

General Psychiatry Patient satisfaction and associated factors among psychiatry outpatients of St Paulo's Hospital, Ethiopia

Kebebew Wogi Goben,¹ Endalamaw Salelew Abegaz ,² Samuel Tolesa Abdi³

To cite: Goben KW, Abegaz ES, Abdi ST. Patient satisfaction and associated factors among psychiatry outpatients of St Paulo's Hospital, Ethiopia. *General Psychiatry* 2020;**33**:e100120. doi:10.1136/gpsych-2019-100120

► Additional material is published online only. To view please visit the journal online (<http://dx.doi.org/10.1136/gpsych-2019-100120>).

Received 01 August 2019
Revised 06 November 2019
Accepted 28 November 2019



© Author(s) (or their employer(s)) 2020. Re-use permitted under CC BY-NC. No commercial re-use. See rights and permissions. Published by BMJ.

¹Psychiatry, Army Force Comprehensive Referral Hospital, Addis Ababa, Ethiopia

²Department of Psychiatry, University of Gondar College of Medicine and Health Science, Gondar, Ethiopia

³Psychiatry, Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia

Correspondence to

Mr Endalamaw Salelew Abegaz; esalelew@gmail.com

ABSTRACT

Background Patient satisfaction with mental healthcare service is recognised as an important integral part of measuring the outcomes and performance of clinical service delivery. It is not well studied in Ethiopia. Therefore, it is essential to improve service in the future.

Aims To assess patient satisfaction and associated factors among psychiatry outpatients at St. Paulo's Hospital Millennium Medical College, Addis Ababa, Ethiopia.

Methods An institutional-based cross-sectional study was conducted with consecutive sampling technique from May to June 2018. Data were collected using a Client Satisfaction Questionnaire (CSQ-8). Both bivariate and multivariate ordinal logistic regression analyses were used. Variables with p value <0.05 at multivariate analysis were considered statistically significant.

Results A total of 589 participants were enrolled with a response rate of 98.2%. In regard to the magnitude of patient satisfaction, 50.3% (95% CI 46.0 to 54.2) were highly satisfied, 31.0% (95% CI 27.2 to 34.8) were satisfied, and 18.7% (95% CI 15.4 to 22.1) were dissatisfied. Male sex (adjusted OR (AOR) 2.30, 95% CI 1.57 to 3.36), inability to read and write (AOR 2.23, 95% CI 1.10 to 4.66), being unemployed (AOR 1.69, 95% CI 1.15 to 2.47), obtaining services for free (AOR 1.57, 95% CI 1.11 to 2.22), and availability of medication (AOR 1.62, 95% CI 1.13 to 2.23) were significantly associated with patient satisfaction.

Conclusions The study showed that further improvements in patient satisfaction are required. Male sex, inability to read and write, being unemployed, obtaining services free of charge, and availability of medication were significantly associated with patient satisfaction. More than half of the participants were dissatisfied with the waiting time to receive services. The provision of services within a reasonable timeframe and meeting patient expectations are helpful for good health outcomes.

INTRODUCTION

Patient satisfaction can be described as the client's response to several aspects of the services they experience and their evaluation of the healthcare facilities as well as the healthcare providers from their own subjective point of view to reduce the patient's problems.^{1–3} Patient satisfaction with mental

healthcare services is recognised as an important integral part of measuring the outcomes and performance of clinical service delivery.⁴ It also provides feedback for the evaluation and determination of the quality of service.^{5,6} Regularly assessing patient satisfaction is advantageous and essential for identifying the problems that need to be resolved in order to improve the quality of health services.⁷ Satisfaction is a difficult concept and is related to several factors such as lifestyle, previous experiences, future expectations, and individual and social values of the client.⁸

Poor patient satisfaction with mental healthcare causes reduced compliance with treatment, which may lead ultimately to poor health outcomes.^{9–12} Providing long-term mental healthcare for people with mental disorders that meets their expectations is one of the major challenges for mental health facilities.¹³ Despite the large burden of mental disorders, less attention has been paid to these conditions in lower- and middle-income countries.¹⁴

Different studies conducted in lower- and middle-income countries among psychiatry outpatients showed that the prevalence of patient satisfaction were: highly satisfied 44.8–72%, satisfied 18.7–81.7%, and dissatisfied 6.8–16.5%.^{15–25} Studies in several African countries showed that satisfaction among psychiatry outpatients in Egypt were rated as very satisfied in 31.2%, satisfied in 50% and dissatisfied in 18.6%²⁶; in Tanzania, 70% of patients were highly satisfied, 25% were satisfied, and 5% were dissatisfied.²⁷ A study conducted in Ethiopia among psychiatry patients showed that 61.2% of the participants were highly satisfied with the psychiatric care services.²⁸

Studies have shown that patient satisfaction is affected by many factors such as age, gender, types of mental illness, waiting time for service, availability of medication,

information given about treatment, marital status, medical cost, education, confidentiality, occupation, residency, hospital infrastructure, cleanliness of the hospital, and respect for patient preferences.^{9 17 22 23 26-31}

Numerous studies on patient satisfaction have been conducted in low- and middle-income countries, but few studies have been conducted in Ethiopia. Understanding the level of patient satisfaction and the associated factors with the psychiatric service will help to improve the quality of care. Thus, the aim of this study was to assess the level of patient satisfaction and factors associated with psychiatric care service at St Paulo's Hospital Millennium Medical College (SPHMMC) psychiatry outpatient department, Addis Ababa, Ethiopia.

