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Research Article

Prevalence of Subjective Unmet Mental Healthcare Needs, Barriers, and Socioeconomic Inequality among Adult Individuals with Physical, Visual, Hearing, and Speech Disabilities in West of Iran

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People with disabilities are susceptible to mental disorders, so it is very important to check and monitor their access to mental health services. There has been no study in this regard in Iran. This study aimed to measure the prevalence and socioeconomic inequality of subjective unmet needs for mental healthcare services (SUNMH) among individuals with disabilities and the various reasons behind them in the west of Iran. This descriptive-analytical and cross-sectional study was conducted on 613 people with disabilities over 18 years of age in Sanandaj city in 2023. Simple random sampling was used, and a questionnaire was applied to collect the data. The multivariate logistic regression was used to determine significant predictors of SUNMH. The concentration index (C) and concentration curve (CC) were calculated to measure inequality in the prevalence of SUNMH. Data were analyzed using STATA software version 16.0 (Stata Corp, College Station, TX, USA. About 47% of people had experienced SUNMH. Lack of financial ability with 45%, insufficient payment of basic health insurance for mental health services with 27%, and noncoverage of mental health services by basic health insurance with 25% were the three main reasons for SUNMH. According to the logistic regression model, unemployment (OR: 2.70, 95% CI: 1.31–5.53), not having supplementary insurance (OR: 2.03, 95% CI: 1.11–4.74), having another member with a disability in the household (OR: 3.33, 95% CI: 1.34–8.29), and poor economic status increased the odds of experiencing unmet need for mental health services by about 3, 2, 3, and 21 times, respectively (OR: 21.11, 95% CI: 13.72–48.11). The concentration index was −0.496, indicating a greater concentration of SUNMH in people with low socioeconomic status. Access to health services is not suitable among people with disabilities and a significant percentage of them suffer from SUNMH. Policy recommendations are proposed to address the primary obstacle of financial barriers to SUNMH and increase access to the necessary services, which include increasing the allocation of financial resources to specialized mental health services for individuals with disabilities and expanding disability-specific health insurance coverage with government financial support.

1. Introduction

Disability is a global public health issue, and a part of the population of every country suffers from physical, mental, and psychological injuries, temporarily or permanently, for various reasons [1]. According to global statistics, about one billion people of the world's population live with at least some forms of disability, and the number of these people is increasing due to the increase in the prevalence of chronic diseases as well as demographic changes, including the aging

of the population [2–4]. Vulnerable groups, such as people with disabilities, are generally more likely to underuse or experience barriers to accessing healthcare ([5–7]; WHO).

Although people with disabilities are more likely to develop mental disorders than people without disabilities, they are less likely to receive treatment [8–10]. Ensuring adequate access to mental health services is essential to reducing this burden. For people with disabilities, access to mental health care is a serious challenge, and they face many obstacles [8, 11–13]. Financial, organizational, cultural, physical, attitudinal, and communicational nonavailability, lack of training for service providers, and low quality of services are among the barriers to accessing mental health services for people with disabilities [14–18].

According to studies, people with long-term physical disabilities are 2 to 3 times more likely to have mental disorders, including anxiety and depression, than people without disabilities [19]. A systematic review and meta-analysis estimated the prevalence of psychiatric disorders among individuals with disabilities at 33.6% (95% CI: 25.2%–43.1%) [20]. According to a national study in the United States in 2018, about 33% of adults with disabilities (17.4 million people) reported mental disorders [21]. According to this study, adults with disabilities experience mental health problems 5 times more than adults without disabilities [9, 21]. The consequences of an unmet need for mental health services for people with disabilities can be serious and far-reaching. Addressing the unmet mental health needs of people with disabilities is important to improve their quality of life and promote social justice [22–24].

