

## Sociodemographic Characteristics of Patients with Schizophrenia: A Comparative Study with Healthy Controls

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### Abstract

**Objective.** This study aimed to assess selected sociodemographic characteristics of patients with schizophrenia and compare them with those of a healthy control group, as well as within the group of patients with schizophrenia. **Patients and Methods.** A retrospective observational study was conducted involving 400 patients with schizophrenia and 200 healthy controls from the Herzegovina-Neretva Canton. The diagnosis of schizophrenia was made according to ICD-10 criteria, and sociodemographic data were obtained through structured interviews. **Results.** Individuals with schizophrenia are more likely to be older, less educated, unemployed, single, and smokers compared to healthy controls. Among patients with schizophrenia, analyses controlling for age showed that gender was significantly associated with both age of onset and duration of illness, with significant gender-by-age interactions. Marital status was significantly related to age at onset and demonstrated a significant interaction with age in relation to illness duration. Education level was associated with age at onset but not with illness duration. No significant differences in illness onset were found across employment groups. **Conclusion.** Sociodemographic characteristics are closely associated with key clinical features of schizophrenia, including age at onset and illness duration. These findings highlight the importance of considering gender, marital status, and educational background when interpreting illness trajectories. The results further underscore the need for early intervention strategies, psychoeducation, and integrated social and healthcare support aimed at improving functional outcomes and quality of life for individuals with schizophrenia and their caregivers.

**Key Words:** Schizophrenia ■ Sociodemographic Factors ■ Quality of Life ■ Urban Health.

### Introduction

Schizophrenia is a highly complex psychiatric disorder that profoundly affects not only individuals with the condition but also society as a whole (1). It is conceptualised as a multifaceted psychiatric syndrome of unclear aetiology, characterised by marked heterogeneity in clinical presentation, symptom profiles, and levels of functional impairment (2, 3). As a severe mental illness resulting from disrupted brain function, schizophrenia leads to impairments in essential mental processes and behaviours, with substantial consequences for social, occupational, and family functioning (1). Although schizophrenia affects approximately 0.3–0.7% of people worldwide, its long duration,

early onset, high disability weight, and associated functional impairment and mortality contribute to a disproportionately large burden of disease measured by Disability-Adjusted Life Years (DALY) and Years Lived with Disability (YLD). In this context, schizophrenia has been identified by the World Health Organization as one of the top global causes of disability, and contributes on the order of >10 million DALYs annually, placing it among the leading causes of disability in global burden assessments (4). Against this global background, epidemiological indicators of schizophrenia show considerable variability across regions and studies, influenced by methodological and contextual factors. Reliable epidemiological data

on the characteristics of schizophrenia in Bosnia and Herzegovina are currently lacking. Existing studies report annual incidence rates ranging from 10 to 70 per 100,000 population (5), while a meta-analysis by McGrath et al. identified a median incidence of 15.2 per 100,000 population per year (6). The disorder most commonly manifests in late adolescence or early adulthood and is often preceded by a prodromal phase lasting months or years, marked by gradual declines in cognitive and social functioning (3). Beyond its epidemiological features, schizophrenia is associated with persistent functional impairments that frequently extend into periods of symptomatic remission. Individuals with schizophrenia often experience difficulties in maintaining social relationships, sustaining employment, and achieving independent living. Functional outcomes are closely linked to the severity of cognitive and negative symptoms present at illness onset (7, 8). In this context, sociodemographic characteristics represent important indicators of social determinants of health, as they reflect the broader social and environmental factors that shape disease course, access to resources, and long-term outcomes. Comparing these characteristics with those of a healthy control group enables the identification of disparities that may contribute to functional limitations, reduced quality of life, and adverse health outcomes in individuals with schizophrenia (8).

