribed to physiological alterations linked to aging, including modified pharmacokinetics and heightened susceptibility to adverse effects. Dibato et al. [6] investigated treatment trajectories in young individuals recently diagnosed with depression, concentrating on a younger demographic. This demographic often failed to initiate or sustain antidepressant therapy, despite receiving prescriptions. The authors proposed that motivational deficiencies, a diminished perceived need for therapy, and apprehensions over stigma were the main factors contributing to discontinuation.

Additional studies by Jaros et al. [7] argued for the creation of age-sensitive treatment regimens, highlighting cognitive decline, polypharmacy, and challenges in accessing healthcare infrastructure as significant obstacles to adherence in the aged population. Their research, rooted in the tenets of personalized medicine, corresponds with the present study's focus on the manifestation of such limitations in actual prescription practices. Borza et al. [8] monitored the trajectories of depression symptoms among nursing home patients over a 36-month duration and found that deteriorating symptoms often correlated with failures in medication adherence. The results indicate that adherence among the elderly is influenced not just by personal motivation or knowledge but is also profoundly rooted in institutional and systemic care contexts.

Unlike the majority of the aforementioned studies that concentrate on a singular age cohort or a binary gender comparison, Zu et al. [9] employed a multidimensional methodology by examining residual depressive symptoms and functional impairments across various age groups and educational backgrounds. Their prospective, multicenter approach facilitated the de-

tection of age – and education-related trends in treatment efficacy. The research, although not explicitly addressing prescription fulfillment, indicated that lingering symptoms were more prevalent among younger and less-educated individuals, suggesting possible deficiencies in the treatment continuum that may affect adherence. McCool et al. [10] examined long-term antidepressant prescription trends in Irish general practice, emphasizing the influence of healthcare system structure, prescribing inertia, and insufficient follow-up in sustaining extended or inadequately managed medication. Their results underscore that adherence is influenced not just by patient characteristics but also by the efficacy of the healthcare system in facilitating continuous patient engagement.

Although these studies together demonstrate that demographic, psychological, and systemic factors affect adherence, they often regard age and gender as discrete variables or concentrate on either short-term clinical responses or prescription patterns instead of adherence behavior. Most current research doesn't focus on whether patients complete their prescriptions as a key behavior, especially among different age groups in regular healthcare settings. The present study was aimed at analyzing prescription fulfillment by patients taking SSRI and SNRI antidepressants, considering their age and gender. The main goal was to identify the factors influencing adherence to treatment and determine key barriers preventing the full implementation of the prescribed therapy.

2. MATERIALS AND METHODS

The study was conducted between January 1, 2023, and August 15, 2024, at the SIMILAR Limited Liability Company (Poland), which provided the necessary diagnostic and analytical capabilities. The main task was to analyze the relationship between the gender and age of patients with diagnoses of F32 and F33 (according to ICD-10) and prescriptions for SSRI and SNRI antidepressants. The study included sampling, analysis of medical data, statistical processing of the results, and interpretation of the data obtained.

The study involved men (84) and women (442) aged 14 to 87 years who were prescribed SSRI or SNRI antidepressants. The study initially considered 4,362 sessions, but after excluding irrelevant data, the final analysis included 526 sessions. The inclusion criteria were the presence of a diagnosis of depressive episode (F32) or recurrent depressive disorder (F33), a prescription for SSRI or SNRI, and the availability of complete data on prescription fulfillment. Limitations to participation in the study were cases when patients changed the drug group during follow-up (for example, switched from SSRI to SNRI or vice versa) or took different SSRIs during different follow-up periods.

Data collection was conducted using the MyDr EDM system (medical software), designed for private practitioners, and by one doctor. The system recorded information about prescriptions written and their subsequent implementation by patients. During the study, all data on patient compliance with prescriptions were divided into three main categories: "Fulfilled" if the patient fully followed the doctor's recommendations, "Partially fulfilled" when only some of the prescribed drugs were purchased, and "Not fulfilled", which meant completely ignoring the prescription. This classification allowed accurately assessing the level of patient adherence to treatment and analyzing the factors that could influence the fulfillment of prescriptions.

A set of statistical methods was used to assess the relationship between gender, age, and prescription fulfillment. Pearson's $\chi 2$ criterion was used to analyze the relationship between the gender, age of patients and their compliance with prescriptions, which to identifying links between categorical variables.