METHODS

Study design, period and area

An institutional based cross-sectional study was undertaken at SPHMMC, Addis Ababa, Ethiopia from May to June 2018. SPHMMC provides medical specialty services to an estimated 200 000 people annually. Around 17 330 were psychiatric patients who were referred from all over the country. An average of 1443 psychiatric patients visit the hospital on an outpatient or emergency basis monthly. All follow-up psychiatry outpatients were the source population. All sampled psychiatry outpatients aged 18 and above who had at least three visits comprised the study population, after exclusion of those who were

severely ill, had cognitive impairment, or communication or hearing problems.

Sample size determination and technique

We determined the sample size by using the single population proportion formula, based on the assumption of 61.2% prevalence of patient satisfaction studies conducted in Dessie referral hospital psychiatric care services, north east Ethiopia²⁸; with 95% CI and 4% marginal error, by adding a 5% non-response rate the sample size was determined to be 600. The study period was 1 month and the average monthly number of outpatients was 1443. The consecutive sampling technique was then used to select the study participants up to the required sample size of 600. The sampling procedure is depicted graphically in figure 1.

Data collection procedures and instruments

Data were collected with a pretested structured questionnaire using face to face interview by five trained psychiatry nurses. The questionnaires were developed in English and translated to Amharic then back to English to maintain consistency. Data on patient satisfaction were collected by using a standardised Client Satisfaction Questionnaire (CSQ-8), developed for use in the mental health programme. The tool has eight items and the rank order is the same for all questions, with four options ranging from 1="less favourable" to 4="most favourable".³² The CSQ-8 was validated in Egypt and has internal consistency

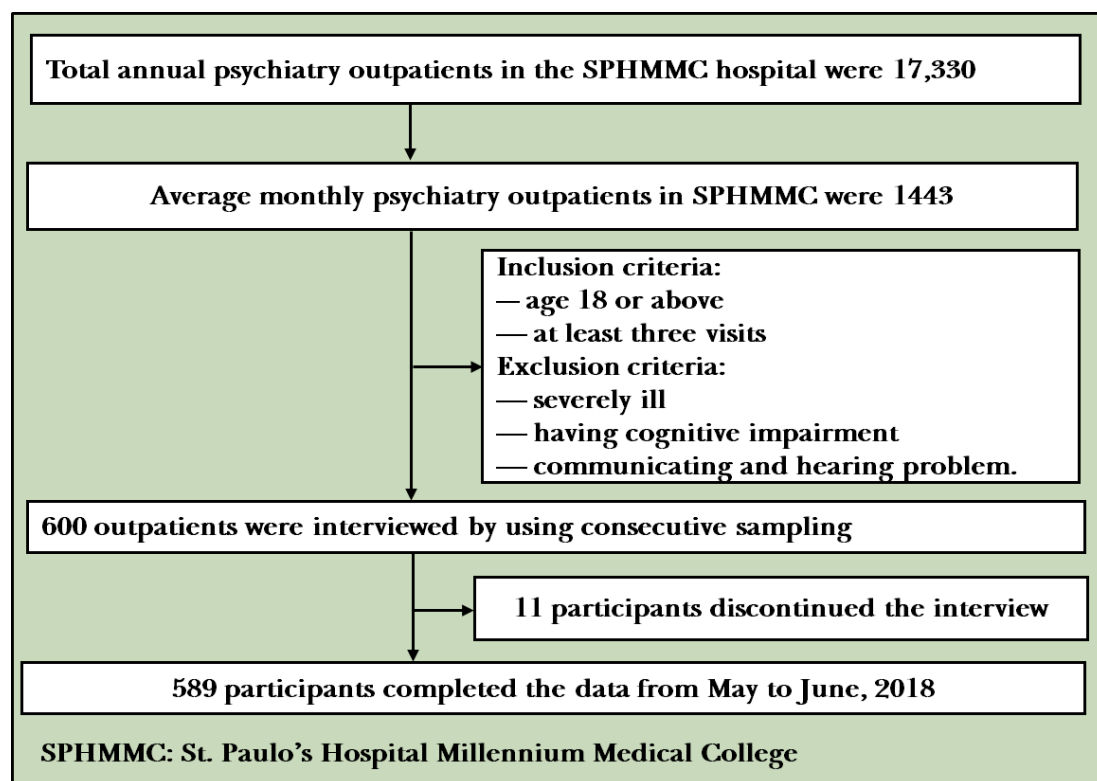


Figure 1 Schematic presentation of the sampling technique of psychiatry outpatients' services of St Paulo's Hospital Millennium Medical College, Addis Ababa, Ethiopia, 2018 (n=589).