Access to needed health services is a global concern and one of the basic human rights [25]. Also, access to health services is one of the dimensions of justice in health systems [26, 27]. Generating data regarding the status of access to health services and the extent of injustice in order to understand health inequalities and the possibility of evaluating the impact of policies and interventions is an undeniable necessity recommended by the World Health Organization [28]. The literature emphasizes that unmet health needs are a key indicator in assessing the status of access to health services [29]. The gap between the need for health services and the actual services received is considered an unmet need [27]. There are two main approaches to measuring unmet needs for health services: *clinical and subjective* [30]. In the subjective approach, the individual's self-evaluation of the health services he needs and the status of receiving them are used to determine the unmet need [29]. Previous studies have used measures of subjective unmet need (SUN) as an easy way to estimate access to various needed health care services [1, 27, 29, 30]. Unmet needs for health care services can also be categorized based on their various causes such as availability and acceptability of services [1, 27].

In Iran, according to the latest statistics, which are related to 2013, more than 1 million of the country's population have at least one type of disability [31]. However, very few studies have been conducted in Iran on the status of access to health services among people with disabilities, indicating that there is a deep gap between the perceived need for health services and the actual use of services among this population [32, 33]. Also, there is a significant gap in the data and evidence related to the state of access to mental health services and the existing obstacles on the path of converting needs to demand among the population with disabilities. So far, there has been no study on the unmet needs for mental health services among this vulnerable group in Iran. More research is needed to fully understand and solve the problems of access to mental health care for people with disabilities. In this regard, the aim of the present study was to collect evidence about the prevalence of unmet need for health services, its reasons, and to determine the various predictive factors of this unwanted outcome and the state of economic inequality in its distribution in the population of people with disabilities in Sanandaj.

2. Materials and Methods

2.1. Study Design and Participants. This descriptive-analytical and cross-sectional study was conducted on people with physical, visual, hearing, and speech disabilities over 18 years of age in Sanandaj city in 2023. In the first stage, the sample size was determined by using the following formula and taking into account $p = 9.2\%$ (use of mental health services) [34], $d = 0.023$ (accuracy rate), and $\alpha = 0.05$ (type 1 error). Simple random sampling was used to select participants from the list of people with disabilities in Sanandaj city (5934 person). The list of these people, their addresses, and their contact numbers were obtained from the Welfare Organization of Kurdistan Province. Sanandaj city is the capital of Kurdistan province with a population of more than 500 thousand people. Finally, 607 people participated in our study (response rate: 99%).

$$n = \frac{Z^2_{1-(\alpha/2)\times P(1-P)}}{d^2} = 613. \quad (1)$$

2.2. Data Collection and Measurements. Data were collected using a household questionnaire (to collect information on the socioeconomic status of the household), an individual questionnaire (to collect demographic and background characteristics including the variables of gender, age, education, employment status, basic health insurance status, supplementary insurance, type of disability, and the number of members with disabilities in the household), and the mental health survey questionnaire (to collect data related to perceived need for mental health services, the status of using services, and the reasons for not receiving services) which was previously used in the Iranian Healthcare Utilization Survey [27]. Questionnaires were completed through an interview at the door of the individual with a disability.

2.3. Measuring Subjective Unmet Need for Mental Health Services and Its Reasons. In this study, people with disabilities were asked questions about the need for mental health services during the past 3 months.

Have you perceived the need to receive mental health services (including visiting a psychiatrist, psychologist, and counselor) during the past 3 months? People who answered "yes" to this question were included in the study (211 people) and they were asked questions about the state of using mental health services. In this study, people who did not receive services despite perceiving the need for services were considered to have a subjective unmet need for mental health services (SUNMH). In the following, people who, despite perceiving the need for mental health services, had not received such services were asked questions related to the reasons for not receiving (using) services in order to identify obstacles.

2.4. Variable Definition. In this study, SUNMH status as an outcome variable (have/don't have) was classified based on demographic and contextual variables including gender (male or female), age (under 30 years, 30 to 59, or over 60 years), type of disability (physical, visual, hearing or speaking), education (illiterate, under-diploma, diploma, or university), employment status (employed or unemployed), basic insurance status (have/don't have), supplementary insurance status (have/don't have) and economic status (the poorest, poor, middle, rich, and the richest).