The reform of mental health services in Bosnia and Herzegovina has shifted the organisation from traditional institutional care toward a community-based model, in which mental health professionals and community mental health centres play a central role in the prevention, treatment, and promotion of mental health, including care for patients with schizophrenia and their caregivers (9). Bosnia and Herzegovina has established a legal framework for employing people with mental disabilities, based on disability employment practices and supported by entity laws and rehabilitation funds. However, implementation is often hindered despite these legal regulations. Employment includes both institutional models and innovative

non-institutional solutions developed with user associations (10).

Given the limited regional data and the importance of sociodemographic factors for understanding functional outcomes, the present study aimed to investigate selected sociodemographic characteristics in patients with schizophrenia and compare them with those of the healthy general population. A secondary aim was to examine these sociodemographic characteristics among patients with schizophrenia in relation to age, age at disease onset, and illness duration.

## Patients and Methods

### *Study Population*

This retrospective, observational, hospital-based case-control study included a total of 600 participants from the Herzegovina-Neretva Canton, comprising 400 patients with schizophrenia and 200 healthy controls, from January 2015 to May 2025.

Patients with schizophrenia were treated as either outpatients or inpatients at the Psychiatric Clinic of the University Clinical Hospital (UCH) Mostar. Eligible patients were consecutively identified from clinical records, provided that all required data were available. The diagnosis of schizophrenia was established according to ICD-10 criteria and confirmed using the Mini-International Neuropsychiatric Interview (M.I.N.I.) (11). Only patients with a primary diagnosis of schizophrenia and without additional psychiatric comorbidities were included in the study.

The control group consisted of 200 healthy participants randomly selected from an existing hospital research archive. Controls were relatives or visitors of patients hospitalized for various psychiatric conditions, not limited to schizophrenia. All control participants were physically and mentally healthy, had no documented psychiatric or somatic illness for at least one month prior to inclusion, and were screened using the Mini-International Neuropsychiatric Interview (M.I.N.I.). No matching procedures were applied between patients and controls.

## **Methods**

Sociodemographic data, including age, gender, education level, employment status, marital status, and place of residence, were collected from all participants using a structured questionnaire. For patients with schizophrenia, additional clinical variables, including age at disease onset and duration of illness, were recorded. Age at onset was defined as the age at first appearance of symptoms, while duration of illness was defined as the interval between symptom onset and the date of assessment. Although all assessments and questionnaires were administered at the time of hospital contact, the data were retrospectively extracted and analysed for the purposes of this study.

## **Ethics Statement**

The study was conducted in accordance with the Declaration of Helsinki and was approved by the Ethics Committee of the University Clinical Hospital (UHC) Mostar (No: 204/25).

## **Statistical Analysis**

Univariate and multivariate outliers for the dependent variables were examined, resulting in the exclusion of four multivariate and three univariate cases for age at illness onset. Normality was assessed using the Shapiro–Wilk test. Continuous variables were analyzed with t-tests or ANCOVA, and categorical variables with Chi-square or Fisher's exact tests. Means and standard deviations are reported for continuous variables, frequencies and percentages for categorical variables. Significant interactions between covariates and factors were probed using the Johnson–Neyman technique for two-level factors, and simple slope analyses with pairwise comparisons for factors with more than two categories. Statistical significance was set at  $P < 0.05$ . Analyses were conducted in SPSS 20.0 (IBM Corp., Armonk, NY, USA) and jamovi 2.6 (The jamovi project, 2025).

## **Results**

The study included 400 patients with schizophrenia (60.5% male, 39.5% female) and 200 healthy controls (56.5% male, 43.5% female). The mean age of patients with schizophrenia was  $50.5 \pm 13.1$  years, while the mean age of controls was  $44.2 \pm 15.1$  years. Among patients with schizophrenia, most had completed high school 67%, followed by university 12%, elementary school 11.3%, and no elementary school 3.3%. In terms of employment, 8.8% of patients were employed, 49.8% unemployed, 40% retired, and 0.8% students. Regarding marital status, 18.3% were married, 67.3% unmarried, 8% divorced, and 6.5% widowed. Most patients lived in urban areas 57.5%, and 69% were smokers. Patients with schizophrenia were older than those in the control group and exhibited statistically significant differences in education level, employment status, marital status, and smoking habits. No significant differences were observed in terms of place of residence or gender distribution. Regarding education level, the patient group included more individuals with no formal education or only elementary-level education, and fewer with a university degree, compared to the control group. Most patients were unemployed or retired, and the majority were single, divorced, or widowed. Patients were also more frequently smokers than controls (Table 1).