(Cronbach's $\alpha=0.88$).²⁶ The client satisfaction questionnaires were easily scored by summing the individual item scores depending on each answer. The results of the questionnaire range from a minimum score of 8 up to a maximum score of 32. A score of 8–20 is regarded as the patient being dissatisfied, 21–26 as satisfied, and 27–32 as highly satisfied.²⁶ Information on the types of mental illness were collected by the reviewing patients' charts. Sociodemographic and other variables were assessed using structured questionnaires developed from different studies in the literature. Internal consistency was demonstrated in this study by Cronbach's alpha ($\alpha=0.892$).

Data processing and analysis

The collected data were edited, coded, and entered into Epi-Data version 3.1 and then exported into Statistical Package for Social Sciences (SPSS) version 20 for analysis. Ordinal logistic regression was used to test the associations between independent and dependent variables. Variables at bivariate analysis $p<0.2$ were candidates for multivariate analysis. The strength of associations was described by using OR and 95% CI. Variables with p value <0.05 at multivariate analysis were considered statistically significant. Descriptive analysis frequency table, mean, SD and graph were used to explore the data. Multicollinearity test was performed to the ordered logit model being fitted, by evaluating the variance inflation factor (VIF). In principal, variables have VIF values no more than 10. The parallel line test was performed to the ordered logit model being fitted for the general model, with $\chi^2=38.44$ and $p=0.513$, which is greater than the level of significance, failing to reject the null hypothesis. An ordinal logistic regression model to fit to the data was chosen.

RESULTS

Sociodemographic characteristics

Of the total of 600 outpatients invited to participate in the study, 589 (98.2%) completed the data; 11 (1.8%) provided incomplete data and were discarded. The mean age of the participants was 35.5 (12.8) years. Most of the participants (413, 70.1%) were between the age 18 and 39 years. The majority of the participants (367, 62.3%) were male, 374 (63.5%) were Orthodox, 233 (39.6%) were Amhara ethnic group, and 327 (55.5%) were single. The mean distance of travel to the hospital was 63.1 (128.0) km (minimum 2 km, maximum 785 km). More than four in five (483, 82%) were residents in urban areas and 486 (82.5%) were living ≤ 50 km from the health facility. Of the participants, 328 (55.7%) were charged for the services they received, 186 (31.6%) were unemployed, and 201 (34.1%) were in secondary school education (table 1).

Clinical characteristics of participants

In regard to the duration of illness, 215 (36.5%) had been ill for <12 months, 201 (34.1%) for 1–5 years, 86 (14.6%) for 6–10 years, and 87 (14.8%) for ≥ 11 years. Diagnoses of the participants included schizophrenia (186, 31.6%),

Table 1 Frequency distribution of sociodemographic characteristics of psychiatry outpatients at SPHMMC, Addis Ababa, Ethiopia, 2018 (n=589)

| Variables | Categories | Frequency (%) | Mean (SD) | Range |
|-----------------------------|--------------------------|-------------------|--------------|-------|
| Sex | Male | 367 (62.3) | | |
| | Female | 222 (37.7) | | |
| Age (years) | 18–29 | 225 (38.2) | 35.5 (12.8) | 52 |
| | 30–39 | 188 (31.2) | | |
| | 40–49 | 87 (14.8) | | |
| | >50 | 89 (15.1) | | |
| Religion | Orthodox | 374 (63.5) | | |
| | Muslim | 113 (19.1) | | |
| | Protestant | 74 (12.6) | | |
| | Catholic | 8 (1.4) | | |
| | Others* | 20 (3.4) | | |
| Ethnicity | Amhara | 233 (39.6) | | |
| | Oromo | 173 (29.4) | | |
| | Gurage | 115 (19.5) | | |
| | Tigray | 36 (6.1) | | |
| | Others† | 32 (5.4) | | |
| Marital status | Single | 327 (55.5) | | |
| | Married | 204 (34.6) | | |
| | Divorced and separated | 36 (6.1) | | |
| | Widowed | 22 (3.7) | | |
| Occupation | Unemployed | 186 (31.6) | | |
| | Employed | 175 (29.7) | | |
| | Private business | 93 (15.8) | | |
| | Students | 75 (12.7) | | |
| | Others‡ | 60 (10.2) | | |
| Educational status | Unable to read and write | 52 (8.8) | | |
| | Primary school | 92 (15.6) | | |
| | Secondary school | 201 (34.1) | | |
| | Diploma | 117 (19.9) | | |
| | Degree and above | 127 (21.6) | | |
| Residence | Urban | 483(82) | | |
| | Rural | 106 ¹⁸ | | |
| Service | Charge free | 261 (44.3) | | |
| | With charge | 328 (55.7) | | |
| Living status | Alone | 85 (14.4) | | |
| | With family | 216 (36.7) | | |
| | With partner | 203 (34.5) | | |
| | With others§ | 85 (14.4) | | |
| Distance of hospital | <50 km | 486 (82.5) | 63.1 (128.0) | 783 |
| | ≥ 50 km | 103 (17.5) | | |

*Includes religions (Jehovah witness, Adventist, waqefata).