The Mann-Whitney U-test was used to compare prescription fulfillment between men and women, which allowed determining statistically substantial differences in the levels of prescribed treatment depending on gender. The Kruskal-Wallis test was used to assess differences in prescription performance between age groups, providing the possibility of a multigroup comparison of data. The analysis of the linear relationship between the age of patients and their prescriptions was conducted using the Spearman correlation coefficient (p), determining the degree of relationship between continuous variables. In all the tests used, the level of statistical importance was set at $p<0.05$, which meant

that the identified dependencies could be considered statistically substantial at a given level of error probability.

All data were completely depersonalized and used exclusively for scientific purposes in accordance with the principles of medical ethics. The study did not require additional approval from the ethics committee, as it analyzed exclusively anonymized data without interfering with the treatment process.

3. RESULTS

3.1. Gender aspects of adherence to antidepressant therapy and prescription fulfillment

Even though the results showed that gender did not significantly affect how well prescriptions were filled, the study looked into gender because earlier research, like the work by Moderie [11], often points out possible differences in how men and women respond to treatments, including antidepressants. Although gender was not identified as a pivotal element, the research was essential to carefully evaluate the theory of gender differences within a modern setting, especially for antidepressant medications. In general, 61.6% of the examined patients fully implemented the prescribed prescriptions, which indicates a high commitment to treatment. This figure was 60.9% among women and 65.5% among men.

Partial prescription fulfilment was rare and was recorded in only 3.2% of patients. Minor differences by gender were also observed in this category: 3.4% of women purchased only a part of the prescribed drugs, while of men – 2.4%. 35.2% of patients completely refused to fulfil their prescriptions, with 37.5% of such cases among women and 32.1% among men. Table 1 shows the data on the fulfillment of prescriptions by patients of different genders.

Table 1. Statistical data on prescription fulfillment among patients of different genders

The degree of fulfillment of prescriptions	Women (n=442)	Men (n=84)	General group (n=526)
Fulfilled completely	269 (60.9%)	55 (65.5%)	324 (61.6%)
Partially fulfilled	15 (3.4%)	2 (2.4%)	17 (3.2%)
Not fulfilled	158 (35.7%)	27 (32.1%)	185 (35.2%)

Source: compiled by the authors.

The presented data showed that patients generally maintained high adherence to treatment, and gender differences did not substantially affect prescription fulfillment. Despite a slightly higher level of adherence among men, this discrepancy did not reach statistical importance (p=0.695), which indicated the absence of a pronounced relationship between gender and compliance with prescribed therapy. Partial fulfillment of prescriptions was extremely rare since most patients either fully followed the doctor's prescriptions or refused them. Thus, the study confirmed that the patient's gender was not a factor influencing the fulfillment of prescriptions. Regardless of gender, the patients showed similar behavioral patterns in relation to taking antidepressants.

The gender of the patient had no substantial effect on the fulfillment of prescriptions after visits. Data analysis showed that among both women (60.9%) and men (65.5%), the majority of patients completed prescriptions after each visit to the doctor. The proportion of those who completed prescriptions only partially was relatively small, while the number of patients who did not complete prescriptions at all remained at a similar level in both groups. Statistical analysis using criterion $\chi 2$ established no substantial differences (p=0.722), which allowed concluding that the patient's gender was not a decisive factor in adherence to antidepressant therapy.

Additionally, the percentage of completed prescriptions among men and women was analyzed. It was determined that the average percentage of visits after which prescriptions were completed was 79.74% for women and 83.15% for men. Despite some differences between the groups, it did not reach statistical significance (p=0.333). The study confirmed that men and women were equally likely to adhere to the pre-

scribed therapy, and the differences identified were random. Table 2 presents data on the percentage of prescriptions completed based on the gender of patients.

Table 2. Percentage of completed prescriptions depending on the gender of patients

Gender of patients	Number of patients	Average (%)	Standard deviation (%)
Women	442	79.74	30.65
Men	84	83.15	28.74

Source: compiled by the authors.

The data illustrated the level of prescription fulfillment among men and women, demonstrating the average rates of treatment adherence after each visit to the doctor. The patients of both genders included in the study generally demonstrated a similar attitude to the prescribed therapy, which confirmed the absence of substantial differences in treatment adherence depending on this factor.

The standard deviation in the data also provided for estimating individual variations in prescription fulfillment, but statistical analysis did not reveal a substantial influence of gender. This indicated that compliance with medical prescriptions was determined more by individual and socioeconomic factors than by the patient's gender. Thus, the results emphasized that gender differences did not play a substantial role in the level of adherence to antidepressant therapy.