2.5. Statistical Analysis. The principal component analysis (PCA) was used to create economic status by using asset data such as having a computer/laptop, dishwasher, washing machine, air conditioner, vacuum cleaner, microwave, color TV, travelling, owning car, and whether the person owned a house or not. This statistical scheme has been widely used in previous studies. The Pearson's chi-square test was also used to analyze the differences between the respondents with unmet and met healthcare needs. A logistic regression analysis with maximum likelihood was used to analyze the determinants of unmet mental health service needs and their major reasons. A 95% confidence interval (CI) was calculated for all estimations. The adjusted logistic regression method was used to investigate the independent relationship of all variables with a P value <0.2 in the univariate analysis. The crude and adjusted odds ratio (OR) with their CI were provided with a significant level of 0.05. The concentration index (C) and concentration curve (CC) were used to examine the socioeconomic-related inequality by wealth index in the prevalence of SUNMH in the study population. To form CC, individuals were sorted according to their socioeconomic status, and then the cumulative percentage of the population was plotted against the cumulative percentage of PUNMH. CC above (below) the line of equality indicates that health variables are concentrated among poor (rich) individuals. C values range from +1 to −1. A positive (negative) value indicates that the health variable is concentrated among rich (poor) individuals, and C equals zero, meaning there is no inequality. Data were analyzed using STATA software version 16.0 (Stata Corp, College Station, TX, USA.

3. Results

In this study, 35% of people (211 out of 607 people) perceived the need for mental health services (SNMH), and their data were analyzed. 46.5% of these people (98 out of 211 people) reported receiving health services for their perceived needs. 100% of people had basic health insurance, and 21% (45 out of 211 people) had supplementary insurance. Profiles of people who reported met and unmet needs for mental health services are presented in Table 1.

The reasons for subjective unmet needs for mental health services are shown in chart 1. Lack of financial ability with 45%, insufficient payment of basic health insurance for mental health services with 27% and noncoverage of health services by basic health insurance with 25% were the three main reasons for unmet needs for mental health services (Figure 1).

The results of the adjusted multiple logistic regression models are shown in Table 2. The variables of employment status, supplementary insurance status, number of individuals with disabilities in the household, age group, and economic status of the household were significantly related to the odds of encountering unmet needs for mental health services (Table 2). Unemployment (OR: 2.70, 95% CI: 1.31–5.53), not having supplementary insurance (OR: 2.03, 95% CI: 1.11–4.74), having another member with a disability in the household (OR: 3.33, 95% CI: 1.34–8.29), and poor economic status increased the odds of experiencing unmet need for mental health services by about 3, 2, 3, and 21 times, respectively (OR: 21.11, 95% CI: 13.72–48.11).

The result of socioeconomic-related inequality for unmet needs for mental healthcare services is shown in Table 3. The value of the concentration index indicates that unmet need for mental healthcare services is significantly concentrated among people with lower economic status ($C = -0.493$, 95% CI: −0.631 to −0.354) (Table 3).

As can be seen in graph 2, the concentration curve for unmet needs for mental healthcare services is placed above the line of equality, which means that it is more prevalent among people with deprived economic status (Figure 2).

The study's sampling framework relied on a list of individuals with disabilities registered with the Welfare Organization of Kurdistan Province. However, it is important to note that this list may not encompass all individuals with disabilities residing in the city of Sanandaj. Hence, it is necessary to interpret the study's findings with caution, taking this limitation into account.

4. Discussion

There is a deep knowledge gap regarding the access of people with disabilities to mental health services in Iran. In this study, we investigated the prevalence of SUNMH, its causes, and distribution of economic inequality among people with disabilities in Sanandaj city, the capital of Kurdistan

Table 1: Characteristics of the individuals with disability reporting subjective met and unmet need for mental healthcare services.