At the group level for participants with schizophrenia, mean age at illness onset was 27 years, while the mean for duration of illness was 21.1 years. The relationship between gender and age at illness onset varied as a function of participants' chronological age (significant gender  $\times$  age interaction,  $P = 0.003$ ; Table 2).

Simple slopes analysis showed that among younger participants, men had an earlier illness onset than women, whereas among older participants, the pattern tended to reverse, with women showing a somewhat earlier onset than men. Overall, gender differences in age at onset diminished with increasing age.

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Table 1. Comparison of Sociodemographic Characteristics between Patients with Schizophrenia and Healthy Controls

Characteristics	Group		Test	P		
	Schizophrenia	Control				
Age	50.5±13.1	44.2±15.1	t=4.974*	<0.001		
Gender N (%)						
Male	242	60.5	113	56.5	χ <sup>2</sup> =0.883 <sup>†</sup>	0.197
Female	158	39.5	87	43.5		
Education level N (%)						
No elementary school	13	3.3	1	0.5	χ <sup>2</sup> =41.302 <sup>‡</sup>	<0.001
Elementary school	45	11.3	13	6.5		
High school	268	67	129	64.5		
University	48	12	57	28.5		
Unknown education level	26	6.5	0	0		
Employment N (%)						
Employed	35	8.8	151	75.5	χ <sup>2</sup> =126.664 <sup>‡</sup>	<0.001
Unemployed	199	49.8	19	9.5		
Student	3	0.8	6	3.0		
Retired	160	40	24	12.0		
Unknown working status	3	0.8	0	0		
Marital status N (%)						
Married	73	18.3	124	62	χ <sup>2</sup> =115.970 <sup>‡</sup>	<0.001
Unmarried	269	67.3	63	31.5		
Divorced	32	8.0	6	3		
Widow/er	26	6.5	7	3.5		
Residence N (%)						
Urban area	230	57.5	132	66.0	χ <sup>2</sup> =7.006 <sup>‡</sup>	0.07
Countryside	162	40.5	68	34.0		
Unknown living area	8	2.0	0	0		
Smoking status N (%)						
Smoker	276	69	101	50.5	χ <sup>2</sup> =36.907 <sup>‡</sup>	<0.001
Nonsmoker	106	26.5	99	49.5		
Unknown smoking habits	18	4.5	0	0		

\*Student t-test; †Fisher exact test; ‡Chi-square test.

Similarly, the association between age and duration of illness varied by gender (significant gender × age interaction,  $P < 0.001$ ). Simple slopes analyses indicated that among younger participants, women had a longer duration of illness than men, while among older participants, a longer illness duration tended to be observed in men.

Age at illness onset differed by marital status (significant main effect of marital status,  $P = 0.026$ ), with unmarried participants showing an earlier

onset compared to married individuals. No other marital status group differences were observed (Table 3).

Although initial analyses suggested differences in illness duration across marital status groups, these differences were no longer significant after controlling for age. However, a modest age × marital status interaction was observed ( $P < 0.045$ ), indicating some variability in the age–duration relationship across marital status categories. Simple