3.2. Barriers and determinants of prescription fulfillment in patients with depression

Data analysis demonstrates that among both women (60.9%) and men (65.5%), the majority of patients completed prescriptions after each doctor's visit. The proportion of those who fulfilled prescriptions only partially was relatively small and amounted to about 30.8%. The number of patients who did not implement the prescribed drugs at all remained at the same level in both groups and did not exceed 7.7%.

The $\chi 2$ criterion was used to assess the differences between men and women. The analysis did not identify a statistically significant relationship between the patient's gender and prescription fulfillment ($p=0.722$). This leads to the conclusion that gender is not a determining factor in adherence to antidepressant treatment.

Regardless of gender, patients showed similar patterns of adherence to treatment, and differences in the percentage of completed prescriptions between men and women did not reach a statistically substantial level. This indicated that adherence to treatment did not depend on the patient's gender but likely on other individual and social factors. The analysis of the effect of patients' age on prescription fulfillment identified substantial differences between the age groups ($p=0.003$). Unlike the gender analysis, where there were no substantial differences, in this case, the statistical importance confirmed that the patient's age could determine adherence to treatment with antidepressants. The largest percentage of patients who did not complete any prescriptions after visits was observed in the age group of 70-87 years (14.1%). This is substantially higher than among patients aged 40-49, where this indicator was minimal (2.5%). Table 3 reports the overall adherence to antidepressant prescriptions over the entire study period for patients in different age groups.

Table 3. Long-term adherence to antidepressant treatment across different age groups

Age group	Fully completed (%)	Partially completed (%)	Not completed (%)	Total number of patients
14-29 years old	42 (56)	5 (6.7)	28 (37.3)	75
30-39 years old	41 (61.2)	2 (3)	24 (35.8)	67
40-49 years old	68 (55.7)	3 (2.5)	51 (41.8)	122
50-59 years old	68 (64.2)	3 (2.8)	35 (33)	106

60-69 years old	62 (67.4)	3 (3.3)	27 (29.3)	92
70-87 years old	43 (67.2)	1 (1.6)	20 (31.3)	64
General	324 (61.6)	17 (3.2)	185 (35.2)	526

Source: compiled by the authors.

Age was identified to be a substantial factor influencing the implementation of the prescribed therapy. The data analysis revealed a statistically important relationship between the age groups of patients and their adherence to prescriptions (p=0.003). There were differences in the level of drug refusal and partial adherence to doctors' prescriptions in different age groups. Patients aged 60 to 87 had elevated adherence rates, with 67.4% in the 60-69 age group and 67.2% in the 70-87 age group. The lowest adherence was seen in younger individuals aged 14-29 (56%) and 40-49 (55.7%). The age-related variance indicates that fundamental psychosocial processes vary over the lifetime and are essential for comprehending treatment actions.

From a developmental and cognitive psychology standpoint, older persons may exhibit enhanced adherence owing to heightened health awareness and a prioritizing of physical well-being, influenced by accumulated health experiences. The Health Belief Model suggests that persons in this age group may recognize a heightened sensitivity to the problems of untreated depression and regard the results as more severe, hence enhancing adherence [12]. Moreover, elderly individuals often exhibit more consistent daily habits, promoting organized drug adherence.

Partial fulfillment of prescriptions was less common than complete rejection, but it also showed differences between age groups. The highest level of partial compliance was observed in patients aged 14-29 (6.7%), which could be due to a lack of time to purchase medications on time or doubts about the need for treatment. Patients aged 70-87 were less likely to partially fulfill prescriptions (1.6%), which could indicate a less flexible approach to treatment in this age group.

Complete refusal to comply with prescriptions was most often recorded in patients aged 40-49 (41.8%), which could be associated with high employment, financial constraints, and underestimation of the importance of long-term treatment. The lowest refusal rate was observed among patients aged 70-87 (31.3%) and 60-69 (29.3%), which probably indicated a deeper understanding of the importance of therapy or a more stable financial situation in these age groups.

Age had an impact on the performance of the prescribed therapy. Regardless of the age group, the majority of patients (over 55%) completed their prescriptions after each visit to the doctor. However, the refusal rate and partial completion varied substantially between different age groups. Thus, the analysis indicated that treatment adherence differed depending on age. In old age, non-fulfillment of prescriptions was probably due to cognitive limitations and difficult access to medical facilities, whereas at a younger age, refusal of therapy was explained by doubts about its necessity or the high workload of the patients.