†Includes ethnic groups (Walayita, Hadiya, Sidama, Harere).

‡Includes occupations (farmers, merchants, and daily laborers).

§Includes living with non-relatives.

Distance of hospital is how far the client travels to receive the services.

SPHMMC, St Paulo's Hospital Millennium Medical College.

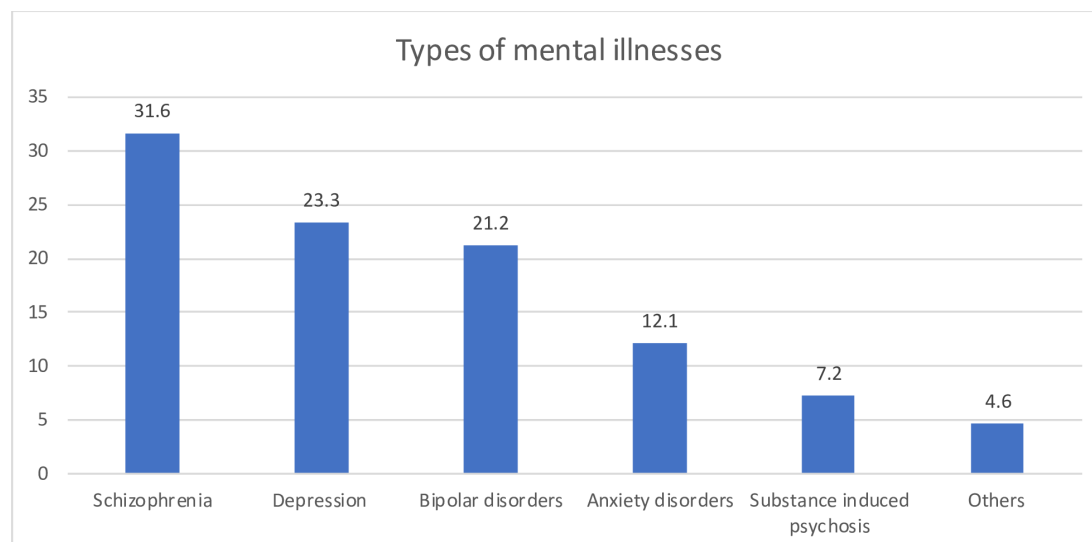


Figure 2 Prevalence of mental illnesses at psychiatry outpatients' services, St Paulo's Hospital Millennium Medical College, Addis Ababa, Ethiopia, 2018 (n=589). Others: post-traumatic stress disorder, delusional disorder and somatization.

depression (137, 23.3%) and bipolar disorders (125, 21.2%) (figure 2).

Patient satisfaction related factors

Regarding patient satisfaction related factors, 528 (89.6%) of the participants were satisfied with the level of confidentiality and discretion, 495 (84%) were highly satisfied with the cleanliness of the hospital in general, 465 (78.9%) were satisfied with the information received about treatment, 457 (77.6%) were satisfied with the relationship with the healthcare staff members, and 397 (67.4%) were satisfied with the opening hours of the treatment centre; however, 339 (57.6%) were dissatisfied with the waiting time for the visit (table 2).

Magnitude of patient satisfaction

Concerning the magnitude of patient satisfaction, 50.3% (95% CI 46.0 to 54.2) were highly satisfied, 31.03% (95% CI 27.2 to 34.8) were satisfied, and 18.7% (95% CI 15.4 to 22.1) were dissatisfied.

Patient satisfaction with service according to the CSQ-8 responses

The two items for which more than half the patients were highly satisfied were: recommending the service to others (346, 58.7%); and coming back to the service again if further help was needed (table 3).

Factors associated with patient satisfaction

In bivariate analysis, factors including male sex, age, religion, ethnicity, living condition, education, occupation, type of mental illness, service, and medication availability were candidates for multivariate analysis with a value of $p < 0.2$. In multivariate analysis, male sex, inability to read and write, being unemployed, free service, and availability of medication were significantly associated with patient satisfaction at $p < 0.05$.