Table 2. Differences among Patients with Schizophrenia, Controlling for Age

Variables	Variance	df	F	P	$\eta^2$
Age of onset	Age (covariate)	1	7.4	0.007	0.025
	Gender	1	12.566	0.000	0.042
	Gender×Age	1	8.829	0.003	0.030
	Error	286	-	-	-
Duration of illness	Age (covariate)	1	171.96	0.000	0.375
	Gender	1	22.192	0.000	0.072
	Gender×Age	1	31.344	0.000	0.099
	Error	290	-	-	-
Age of onset	Age (covariate)	1	0.100	0.752	0.000
	Marital status	3	3.140	0.026	0.032
	Marital status×Age	3	2.447	0.064	0.025
	Error	282	-	-	-
Duration of illness	Age (covariate)	1	40.209	0.000	0.125
	Marital status	3	2.413	0.067	0.025
	Marital status×Age	3	2.725	0.045	0.028
	Error	282	-	-	-
Age of onset	Age (covariate)	1	0.018	0.892	0.000
	Education	4	2.556	0.039	0.038
	Education×Age	4	2.125	0.078	0.032
	Error	261	-	-	-
Duration of illness	Age (covariate)	1	26.013	0.000	0.091
	Education	4	0.982	0.418	0.015
	Education×Age	4	1.355	0.250	0.020
	Error	261	-	-	-
Age of onset	Age (covariate)	1	14.209	0.000	0.048
	Work status	2	0.636	0.530	0.005
	Work status×Age	2	1.256	0.286	0.009
	Error	279	-	-	-
Duration of illness	Age (covariate)	1	88.019	0.000	0.240
	Work status	2	0.645	0.525	0.005
	Work status×Age	2	1.160	0.315	0.008
	Error	279	-	-	-

df =Degrees of freedom; F=F-statistic (ANOVA); P=Significance level;  $\eta^2$  = Eta squared effect size.

slopes analyses did not reveal significant differences between individual groups.

Educational level was associated with age at illness onset (significant main effect of education,  $P=0.039$ ), with participants without completed schooling exhibiting the highest age at onset (Table 3).

This effect was not moderated by age (non-significant education  $\times$  age interaction).

In contrast, duration of illness did not differ across educational levels after controlling for age. Age remained a significant predictor of illness duration, with older participants showing longer illness duration, while neither the main effect of education nor the education  $\times$  age interaction reached statistical significance (Table 2). Age at illness onset did not differ across work status groups after adjusting for age, as neither the main effect of

Table 3. Age of Onset and Illness Duration by Gender and Socioeconomic Characteristics, Controlling for Age

Variables	Categories	Age of onset M (CI)	Duration of illness M (CI)
Gender	Male	26.2 (25.03 – 28.4)	21.6 (20.4 – 22.8)
	Female	29.4 (27.8 – 31.02)	19.4 (17.8 – 21.1)
Marital status	Married	30.7 (28.2 – 33.1)	19.4 (16.8 – 22.1)
	Unmarried	26.6 (25.5 – 27.8)	20.8 (19.5 – 22.0)
	Divorced	28.6 (25.1 – 32.1)	18.01 (14.2 – 21.8)
	Widow/er	27.5 (19.3 – 35.8)	24.7 (15.6 – 33.7)
Education level	No education	43.2 (34.2 – 52.3)	23.1 (13.0 – 33.2)
	Elementary	28.3 (25.1 – 31.4)	19.7 (16.2 – 23.1)
	High school	27.0 (25.9 – 28.1)	19.5 (18.3 – 20.8)
	University	27.3 (23.8 – 30.8)	20.03 (16.2 – 23.9)
	PhD	22.1 (16.5 – 27.7)	25.1 (18.8 – 31.3)
Work status	Employed	28.1 (24.9 – 31.3)	19.7 (16.3 – 23.1)
	Unemployed	28.1 (26.7 – 29.5)	18.6 (17.1 – 20.1)
	Retired	26.6 (24.3 – 28.9)	21.9 (19.4 – 24.3)

M=Mean; CI=Confidence Interval.

work status nor the work status  $\times$  age interaction was significant.

Although initial analyses indicated differences in illness duration by work status, these differences were no longer evident when age was included as a covariate. Age remained the primary factor associated with illness duration, and no significant work status  $\times$  age interaction was observed (Table 2).