Partial prescription fulfillment also varied between age groups. The largest proportion of patients who partially performed doctors' prescriptions was observed in the group of 40-49 years (41.8%). On the contrary, the lowest percentage of partial prescriptions was observed in patients aged 70-87 (18.8%). Patients aged 60-69 (67.4%) followed the doctor's prescriptions completely, which made this age group the most committed to therapy. Table 4 shows the frequency of prescription fulfillment following individual doctor visits, categorized by age group. The data reflects the number of prescriptions fully completed, partially completed, or not completed after each visit.

Table 4. Frequency of antidepressant prescription fulfillment after doctor visits by age group

Age group	Not a single prescription completed	Partially completed	All prescriptions completed	Total number of patients
14-29 years old	4	29	42	75
30-39 years old	3	23	41	67
40-49 years old	3	51	68	122
50-59 years old	13	25	68	106
60-69 years old	8	22	62	92
70-87 years old	9	12	43	64

Source: compiled by the authors.

The data showed that age impacted prescription fulfillment, as statistically substantial differences were found between the age groups (p=0.003). Young patients (14-49 years old) were more likely to partially fulfill prescriptions, which could be explained by their busy schedule, irregular medication regimen, or doubts about the need for long-term therapy. Patients in the older age group (70-87 years old) often did not fill prescriptions at all, which could be due to limited access to pharmacies, financial difficulties, forgetfulness, or cognitive impairments.

The greatest adherence to treatment was observed in patients aged 60-69 years, which probably indicated a high awareness of therapy or a better organization of medical care for this age group. Thus, the results of the study confirmed that the patient's age was a substantial factor influencing the implementation of the prescribed therapy, and the fulfillment of prescriptions varied depending on age. The findings indicated that the 70-87 age group exhibited the largest percentage of patients who failed to finish any prescriptions after visits (14.1%), highlighting the twin burden of age-related obstacles. This encompasses restricted mobility, diminished memory and executive function (as anticipated by cognitive aging theory), and decreased access to pharmacies, especially in rural or economically disadvantaged regions. Gerontological theories highlight the impact of functional limitations and social isolation on diminishing effective healthcare utilization, which may elucidate this contradiction: although older adults recognize the significance of treatment, physical and systemic obstacles may impede its execution.

Younger patients had poor adherence, which may be analyzed using health behavior change models. The Theory of Planned Behavior posits that the intention to conform is shaped by attitudes, subjective standards, and perceived behavioral control [13]. Younger persons may see antidepressants as stigmatizing, superfluous, or even detrimental, especially when relief from symptoms is not instantaneous [14]. The elevated rates of partial or non-fulfillment in this cohort (37.3% not satisfied; 6.7% partly) indicate a deficiency in treatment internalization and an underappreciation of depression severity. Moreover, inconsistent schedules, scholastic or professional pressures, and the prevalent perception of invulnerability characteristic of youth and early adulthood may impede regular drug adherence.

The 40-49 age demographic represents a notably complex scenario. This cohort, while being older than the youngest group, had the greatest rates of full non-fulfillment (41.8%) and partial fulfillment after individual visits (41.8%). These results may be elucidated by role strain theory, which asserts that conflicting obligations (employment, childcare, elder care) generate time scarcity and emotional burden, hence diminishing the ability to adhere to therapy regimens. Furthermore, individuals in this age group may subordinate mental health to other perceived responsibilities and experience a decline in motivation owing to chronic stress and burnout [15]. Apprehension about side effects and skepticism toward prolonged pharmacological treatments may result in self-modification or evasion of recommended therapies.

In contrast, the 60-69 age group had the best overall adherence, perhaps indicating a transi-

tional demographic characterized by enhanced health knowledge and fewer logistical obstacles compared to the senior population. This demographic may also gain from more interaction with the healthcare system (e.g., via chronic illness management programs), enhancing confidence in medical counsel and ensuring continuity of treatment. Although statistical analyses, including the Kruskal-Wallis test ($p=0.835$) and Spearman correlation ($\varrho=0.046$, $p=0.294$), did not indicate a significant linear relationship between age and the overall percentage of prescriptions fulfilled, the frequency-based analysis of individual visits distinctly demonstrated considerable behavioral variations among age groups. The nonlinear patterns indicate that age affects not just the completion of prescriptions by patients but also the timing and manner of adherence, highlighting the need for age-sensitive treatment approaches.