Variable	Subjective met need for mental health services 98 of 211 (46.5%)	Subjective unmet need for mental health services 113 of 211 (53.5%)	*P value
Sex			
Male	32 (39.0)	50 (61.0)	0.085
Female	66 (51.2)	63 (48.8)	
Type of disability			
Physical	60 (44.1)	76 (55.9)	0.242
Visual	20 (58.8)	14 (47.2)	
Hearing	13 (52.0)	12 (48.0)	
Vocal	5 (31.3)	11 (69.7)	
Age			
Under 30	31 (57.4)	23 (42.6)	0.124
30–59	57 (44.2)	72 (55.7)	
60 and above	10 (35.7)	18 (64.3)	
Employment status			
Employed	67 (53.6)	58 (46.4)	0.012
Unemployed	31 (36.1)	55 (63.9)	
Education			
Illiterate	8 (44.4)	10 (55.6)	0.996
Under diploma (primary and secondary)	50 (47.2)	56 (52.8)	
Diploma	24 (46.2)	28 (53.8)	
University	16 (45.7)	19 (54.3)	
Complementary health insurance	59	111	
Yes	29 (64.4)	16 (35.6)	0.006
No	69 (41.6)	97 (58.4)	
Number of people with disabilities in the household			
One	82 (49.1)	85 (50.9)	0.132
Two or more	16 (36.4)	28 (63.6)	
Economic status			
The poorest	8 (17.8)	37 (82.2)	<0.001
Poor	13 (31.0)	29 (69.0)	
Middle	17 (42.5)	23 (57.5)	
Rich	29 (67.4)	14 (32.6)	
The richest	31 (75.6)	10 (24.4)	

*P value: chi-square test on the difference of met and unmet needs of mental health services across different groups.

province in Iran, using data from a cross-sectional study. Importantly and uniquely, our research showed that a significant portion of people with disabilities who perceive the need for mental health services do not use mental health services.

Our study highlights a significant difference between the perceived need for mental health services and the actual use of those services. In general, more than a third of the studied people had perceived the need for mental health services during the last three months, and more than a half of these people had not received any mental health services. This gap has been shown in previous studies as well, such that in a study in the United States, the prevalence of unmet needs for mental health services among people with functional disabilities was reported as 46.3% [35]. A previous study conducted in Iran among adults with disabilities reported a prevalence of subjective unmet needs of 55% and 30% for outpatient and inpatient services, respectively [32]. In another study in Iran that was conducted among children with disabilities, only about 31% of the needed mental health services were sought by these children [34]. In Iran, in the general population, the gap between the need for health services and the actual use of services is deep, but this gap is significantly deeper for people with disabilities and requires urgent, special, and targeted measures [27]. Also, in several other studies, the remarkable burden of mental illnesses among people with disabilities has been reported, and ensuring sufficient access to mental health services to reduce this burden has been deemed essential [36–38]. In general, the unmet need for health services for people with disabilities is high in many countries around the world, so in a study conducted among people with spinal cord injury disabilities in 22 countries, 18% of the unmet need for health services was reported in the last 12 months. The highest percentage was related to Morocco (62.3%) and South Korea (27.5%), and the lowest percentage was related to Spain (6.7%) and Switzerland (7.5%) [39].

As unmet health care needs are considered to be a critical indicator of a country's health care system, it is crucial to identify and eliminate any obstacles that prevent access to health care services. The results of our study revealed that the individual's lack of financial ability and the weakness of the