The odds of highly satisfied versus satisfied and dissatisfied for males was 2.3 times more likely as compared with females; likewise the odds of highly satisfied and satisfied versus dissatisfied for males was 2.3 times more likely as compared with females (adjusted OR (AOR) 2.30, 95% CI 1.57 to 3.36). The odds of highly satisfied versus satisfied and dissatisfied for respondents unable to read and write

Table 2 Frequency distribution of patient satisfaction related variables with psychiatric services at SPHMMC, Addis Ababa, Ethiopia, 2018 (n=589)

| Satisfaction related variable | Dissatisfied | Satisfied |
|---|--------------|-------------|
| Are you satisfied with your relationship with healthcare staff members? | 132 (22.4%) | 457 (77.6%) |
| Are you satisfied with staff members' availability? | 153 (26%) | 436 (74%) |
| Are you satisfied with the opening hours of the treatment centre? | 192 (32.6%) | 397 (67.4%) |
| Are you satisfied with the cleanliness of the hospital in general? | 94 (16%) | 495 (84%) |
| Are you satisfied with the information received about your treatment? | 124 (21.1%) | 465 (78.9%) |
| Are you satisfied with the time you wait for a visit? | 339 (57.6%) | 250 (42.4%) |
| Are you satisfied with confidentiality and discretion? | 61 (10.4%) | 528 (89.6%) |

SPHMMC, St Paulo's Hospital Millennium Medical College.

Table 3 Frequency distribution of client satisfaction questionnaire by each question with psychiatric service at outpatients department of SPHMMC, Addis Ababa, Ethiopia, 2018 (n=589)

| CSQ-8: items | Highly Satisfied | Satisfied | Dissatisfied |
|--|------------------|-------------|--------------|
| How would you rate the quality of service you have received? | 148 (25.2%) | 294 (49.9%) | 147 (24.9%) |
| Did you get the kind of service you wanted? | 286 (48.6%) | 189 (32%) | 114 (19.4%) |
| To what extent has the service met your needs? | 167 (28.4%) | 268 (45.5%) | 154 (26.1%) |
| If a friend were in need of similar help, would you recommend the service to him or her? | 346 (58.7%) | 208 (35.3%) | 35 (6%) |
| How satisfied are you with the amount of help you have received? | 251 (42.7%) | 246 (41.7%) | 92 (15.6%) |
| Have the services you received helped you to deal more effectively with your problems? | 158 (26.8%) | 327 (55.5%) | 104 (17.7%) |
| In an overall general sense, how satisfied are you with the service you have received? | 159 (27%) | 303 (51.4%) | 127 (21.6%) |
| If you were to seek help again, would you come back to the service? | 340 (57.7%) | 225 (38.2%) | 24 (4.1%) |

SPHMMC, St Paulo's Hospital Millennium Medical College.

were 2.2 times greater as compared with those with a degree level of education and above; likewise the odds of highly satisfied and satisfied versus dissatisfied for participants unable to read and write were 2.2 times greater as compared with those with a degree level of education and above (AOR 2.23, 95% CI 1.10 to 4.66).

The odds of highly satisfied versus satisfied and dissatisfied for unemployed participants was 1.69 times more likely as compared with employed patients; likewise the odds of highly satisfied and satisfied versus dissatisfied for unemployed participants was 1.69 times more likely as compared with employed subjects (AOR 1.69, 95% CI 1.15 to 2.47).

The odds of highly satisfied versus satisfied and dissatisfied for receiving the service for free were 1.57 times greater as compared with respondents being charged a fee; likewise the odds of highly satisfied and satisfied versus dissatisfied for receiving the service for free were 1.57 times greater as compared with respondents being charged a fee (AOR 1.57, 95% CI 1.11 to 2.22).

The odds of highly satisfied versus satisfied and dissatisfied for availability of medicine were 1.62 times more likely as compared with no availability; likewise the odds of highly satisfied and satisfied versus dissatisfied for availability of medicine were 1.62 times more likely as compared with no availability (AOR 1.62, 95% CI 1.13 to 2.23) (table 4).

DISCUSSION

Main findings

This study examined the level of patient satisfaction in a psychiatry outpatient setting. Of the study subjects, 50.3% were highly satisfied, 31.03% were satisfied, and 18.7% were dissatisfied. The proportion of patients being highly satisfied with the general mental healthcare services was lower in our study than in those in psychiatry outpatient settings elsewhere, such as 61.2% in Ethiopia, 60% in Tanzania, 60% in Austria, and 58% and 72% in

two different studies in Pakistan.^{19 24 25 27 28} The discrepancy might be due to the use of different measurement tools (locally developed tools were used in Austria, and the Patient Satisfaction Questionnaire III in Pakistan), different patient characteristics or study populations, different data collection methods (a self-administered questionnaire was used in Tanzania), different study design (a prospective study was undertaken in one of the Pakistan reports), differences in mental health literacy and mental health services, and sociocultural differences. Conversely, our finding was higher than the 31.2% noted in Egypt among psychiatry outpatients, and 44.8% among anxiety disorder outpatients in Los Angeles, California.^{15 26} The possible reasons for the difference might be due to the type of mental disorder of the patients and the use of different instruments and setting (the California study was done at a primary healthcare location), study design (a prospective study design was used in California), and sociocultural differences. On the other hand, our findings are comparable with the studies done in Mexico and Ireland, 53% and 52%, respectively.^{16 17}