These results must be understood within the context of structural and systemic limitations. Economic adversity, insufficient insurance coverage, and inequitable access to mental health care disproportionately impact both the youngest and oldest demographics [16,17]. Younger patients may lack financial autonomy or prioritize non-essential expenditures, while elderly persons may contend with restricted incomes and geographic seclusion. These economic factors interact with age to create unique patterns of nonadherence. Age-related variations in prescription completion result from the interaction of psychological disposition, social role expectations, cognitive ability, and systemic healthcare accessibility [18]. Comprehending these drivers is crucial for formulating tailored treatments that enhance adherence across the lifespan – for instance, using digital reminders for younger patients, streamlined dose regimens for older patients, and integrated care models for middle-aged individuals.

In addition, regional differences in the medical system also had an impact on adherence to therapy. In countries where antidepressants were available through government programs and patients did not have to pay for treatment on their own, the rate of prescription fulfillment was higher. In countries with less developed healthcare systems, financial barriers substantially limit patients' access to treatment. Research identifies several elements affecting adherence, such as age, awareness, and social circumstances. Adolescents and young adults (14-29) exhibit the lowest adherence, perhaps owing to a minimization of depression's severity, indicating a need for more teaching from healthcare professionals. Middle-aged patients (40-49) often exhibit incomplete adherence, presumably owing to time limitations; adaptable regimens and reminder mechanisms are advised for this demographic. Geriatric individuals (70-87) require more assistance owing to cognitive and physical constraints, including specialized dosage methods and familial engagement.

Hormonal fluctuations, particularly in postmenopausal women, may diminish adherence and elevate relapse risk, requiring customized therapy and enhanced supervision [19,20]. Prevalent explanations for declining treatment include apprehension about side effects and insufficient comprehension of antidepressants. Healthcare practitioners have to prioritize patient education and mitigate stigma via awareness initiatives.

Enhancing accessibility via electronic prescriptions, tele-counseling, and improved pharmaceutical logistics, particularly in rural regions, can increase adherence [21,22]. Enhancing pharmaceutical subsidy initiatives for at-risk populations, especially the elderly, helps mitigate financial obstacles. Mobile applications and platforms for medication monitoring, together with the engagement of family physicians and pharmacists, may assist in identifying and addressing adherence challenges [23,24]. The integration of psychotherapy with pharmacotherapy enhances efficacy, while broadening access to counseling services may further decrease rejection rates.

When interpreting the results obtained, some limitations of the study were considered. The sample of patients was limited to one doctor, which could affect the representativeness of the data and create the effect of an individual approach to treatment. The study did not analyze specific reasons for not taking medications, such as financial difficulties, personal preferences, or the availability of drugs in pharmacies. In addition, concomitant illnesses, the duration of a depressive disorder, and previous experience with antidepressants that could affect prescription fulfillment were not regarded.

Thus, the identified barriers to prescription fulfillment required further research. This would allow for a deeper understanding of the factors influencing patient adherence to treatment and the development of more effective strategies to improve the fulfillment of medical prescriptions.

4. DISCUSSION

The results demonstrated that the patient's gender has no substantial effect on prescription fulfillment, while age is a statistically substantial factor. The majority of patients, regardless of gender, adhered to the prescribed therapy. Previous studies have also not revealed substantial differences in treatment adherence between men and women. It is noted that gender differences may manifest themselves at the stage of prescribing drugs but did not substantially affect their actual use by patients [3]. Similar conclusions were drawn by Gougoulaki et al. [25], analyzing the tolerance of SSRIs in men and women, where it was shown that gender did not play a decisive role in adherence to SSRI therapy, and the factors of intolerance or interruption of treatment were rather determined by individual body reactions.

On the other hand, Schwalsberger et al. [4] noted a slight trend towards higher treatment adherence among women, especially in groups of patients taking antidepressants for a long time. However, the difference between men and women also did not reach statistical importance. This confirmed that the patient's gender is not a critical factor in fulfilling prescriptions, and age, financial barriers, or personal attitude to drug treatment may be more substantial determinants. A similar conclusion was drawn by Reinold et al. [26], who, based on an analysis of insurance data, determined that variations in prescribing drugs by gender exist but do not affect the frequency of prescriptions and the duration of medication intake.