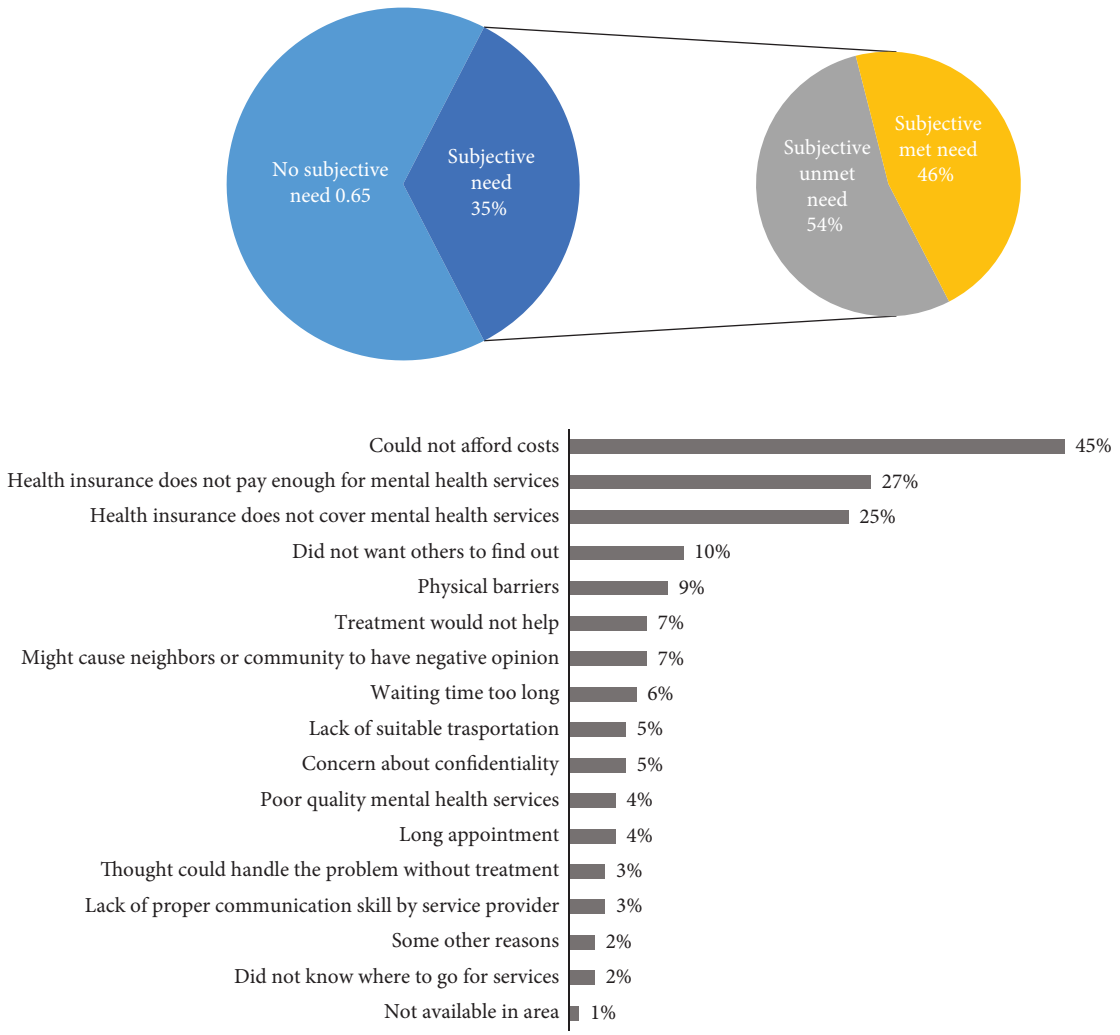

Figure 1: Reasons for subjective unmet need for mental healthcare services (notes: one participant could choose more than one option).

country's insurance system were the most important obstacles to not receiving mental health services. These barriers have been reported in other studies in Iran as the most important barriers to accessing health services among people with disabilities and other vulnerable groups [32–34]. People with disabilities experience various social restrictions and discrimination during their lifetime, affecting their social participation (WHO). For example, the unemployment rate among people with disabilities is very high, which can leave a negative impression on their economic situation. In our study, about 41% of people with disabilities were unemployed, which is much higher than the general population in Iran. In addition, although in our study 100% of people had basic health insurance, lack of adequate coverage of costs and lack of coverage of mental health services were stated as the second and third most common obstacles to not using mental health services, indicating the inefficiency of the country's insurance system.

In Iran, many mental health services are not covered by basic insurance, and you have to pay out-of-pocket in order to use them [33]. Also, in Iran, rehabilitation services are not covered by basic insurance, and according to previous studies, households with a disabled person have a higher chance of facing catastrophic healthcare expenditures and poor health [33, 40]. In addition, our study showed that the availability of mental health services does not guarantee their use, so in this study, only 1% of people with unmet needs stated "Not available in area" as the reason for not receiving health services. In a study conducted among people with spinal cord injury disabilities in 22 countries, the most important causes of unmet needs for health services were the cost of health services (36%), transportation (25%), inadequacy of health service providers (21%), and nonavailability of services (18%) [39].