## Discussion

The sociodemographic factors investigated in this study provided us with a valuable framework for understanding the broader psychosocial challenges experienced by individuals with schizophrenia (12). In the group of patients with schizophrenia, there were more men than women, which is consistent with previous findings suggesting that men have a slightly higher incidence of schizophrenia than women, although some studies report that the risk of developing schizophrenia is similar between genders (12, 13). Although men and women have similar lifetime prevalence rates, men usually develop the illness 3 to 5 years earlier than women and tend to exhibit more pronounced negative symptoms, poorer social functioning, and a

greater likelihood of co-occurring substance use disorders (14). As reported by Abel et al., the modal age of onset for schizophrenia is 22 years for both men and women; however, the overall distribution of age at onset varies between the sexes (15). Gender differences in the incidence and prevalence of schizophrenia largely depend on the strictness of the diagnostic criteria used. Specifically, when more flexible criteria are applied, these gender differences tend to be less pronounced. In our study, age of onset was significantly higher in women than in men of younger age. The difference in age of onset is consistent with prior reports (14, 15). Compared to males, females with schizophrenia typically have a later age of onset, better premorbid functioning, and a milder course of illness. They also tend to exhibit more affective and atypical clinical features, show fewer structural brain changes, and respond more favourably to social and occupational interventions. In addition to genetic predispositions for the development of schizophrenia, women appear to be more susceptible to environmental factors, such as *in utero* exposure to the influenza virus. Influenza epidemics and pandemics have been associated with a higher incidence of schizophrenia and affective disorders

among individuals exposed during the fetal period, particularly females. The differing disease manifestation in comparison to men has also been attributed to the influence of estrogen (16, 17). In patients with schizophrenia, the level of education has been used both as a measure of premorbid functioning and as a predictor of disease onset. Studies have shown that patients with higher levels of education tend to experience a later onset of illness, exhibit less pronounced psychotic symptomatology, and demonstrate generally better cognitive functioning (12, 18). Paradoxically, in our study, patients with lower levels of education had a statistically significantly higher age of disease onset; we suppose this may be due to a prolonged period of poor premorbid functioning or unrecognized early symptoms of the disease. Patients with schizophrenia were significantly more frequently unemployed compared to healthy controls. In Bosnia and Herzegovina, lower employment rates among patients with schizophrenia are partly influenced by social and financial support, including disability pensions and assistance for individuals with mental disorders. These local factors should be considered when comparing results with studies from other countries; however, our finding is consistent with previous studies demonstrating a notably lower employment rate among patients with schizophrenia compared to the general population (10, 19, 20). It is well established that the employment rate among patients with schizophrenia decreases over the course of the illness, whereas in the healthy population, this rate remains relatively stable over time. However, patients with schizophrenia did not vary in age of illness onset or illness duration regardless of their (un)employment status in our study. According to various studies, the employment rate in patients with schizophrenia varies widely, as different methodologies are used to define and assess employment. Some studies from Europe report employment rates ranging from 10% to 20% among patients with schizophrenia, which is similar to the findings of this study. Factors that negatively influence the employment rate among patients with schizophrenia include stigmatisation, discrimination,

fear, and a lack of adequate professional support. Conversely, employment is associated with positive outcomes in social functioning, symptom severity, quality of life, and self-esteem (21). Patients with schizophrenia commonly exhibit impairments in multiple areas of daily functioning, which often persist even after remission is achieved. These difficulties affect their ability to maintain employment, live independently, and sustain social relationships. Even in symptomatic remission, individuals with schizophrenia may experience difficulties in everyday life (7, 22). Due to impairments in daily functioning, a large proportion of patients with schizophrenia belong to the lower socio-economic class. One possible explanation is that various aspects associated with this mental disorder limit opportunity for social achievement (23). As a result, unemployment and early retirement are highly prevalent among individuals with schizophrenia. It is well established that, compared to other mental illnesses, schizophrenia imposes the greatest burden in terms of social disability (24, 25). Schizophrenia is a disorder that, by definition, results in significant impairments in social and family functioning, which are factors that are crucial for initiating and maintaining marital relationships. In the present study, patients with schizophrenia were statistically significantly more likely to have never been married compared to healthy controls, which is consistent with previous studies reporting a lower prevalence of marriage among individuals with schizophrenia (21, 26). Our results additionally support this, while a significantly later illness onset is evident among married patients with schizophrenia than the unmarried group. This implies that the married patients might have had a milder illness course, which allowed for better social functioning. In the present study, no statistically significant differences were observed between patients with schizophrenia and healthy controls in terms of place of residence. However, a trend was noted, with 57.5% of patients living in urban areas compared to 66% of controls, which may suggest a minor local effect that did not reach significance. This finding suggests that, within our sample,