Age proved to be a substantial predictor of prescription fulfillment in this study. The highest adherence to treatment was observed among patients aged 60-69 years, which is generally consistent with previous studies, according to which young patients are more likely to stop taking antidepressants or not follow their doctor's recommendations. As stated in the paper of Mikkelsen et al. [27], age differences in treatment adherence could be related to the level of awareness of the need for therapy and individual perception of drug treatment. In addition, the findings of Harkness et al. [28] confirmed that patients with a history of emotional or physical abuse are more likely to interrupt treatment, which is especially true for young age groups. This could explain the low adherence to treatment among patients aged 14-29 years, in whom such factors are more common.

A study by Kindstedt et al. [29] stressed that older patients generally had higher adherence to therapy, but in some cases, they could completely refuse to take medications, which could be due to cognitive impairments or difficulty accessing medical care. This explained the cases of prescription refusal identified in this study in the 70-87-year-old group. Additionally, according to Gałecki et al. [30], low adherence to treatment was associated with resistance to antidepressants and the need for frequent adjustments to therapy, which could also make it difficult to comply with prescriptions, especially among young patients.

Thus, the results confirmed the existence of age-related differences in adherence to antidepressant therapy. At a young age, patients were more likely to stop treatment or take medications irregularly, while older patients either strictly followed their prescriptions or completely refused to take medications.

The obtained results were consistent with the conclusions of Cesta et al. [31], where it was highlighted that elderly patients may have difficulty following medication due to age-related changes and decreased cognitive function. Additionally, according to Robiyanto et al. [32], difficulties in following prescriptions in elderly patients could be related to changes in dosages, the need to adjust the treatment regimen, and interactions with other medications. These factors led to the irregular use of antidepressants or complete withdrawal from therapy.

A study by Wang et al. [33] showed that among elderly patients, adherence to treatment was determined by cognitive changes and age characteristics rather than gender. Additionally, data from Garcia-Marin et al. [34] indicated that the patient's subjective attitude to therapy and

the specific profile of depressive disorder had a greater impact on the discontinuation of antidepressants than gender differences. In turn, the study by Luca et al. [35] emphasized that anhedonia, which is one of the key symptoms of depression, was associated with a worse response to therapy, which also affected prescription fulfillment regardless of the patient's gender.

Thus, the age barriers identified in this study corresponded to the data of previous studies. This indicated the need to further evaluate the factors preventing prescriptions from being fulfilled in elderly patients and develop strategies to increase their adherence to therapy.

The results of the study showed that the differences in prescription fulfillment between men and women were not statistically substantial ($p=0.695$). This indicated that adherence to antidepressant treatment did not depend on gender but was determined by other factors.

Conclusions similar to the current research were confirmed by a number of studies, which noted that the absence of substantial differences in adherence to therapy among men and women could be due to the fact that the decision-making mechanisms for treatment in both genders were alike [36-38]. In modern conditions, patients of either sex had equal access to medical services, received similar recommendations from doctors, and faced the same barriers when purchasing medicines.

Another explanation could be a change in attitudes towards depression and treatment in society. In the past, men were less likely to seek medical help due to the stigmatization of mental disorders, but the situation has changed from the end of the 20th century to the beginning of the 21st century. Men who were prescribed antidepressants generally showed the same degree of commitment to treatment as women, since the very fact of contacting a doctor indicated acceptance of the need for therapy [3].

In addition, patients of both sexes faced the same socio-economic barriers that affected the fulfillment of prescriptions. As noted by Pagan Colon et al. [39], the main reasons for not taking antidepressants were the high cost of drugs, concerns about side effects, and distrust of drug treatment. These factors had the same substantial effect on both men and women, which explained the absence of statistically substantial differences in adherence to therapy. Thus, the same level of prescription fulfillment among men and women was explained by the fact that barriers and motivational factors in antidepressant treatment did not depend on the patient's gender.

In contrast to gender, age proved to be a substantial factor in prescription fulfillment. Young patients (14-29 years old) were more likely to refuse prescriptions, which could be due to a lack of understanding of the need for long-term therapy. According to a study by Sheu et al. [40], factors such as perception of depression and lack of awareness about long-term treatment reduced adherence to therapy in young patients. In addition, this group had an increased level of anxiety about side effects, which also hindered the fulfillment of prescriptions.