In our study, based on the multivariate logistic regression model, the variables of being employed, not having supplementary insurance, the presence of more than one member with a disability in the household, an older age group, and lower economic status significantly affect the odds of a person with a disability facing unmet needs for mental health services. In previous studies in Iran, these variables have been reported as risk factors for lack of proper access to health services and unmet needs for mental health services [33, 34]. In Iran, the prevalence of unemployment

Table 2: Univariate and multivariate logistic regression models for subjective unmet need for mental health services.

Variable	Crude		Adjusted	
	OR (95% confidence interval)	*P* value	OR (95% confidence interval)	*P* value
Sex				
Male	1.63 (0.93–2.87)	0.086	1.74 (0.86–3.51)	0.120
Female	1		1	
Type of disability				
Physical	1		1	
Visual	0.55 (0.25–1.18)	0.127	0.38 (0.14–1.29)	0.511
Hearing	0.73 (0.31–1.71)	0.468	0.69 (0.23–2.41)	0.513
Vocal	1.73 (0.57–5.27)	0.330	1.45 (0.37–5.75)	0.589
Age				
Under 30	1		1	
30–59	1.70 (0.89–3.23)	0.104	2.66 (1.14–6.16)	0.022
60 and above	2.42 (0.94–5.22)	0.065	2.81 (1.25–9.30)	0.049
Employment status				
Employed	1		1	
Unemployed	2.05 (1.17–3.60)	0.013	2.70 (1.31–5.53)	0.007
Education				
Illiterate	1		—	
Under diploma (primary and secondary)	0.89 (0.33–2.44)	0.830	—	
Diploma	0.93 (0.32–2.74)	0.900	—	
University	0.95 (0.30–2.97)	0.930	—	
Complementary health insurance				
Yes	1		1	
No	2.54 (1.28–5.05)	0.007	2.03 (1.11–4.74)	0.044
Number of individuals with disabilities in the household				
One	1		1	
Two or more	1.68 (0.85–3.49)	0.134	3.33 (1.34–8.29)	0.009
Economic status				
The poorest	14.33 (5.01–40.76)	<0.001	21.11 (13.72–48.11)	<0.001
Poor	6.91 (2.62–18.19)	<0.001	10.08 (5.20–33.08)	<0.001
Middle	4.19 (1.65–10.85)	0.003	6.29 (3.45–24.84)	<0.001
Rich	1.49 (0.57–3.82)	0.409	2.17 (0.75–6.23)	0.115
The richest	1		1	

Table 3: The concentration index for subjective unmet need for mental healthcare services.

Variable	Concentration index	Standard error	95% confidence interval	*P* value
Unmet need for mental health services	−0.493	0.070	−0.631, −0.354	<0.001

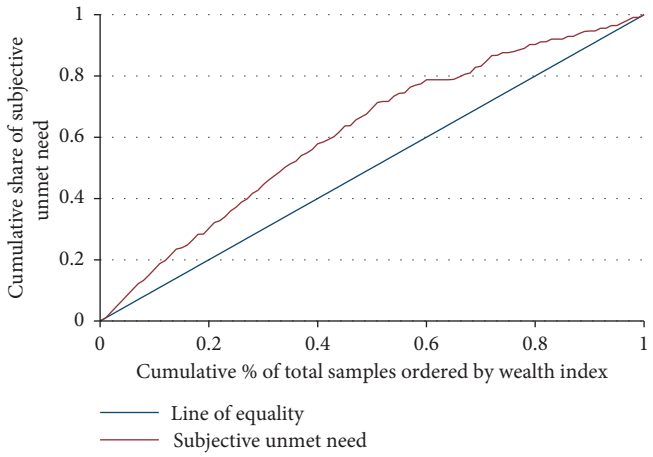

Figure 2: Concentration curve for subjective unmet need for mental healthcare services.