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urban residence itself cannot be considered a distinguishing factor between patients and controls and should be interpreted with caution. Previous studies have indicated an association between living in urban areas and schizophrenia, although the nature of this relationship remains controversial. It is still unclear whether urban living increases the risk of developing schizophrenia or whether individuals with schizophrenia tend to migrate to urban areas. In the second half of the 20th century, this association was explained as a social drift of patients towards central city zones (27). Other studies have confirmed a link between being born and raised in urban areas and an increased risk of developing schizophrenia (28, 29). Previous research on this issue, despite employing varying methodologies for measuring urban exposure and using different definitions of schizophrenia, supports the conclusion that living in urban environments increases the risk of developing the disorder. According to a meta-analysis by Vassos et al., the risk of developing schizophrenia in the most urbanised areas is 2.37 times higher compared to the most rural areas (30). Similarly, Krabbendam and van Os reported that the risk of schizophrenia increases linearly with the degree of environmental urbanisation (31). Among the factors associated with urban living, several have been suggested as potential contributors to the increased risk of developing schizophrenia. These factors include the use of psychoactive substances such as cannabis, prenatal and perinatal health factors, poverty, levels of social stress, migration, environmental pollution, various infectious diseases, and vitamin D deficiency (32). Therefore, while existing literature strongly supports urbanicity as a population-level risk factor for schizophrenia, our findings do not allow for a direct confirmation of this association at the individual level. Differences in our study design, definitions of urban exposure, sample size, and local sociodemographic characteristics may partly explain this discrepancy. Frequent tobacco use is a well-documented and widely confirmed phenomenon among patients with psychosis, including those with schizophrenia. A 2019 study investigated the self-medication

hypothesis and the role of smoking in alleviating distressing symptoms among individuals with psychosis. The results showed that 67% of patients with psychosis were smokers, compared to 25% of healthy controls (33). Wu et al. reported a notably high smoking prevalence (72%) among patients with schizophrenia experiencing acute and severe psychotic symptoms, which was higher than in individuals with other acute psychiatric conditions. In their study, smoking was associated with being male, younger age, lower educational attainment, shorter illness duration, comorbid substance use, and a shorter hospital stay. However, no significant association was found between smoking and illness severity, medication, psychiatric symptoms, or cognitive function (34). Patients with schizophrenia have a reduced life expectancy and an increased mortality rate, often accompanied by a higher prevalence of physical comorbidities, particularly cardiovascular diseases. Among the various contributing factors, smoking plays a significant role, negatively impacting physical health and increasing personal expenditures on tobacco products and medications (35). In this study, patients with schizophrenia were older than healthy controls, which may be a local phenomenon and could also reflect sample bias. Considering the age of disease onset, there were few younger participants below this threshold in the patient group compared to the healthy population, which could have influenced the result. That finding is not consistent with larger studies. Although they may be younger in chronological age, their biological age is higher than that of the general population. As a result, they experience more comorbidities and poorer health (36). In light of our findings, it is important to note that marital status, education, employment, and the observed associations with age should be interpreted cautiously, as they do not imply causal relationships.

It is also important to note that chronological age in the analyzed models may reflect cohort- or period-related effects rather than age-dependent biological mechanisms. Older patients in our sample likely belong to different diagnostic, treatment, and social cohorts, having been exposed

to distinct healthcare systems, societal attitudes toward mental illness, and availability of psychosocial support across different historical periods. Consequently, the observed associations involving age should be interpreted as reflecting generational or contextual influences rather than direct effects of biological ageing. This interpretation is consistent with the retrospective design of the study and with prior research emphasising the role of cohort and period effects in schizophrenia outcomes.