The results of this study corroborate prior studies demonstrating that age is a crucial determinant of adherence to antidepressant medication. Older patients (60-69 years) exhibited superior adherence to prescribed antidepressant regimens relative to younger patients, corroborating the findings of Albert et al. [41], who noted that older adults possess a heightened awareness of the significance of sustaining therapy. The increased adherence seen in older age groups may be ascribed to their collected experiences with the healthcare system, as posited by Carratalá-Ros et al. [42]. These findings emphasize the need to customize treatments to the specific requirements of various age demographics.

Kuzin et al. [43] observed that senior patients, despite recognizing the need for therapy, often have difficulties with adherence owing to cognitive and physical constraints. This trend underscores the need to modify treatment protocols to address these limitations, including the simplification of medication schedules and the use of supporting aids such as medication reminder systems or the engagement of family members in overseeing medication adherence. The hesitance of the age group 14-29 to adhere to antidepressant therapy may stem from several causes, such as insufficient motivation, skepticism about the need for medicine, and apprehensions about side effects, as noted by Janas-Kozik et al. [44].

Age-related hormonal changes may affect treatment adherence, especially among postmenopausal women [45]. During this period,

patients often develop mental disorders that require an adapted prescription of antidepressants. In addition, studies show that women with chronic psychiatric diseases after menopause are more vulnerable to relapses, which requires additional monitoring and a comprehensive approach to treatment [46,47].

Apprehension over side effects and insufficient comprehension of antidepressants can result in the rejection of treatment [48,49]. Medical practitioners must provide transparent and dependable information on pharmacological safety and efficacy, while initiatives aimed at diminishing stigma via awareness campaigns may foster faith in therapy [50,51]. Improving access via electronic prescriptions, telehealth counseling, and optimized medication logistics, particularly in rural regions, can reduce prescription rejections. Moreover, elevated expenses, especially for senior patients, impede adherence. Enhancing subsidy initiatives and providing preferred or complimentary drugs for at-risk populations could increase treatment compliance.

The introduction of specialized mobile applications and platforms for monitoring medication intake will allow patients to independently monitor the fulfillment of doctors' prescriptions. An important measure may be the involvement of family doctors and pharmacists in monitoring the fulfillment of prescriptions, which will help to identify and resolve problems with medication in a timely manner. The interaction of drug treatment and psychotherapy increases the effectiveness of therapy. The development of the availability of counseling by psychologists and psychotherapists can help reduce the level of refusal to take antidepressants.

5. CONCLUSIONS

This research revealed critical factors affecting the adherence to prescriptions for selective SSRIs and SNRIs in patients diagnosed with depressive disorders (ICD-10: F32, F33). The examination of 526 outpatient visits established that gender did not have a statistically significant effect on treatment adherence ($p=0.722$). However, age proved to be a significant predictor of prescription performance ($p=0.003$). Both male and female patients had similar percentages of complete, partial, and non-fulfillment of antidepressant prescriptions.

Conversely, age stratification exhibited clear patterns: patients aged 50-69 exhibited the highest rates of complete prescription adherence, whereas younger patients (14-29 years) displayed lower compliance, likely attributable to diminished treatment motivation, a low perception of illness severity, or a lack of treatment continuity. In patients aged 70-87, non-fulfillment was significant and may be ascribed to cognitive impairments, logistical difficulties in obtaining drugs, and financial limits. The findings underscore a multifaceted interaction of age-related and contextual obstacles, such as work burdens, inadequate understanding of long-term treatment advantages, financial constraints, restricted access to pharmacies or primary care, and apprehensions about drug side effects. These results demonstrate the value of tailored adherence tactics across various age demographics. The study recommends several practical strategies to enhance adherence to antidepressant treatment: implementing age-specific patient engagement strategies, promoting educational campaigns on the significance of ongoing pharmacotherapy, facilitating access to medications through electronic prescription systems and subsidy programs, and incorporating digital adherence tools such as medication tracking applications.

The study's limitations are its dependence on data from a single medical practitioner, which thereby limits generalizability. Moreover, essential moderating variables, such as socioeconomic position, mental comorbidities, and psychosocial context, were excluded from the present research. Future research should concentrate on elucidating the subjective and structural determinants of prescription non-fulfillment via mixed-methods approaches, evaluating the influence of comorbid chronic conditions on antidepressant adherence, and performing cross-cultural analyses to discern regional variations in treatment continuity. These guidelines will enhance the formulation of more inclusive and successful methods for promoting medication adherence in depressive disorders.

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