Some 31.0% of the participants were satisfied with the general mental health service based on CSQ-8. This is consistent with reports of 25% in Tanzania, 34.3% in Mexico, 24% in Austria, and 25.5% and 18.7% in Pakistan.^{16 19 24 25 27} In contrast, this finding is lower than that in the studies done in Egypt (50%) and Ireland (38%).^{17 26} The possible reason for the variance in the finding might be the differences in the characteristics of the study population, socio-cultural differences and the data collection methods (a self-administered questionnaire was used in Ireland). On the other hand, the magnitude of satisfaction is higher in our study than that in the study in Austria (24%)¹⁹ and the two studies in Pakistan (25% and 18.5%).^{24 25} The possible reason for the difference in the finding might be the use of different measurement tools (hospitalised patients' satisfaction questionnaire in psychiatry in Austria, and patient satisfaction questionnaire III in Pakistan), the study population,

and sociocultural, mental health literacy and mental health service differences.

In this study, the magnitude of dissatisfaction is consistent with the studies done in Egypt (18.6%), Saudi Arabia (18.3%), China (22.1%), Germany (18.5%), Austria (16%), Romania (22%) and Pakistan (16.5%).^{18-21 23 24 26} Conversely, the level of dissatisfaction in our study was found to be higher than in other studies done in Tanzania (5%), Ireland (10%), Pakistan (9.3%) and Mexico (12.7%).^{16 17 25 27} The possible reason for the variance in the finding might be the characteristics of the study populations, sociocultural differences and the different data collection methods (a self-administered questionnaire was used in Ireland). The level of dissatisfaction found in our study was also lower than in studies done in north east Ethiopia (38.8%), India (43%) and Los Angeles (55.2%).^{15 22 28} This discrepancy might be due to the different measurement tools (Charleston Psychiatric Outpatient Satisfaction Scale, a 15-item scale assessing patient satisfaction, was used in the north east Ethiopia study), and differences in the characteristics of the study population.

Regarding the factors associated with patient satisfaction, male sex was significantly associated with patient

satisfaction in our study. The results are supported by studies done in Ethiopia, Nigeria, Qatar and Ireland.^{9 17 28 31}

In our study the inability to read and write was significantly associated with patient satisfaction. This finding coincides with studies done in India, Saudi Arabia, Sir Lanka and Ireland.^{17 23 29 30} Being unemployed is also significantly associated with patient satisfaction and is supported by studies done in India, Qatar and Sir-Lanka.^{22 30 31} In our study, obtaining services free of charge was significantly associated with patient satisfaction. However, this is not supported by findings from other studies. The possible reason could be that, in our study, individuals who received services for free were poor and could not afford medical costs, so they might be grateful for fulfilment of their needs without charge.

In this study the availability of medicine was statistically associated with patient satisfaction. This finding is supported by a study done in Tanzania.²⁷ The possible reason might be that the insufficient supply of psychiatric drugs in hospital could create dissatisfaction because patients are unable to afford and access the prescribed medications at a private pharmacy.

According to our study, factors such as marital status, distance from the health institution, residency,

Table 4 Bivariate and multivariate ordinal logistic regression analysis of factors associated with patient satisfaction at SPHMMC, Addis Ababa, Ethiopia, 2018 (n=589)

| Explanatory variables | Highly | | | COR (95% CI) | AOR (95% CI) | P values |
|---|-----------|-----------|--------------|---------------------|----------------------------|-----------------|
| | satisfied | Satisfied | Dissatisfied | | | |
| Sex | | | | | | |
| Male | 183 | 112 | 67 | 1.34 (1.01 to 1.72) | 2.30 (1.57 to 3.36) | 0.001*** |
| Female | 113 | 71 | 43 | 1 | 1 | |
| Educational status | | | | | | |
| Unable to read and write | 22 | 14 | 16 | 1.89 (1.03 to 3.13) | 2.23 (1.10 to 4.66) | 0.012* |
| Primary school | 39 | 35 | 18 | 1.50 (0.90 to 2.49) | 1.67 (0.93 to 2.99) | 0.376 |
| Secondary school | 94 | 68 | 39 | 1.33 (0.87 to 2.03) | 1.21 (0.75 to 1.96) | 0.152 |
| Diploma | 72 | 28 | 17 | 0.77 (0.47 to 1.26) | 0.85 (0.49 to 1.48) | 0.087 |
| Degree and above | 69 | 38 | 20 | 1 | 1 | |
| Occupation | | | | | | |
| Employed | 77 | 60 | 38 | 1 | 1 | |
| Unemployed | 96 | 57 | 33 | 1.28 (1.02 to 1.60) | 1.69 (1.15 to 2.47) | 0.033* |
| Private business | 55 | 26 | 12 | 2.47 (0.40 to 1.53) | 2.0 (0.37 to 5.38) | 0.741 |
| Students | 36 | 23 | 16 | 1.57 (0.29 to 2.56) | 1.41 (0.54 to 1.23) | 0.264 |
| Others | 32 | 17 | 11 | 5.00 (0.27 to 2.38) | 1.14 (0.36 to 2.38) | 0.687 |
| Receiving service | | | | | | |
| Charge free | 117 | 89 | 55 | 1.43 (1.05 to 1.95) | 1.57 (1.11 to 2.22) | 0.041* |
| With charge | 179 | 94 | 55 | 1 | 1 | |
| Availability of medicine in the hospital | | | | | | |
| Available | 71 | 72 | 41 | 1.77 (1.27 to 2.46) | 1.62 (1.13 to 2.22) | 0.004** |
| Not available | 225 | 111 | 69 | 1 | 1 | |