among people with disabilities is very high, which makes them extremely vulnerable in the absence of a suitable insurance welfare system [33]. In Iran, supplementary insurance is often provided by private sector insurance organizations, and it requires the monthly payment of the insurance premium by the individual. Supplementary insurances pay the patient's share of the tariff for health services that are covered by basic health insurance. In addition, they pay for a number of services that are not covered by basic health insurance up to a certain limit, for example, for rehabilitation services and dental services [32]. According to various previous studies in Iran, not having supplementary insurance, the presence of a person with a disability or an elderly person in the household, and having a poor economic status were the risk factors of unmet need for health services and facing catastrophic healthcare expenditures [27, 40]. In this study, households with more than one member with a disability had higher odds of SUNMH,

which could be due to increased household health costs and lack of financial capacity to meet all the health needs of members with disabilities.

The results of this study showed that the prevalence of SUNMH is concentrated among the poorer people in the society, which could be due to the lack of financial resources and the existence of economic barriers in the way of seeking and using health services. Another study in Iran using national data showed that the unmet need for health services is concentrated among the poor in the society [27]. In another study, among people with disabilities, life years with disability (which was considered as a consequence of unmet health needs) had an unequal distribution and was significantly concentrated among the poor population [41]. In the preceding study, the most important barrier of unmet needs was the cost of health care services.

4.1. Policy Recommendation. To enhance the utilization of mental healthcare services for individuals with disabilities, the study recommends the following policies: allocating dedicated funding to disability-specific mental health services, designing specialized health insurance plans, considering subsidies and payment exemptions, adapting urban spaces and healthcare facilities to be disability-friendly, destigmatizing mental health services through awareness campaigns, establishing dedicated lines in health centers for individuals with disabilities in order to reduce waiting time, and improving the quality of mental health services through training programs for healthcare providers.

4.2. Limitation. The sampling framework of this study consisted of a list of individuals with disabilities whose information was registered in the Welfare Organization of Kurdistan Province. However, this list does not cover all individuals with disabilities living in the city of Sanandaj. Therefore, the results of the study should be interpreted considering this limitation.

5. Conclusion

In summary, this study highlights that access to mental health services for people with disabilities in Iran is inadequate, with a large proportion of individuals who perceive the need for mental health services not receiving them due to financial barriers and inefficiencies in the insurance system. Additionally, there is a significant socioeconomic inequality in the distribution of SUNMH, with a greater burden among the poorer population. These findings have important policy implications for improving access to mental health services and reducing unmet health needs and adverse health outcomes. Addressing financial barriers and improving the insurance system can help reduce the gap between perceived need and use of mental health services among people with disabilities. Policymakers in the health sector should prioritize the needs of this vulnerable population and implement targeted measures to improve access to mental health services.

Data Availability

The data that support the findings of this study are available from the corresponding author upon reasonable request.

Additional Points

What Is Known about This Topic? (i) People with disabilities have a higher prevalence of mental health problems compared to the general population. (ii) Despite growing recognition of the importance of mental healthcare for individuals with disabilities, there are still significant unmet mental healthcare needs among this population. (iii) Specifically in Iran, there is a significant lack of knowledge regarding the unmet mental healthcare needs of people with disabilities. *What This Paper Adds?* (i) A significant percentage of the mental healthcare needs of individuals with disabilities in Iran are unmet. (ii) The primary barrier to meeting healthcare needs in Iran is financial obstacles. (iii) There is socioeconomic inequality in the distribution of unmet mental healthcare needs among individuals with disabilities in Iran.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional level and/or national level Medical Research Ethics Committee (IR.MUK.REC.1402.086) and in line with the 1964 Helsinki Declaration and its later amendments. The ethical approval for the study conduct was obtained from the institutional Medical Ethics Review Board of Trustees (MERBoT) in the Kurdistan University of Medical Sciences.

Consent

Informed consent was obtained from all individual participants included in the study.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors' Contributions

BP, YZ, and HMA apprehended the idea. ASH and BP designed and analyzed it. HMA, BP, YZ, and ASH interpreted the results and drafted the manuscript. All the authors took responsibility for the integrity of the work as a whole from inception to published article. All the authors read and approved the final manuscript.

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