Patients with schizophrenia experience a poorer quality of life compared to the general healthy population. Reduced quality of life has been associated with unemployment, older age, engagement in occupations traditionally defined as female-dominated, financial difficulties, absence of marital partnership, and lower levels of education. Moreover, the quality of life of individuals who care for patients with schizophrenia is also significantly impaired, highlighting the need for various support programmes directed not only at the patients themselves but also at their caregivers (9, 10, 37). A key action for improving both the social status and quality of life of individuals with schizophrenia is education about mental illness, along with the destigmatisation of psychiatric disorders (38).

### ***Limitations of the Study***

Because of the retrospective design of the study, several potentially informative variables were not systematically recorded, including premorbid functioning, success in school, social and romantic relationship achievements, parental and caregivers' status, detailed socioeconomic circumstances, work-related accomplishments, and physical health. The inclusion of such data would have enabled a more nuanced and comprehensive appraisal of the quality of life in individuals living with schizophrenia. Also, long-term follow-up is recommended for such studies. The control group for this study was selected from visitors of patients hospitalized for various psychiatric conditions. Although this approach was intended to approximate characteristics of the general population and resulted in a heterogeneous control sample,

it cannot be considered fully representative (complete mental and physical health is not characteristic of the general population). Potential selection bias related to shared urbanicity, environmental, or socioeconomic factors is therefore acknowledged. We suggest using a larger pool of participants from other hospital departments for studies that choose this type of control group.

### **Conclusion**

This study highlights sociodemographic differences between individuals with schizophrenia and healthy controls. Patients with schizophrenia were generally older, less educated, more frequently unemployed, unmarried, and more likely smokers. After controlling for age, gender is significantly related to both age at onset and the duration of schizophrenia, highlighting the presence of gender-by-age interactions. Marital status was also associated with age at onset, with unmarried participants exhibiting earlier onset compared to married participants. Additionally, educational level was related to age at onset, as participants without completed schooling showed the highest age at illness onset compared to other education groups. It is important to note that these comparisons do not imply causal relationships. These findings underscore the importance of sociodemographic factors in understanding the clinical course of schizophrenia and emphasize the need for targeted psychosocial and educational interventions to improve outcomes and quality of life in this population.

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#### **What Is Already Known on This Topic:**

*Globally, schizophrenia is strongly associated with lower socioeconomic and sociodemographic status (SES), including reduced educational attainment, unemployment, and lower income. Evidence from large population-based studies indicates that both low parental and individual SES increase the risk of developing schizophrenia, while socioeconomic disadvantage among patients is linked to poorer cognitive, functional, and treatment outcomes. Furthermore, area-level SES interacts with individual disadvantage, with socially deprived individuals living in more affluent regions exhibiting particularly elevated risk. Overall, socioeconomic inequalities significantly influence both the onset and the course of schizophrenia worldwide (39-41).*

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**What This Study Adds:**

Although some research on mental health and schizophrenia has been conducted in Bosnia and Herzegovina (42, 43), there remains a notable lack of country-specific studies addressing the socioeconomic and sociodemographic profiles of individuals with schizophrenia, including aspects of risk, outcomes, and functioning. The present study contributes to filling this gap by providing a comprehensive analysis of the sociodemographic characteristics of patients with schizophrenia, based on a relatively large sample from this region. The most interesting finding in this study is the highest age of disease onset in the group of patients with the lowest education level.

**Authors' Contributions:** Conception and design: PR and MP; Acquisition, analysis and interpretation of data: PR, MP, JK and MPT; Drafting the article: JK and ADB; Revising it critically for important intellectual content: MPT and PR; Approved final version of the manuscript: PR and MP.

**Conflict of Interest:** The authors declare that they have no conflict of interest.

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