Significant at: *p<0.05, **p<0.01, ***p<0.001.
SPHMMC, St Paulo's Hospital Millennium Medical College.

infrastructure, excessive reliance on laboratory and physical examinations, relationship with healthcare staff members, and information received about treatment were not associated with patient satisfaction. The possible reasons might be the use of different tools, data collection methods, study designs and the study subjects.

Limitations

Despite providing invaluable baseline data, this study has some limitations. Firstly, social desirability bias; the data were collected by an interviewer administered method which might lead to either over reporting or under reporting. Secondly, recall bias; participants may be forgetful and there was no cross checking of the information they gave us. In this study, only adult psychiatry patients were included, so it is difficult to generalise our findings to all psychiatry patients because inpatients, children and adolescent psychiatry patients were not included in the study.

Implications

This study has many strengths. The extent of patient satisfaction was assessed by using a reliable standard tool and the satisfaction level was quantified on ordinal scale descriptions. The study showed that further improvement of patient satisfaction is required. Male sex, an inability to read and write, being unemployed, receiving services free of charge and availability of medication were significantly associated with patient satisfaction. More than half of the participants were dissatisfied with the waiting time to receive services. The timely provision of services and meeting patients' expectations are helpful for achieving good health outcomes.

Acknowledgements The authors are indebted to the University of Gondar for funding this research. Our appreciation goes to all supervisors, data collectors and study participants.

Contributors KW: the principal investigator of the study, carried out the study from its conception, analysis, to interpretation of data and drafted the manuscript. ES: participated in reviewing the proposal, tool evaluation, interpretation and critical review of the draft manuscript. ST: participated in reviewing the proposal, tool evaluation, interpretation and critical review of the draft manuscript. All authors have read and approved the final draft of the manuscript.

Funding This research was funded by University of Gondar.

Competing interests None declared.

Patient consent for publication Not required.

Ethics approval Approval was obtained from Review Board and ethical clearance from the joint Ethical Review Committees of University of Gondar and Amanuel mental specialized hospital. We received informed written consent from study participants. Confidentiality was maintained by omitting personal identifiers.

Provenance and peer review Not commissioned; externally peer reviewed.

Data availability statement Data are available upon reasonable request. Data may be obtained from a third party and are not publicly available. All data relevant to the study are included in the article or uploaded as supplementary information.

Open access This is an open access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 4.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited, appropriate credit is given, any changes made indicated, and the use is non-commercial. See: <http://creativecommons.org/licenses/by-nc/4.0/>.

ORCID iD

Endalamaw Salelew Abegaz <http://orcid.org/0000-0001-7280-9165>

REFERENCES

- Özü ZK. Evaluation of satisfaction with nursing care of patients hospitalized in surgical clinics of different hospitals. *Int J Car Sci* 2015;8:19–24.
- Hirukawa M, Ohira Y, Uehara T, et al. Satisfaction of patients and physicians with outpatient consultations at a university hospital. *Intern Med* 2015;54:1499–504.
- Schoenfelder T, Klewer J, Kugler J. Determinants of patient satisfaction: a study among 39 hospitals in an in-patient setting in Germany. *Int J Qual Health Care* 2011;23:503–9.
- Brunero S, Lamont S, Fairbrother G. Using and understanding consumer satisfaction to effect an improvement in mental health service delivery. *J Psychiatr Ment Health Nurs* 2009;16:272–8.
- Kelly PJ, Kyngdon F, Ingram I, et al. The Client Satisfaction Questionnaire-8: psychometric properties in a cross-sectional survey of people attending residential substance abuse treatment. *Drug Alcohol Rev* 2018;37:79–86.
- Thayaparan AJ, Mahdi E. The patient satisfaction questionnaire short form (PSQ-18) as an adaptable, reliable, and validated tool for use in various settings. *Med Educ Online* 2013;18:21747.
- Ruggeri M, Lasalvia A, Bisoffi G, et al. Satisfaction with mental health services among people with schizophrenia in five European sites: results from the EPSILON study. *Schizophr Bull* 2003;29:229–45.
- Mishra PH, Mishra T. Study of patient satisfaction at a super specialty tertiary care hospital. *Indian J Clin Pract* 2014;25:624–34.
- Iliyasu Z, Abubakar IS, Abubakar S, et al. Patients' satisfaction with services obtained from Aminu Kano Teaching Hospital, Northern Nigeria. *Niger J Clin Pract* 2010;13:371–8.
- Gupta A, Semwal V, Singh AK. Patient satisfaction in health care facility in hilly areas of Uttarakhand. *Int J Commun Med Public Health* 2018;5:1024–9.
- Mayston R, Habtamu K, Medhin G, et al. Developing a measure of mental health service satisfaction for use in low income countries: a mixed methods study. *BMC Health Serv Res* 2017;17:183.
- Zendjidian XY, Auquier P, Lançon C, et al. Determinants of patient satisfaction with hospital health care in psychiatry: results based on the SATISPSY-22 questionnaire. *Patient Prefer Adherence* 2014;8:1457.
- Kessler RC, Aguilar-Gaxiola S, Alonso J, et al. The global burden of mental disorders: an update from the WHO World Mental Health (WMH) surveys. *Epidemiol Psychiatr Soc* 2009;18:23–33.
- Mathers C. *The global burden of disease: 2004 update*. 146. World Health Organization, 2008.
- Stein MB, Roy-Byrne PP, Craske MG, et al. Quality of and patient satisfaction with primary health care for anxiety disorders. *J Clin Psychiatry* 2011;72:970–6.
- Nigenda-López G, Salinas-rodríguez A, Gómez-camponovo M, et al. Identification of users according to care services using cluster analysis. *Rev Esc Enferm USP* 2013;47:415–9.
- Lally J, Byrne F, McGuire E, et al. Patient satisfaction with psychiatric outpatient care in a university hospital setting. *Ir J Psychol Med* 2013;30:271–7.
- Antje R, Dipl K, Weigand M, et al. Associations between hospital characteristics and patient satisfaction in Germany. *Health Expectations* 2016;2017:593–600.
- Berghofer G, Lang A, Henkel H, et al. Satisfaction of inpatients and outpatients with staff, environment, and other patients. *Psychiatric Services* 2001;52:104–6. [Internet].
- Version D. The Romanian health care system in transition from the users perspective: chapter 5 an evaluation of recent health care reforms 2003.
- Wong ELY, Leung MCM, Cheung AWL, et al. A population-based survey using PPE-15: relationship of care aspects to patient satisfaction in Hong Kong. *Int J Qual Health Care* 2011;23:390–6.
- Holikatti PC, Kar N, Mishra A, et al. A study on patient satisfaction with psychiatric services. *Indian J Psychiatry* 2012;54:327.
- Mohamed EY, Sami W, Alotaibi A, et al. Patients' Satisfaction with Primary Health Care Centers' Services, Majmaah, Kingdom of Saudi of Saudi Arabia. *Int J Health Sci* 2015;9:159–65.
- Jalil A, Zakar R, Zakar MZ, et al. Patient satisfaction with doctor-patient interactions : a mixed methods study among diabetes mellitus patients in Pakistan. *BMC health services research* 2017:1–13.
- Gani N, Saeed K, Minhas FA, et al. Assessment of patient satisfaction with mental health services in a tertiary care setting. *Journal of Ayub Medical College Abbottabad* 2011;23:43–6.

- 26 Shorub EM, Rasas HH, Kalifa AG. Satisfaction with Ain Shams outpatient mental health services. *Middle East Current Psychiatry* 2015;22:186–92.
- 27 Damghi N, Belayachi J, Armel B, et al. Patient satisfaction in a Moroccan emergency department. *Int Arch Med* 2013;6:20–8.
- 28 Yimer S, Yohannis Z, Getinet W, et al. Satisfaction and associated factors of outpatient psychiatric service consumers in Ethiopia. *Patient Prefer Adherence* 2016;10:1847–52.
- 29 Life AJ, Res S, Radaie F, et al. Determination of the satisfaction of patients and therapists (2nd, 3rd, and 4th-year psychiatric residents of Shahid Beheshti University) with psychotherapy 2015;3:1–12.
- 30 Sanjeewa GG, Senevirathne R. Assessment of patient satisfaction using OPD Service at the out patients department - case study - at Teaching Hospital Karapitiya Sri Lanka. *J Primary Health Care Gen Practice* 2017;1:1–8.
- 31 Bener A, Ghuloum S. Gender difference on patients' satisfaction and expectation towards mental health care. *Niger J Clin Pract* 2013;16:285–7.
- 32 Abd Z, Gawad E, Abo S, et al. Evaluating psychiatric patients awareness of and satisfaction with psychiatric outpatient services. *IOSR Journal of Nursing and Health Science* 2016;5:35–43.



Kebebew Wogi Goben is a mental health professional. He graduated with a Bachelor of Science in Psychiatry Nursing from the Ethiopian Defense University in 2013 and a Masters Degree in Integrated Clinical and Community Mental Health from the University of Gondar and Amanuel Mental Specialized Hospital Joint Program in 2018. He works as a health provider at the Army Force Comprehensive Referral Hospital Psychiatry Clinic since 2014. His research interests are patient satisfaction and factors affecting the effectiveness of psychiatry services.