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# Pathways to care and supernatural beliefs among patients with psychotic disorders in Nepal



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#### **Abstract**

**Background:** Longer pathways to care worsen the course of psychotic illness as well. The study aimed to assess the pathways to care, supernatural beliefs, and impact on the duration of untreated psychosis in patients with schizophrenia. It was a cross-sectional, observational study that involved 133 patients and their caregivers. Supernatural Attitude Questionnaire and World Health Organization Encounter form for Pathways to care were used to evaluate the pathways to care, supernatural beliefs in caregivers, and duration of untreated psychosis. SPSS descriptive and non-parametric tests were used for analysis.

**Results:** Overall, 59.4% of the participants had a non-medical person as the first treatment contact. Duration of untreated psychosis (DUP) for the whole study sample was 6.04 (SD 15.14) months and when it was compared among the first contact with a medical person (mean 4.43; SD 14.39) and non-medical person (mean 7.15; SD 15.63), the later had significantly longer (Mann-Whitney U = 1278; p < 0.001) DUP. More than half of the patients had one or more supernatural beliefs. Having supernatural beliefs and carryout rituals related to these beliefs is associated with a higher number of visits to different professionals before reaching a psychiatrist.

**Conclusions:** Patients with psychosis and their caregivers seek first help from non-medical persons, especially faith healers. This is associated with a longer duration of untreated psychosis and supernatural beliefs in caregivers. Thus, there is a need to improve mental health literacy and have public awareness programs to address the belief systems and clarify the prevailing myths in society.

Keywords: Faith healers, Nepalese mental health, Psychosis, Supernatural beliefs, Untreated psychosis

#### Key messages

Overall, 59.4% of the participants had a non-medical person as the first treatment contact despite the availability of mental health professionals. People with supernatural beliefs have longer pathways to care and thus a longer duration of untreated psychosis. Supernatural beliefs can be navigated by bringing faith healers into the healthcare delivery system.

#### **Background**

Pathways to care in psychiatry are the health services that a patient uses before reaching a mental health professional for proper management of their mental disorder. Significant time is lost in search of the actual treatment provider [1]. An average of three professional consultations are made before the first contact with mental health services that may include faith-healers [2, 3].

Delay in mental health consultation was found to have a longer duration of untreated psychosis (DUP), which is known to be associated with poorer outcome [4-6]. The literature from India focused mainly on common mental disorders [7-12] and few on schizophrenia [13, 14].



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Developing countries like Nepal have lack of enough health care professionals to meet the needs of the general population. Mental health workers are not an exception. There are only 200 psychiatrists, 50 psychiatric nurses and 500 hospital beds for 30 million population [15]. Those who are available find difficult to leave central services fearing difficult livelihood at remote districts. This plays major role in pathways covered by patients. Political instability, lack of budget for mental health, natural calamities and difficult landscape has posed further hindrances. With this background, faith healers become prominent service providers. In addition to that, general practitioners and medical officers are also major carers not only in remote places but also at major cities. Recent increased practice of satellite clinics and focus of government on mental health gap action plan (mhGAP) is likely to uplift the service standards [16, 17]. For time being, efforts from non-governmental organizations are one of the major health service providers in Nepal [18].

A Nepalese pilot study reported the prevalence of psychotic illness as 1.1% [19]. However, Nepalese patients with severe mental illness have fewer options to go for treatment [10]. There are limited numbers of mental health services in the country and there is a need for community health programs in Nepal [20, 21]. As per the previous studies reported in Nepal, faith healers are the first contact for psychiatric patients, and patients report to psychiatrists after a gap of 2.5 months [22]. Similar results were testified by Lamichhane et al. in 2019 who observed that all the patients eventually make late contact with a mental health professional [23]. Health care in Nepal has inequality in mental health access and services. It is accessible to only those who can afford high-rated private hospitals or those who can easily access the hospital in their locality/district. Conventional and spiritual healers play an essential role in the mental health care pathway in developing countries [20]. Mental Health systems in Nepal are not fully systematized to provide ideal mental health services to patients suffering from any mental health problems due to either non-existence or unequal distribution of available resources [20].

There are no previous studies on referral pathways to care, supernatural beliefs among psychotic illness in Nepal. To address this gap, the study aimed to assess the pathways to care, supernatural beliefs in caregivers, and impact on the duration of untreated psychosis in patients with schizophrenia.

# Methods

#### Selection and description of participants

It was a cross-sectional quantitative, observational study done between August 2019 and August 2020. All the participants were from the department of psychiatry at National Medical College Teaching Hospital (NMCTH), Birguni, Nepal. This institute is the nodal and referral center of province number 2 in Nepal. It covers mainly 5 districts of the Terai belt of southern Nepal and the northern Bihar State of India. Convenient sampling was used to approach the study sample. The sample size was determined on the basis of average number of patients with psychotic disorders coming to the respective department over the last 5 years. This was done as there was no previous study from this center to take a reference. A total of 133 participants were included in the study period. Their clinical remission was ensured through PANSS (Positive and Negative Syndrome Scale) rating criteria. Patients with the age of 16 to 60 years, with a diagnosis of F20 to F29 as per the International Classification of Diseases (ICD-10) criteria approached. These patients were already diagnosed by detailed workup but were confirmed by using ICD 10 checklist. The patients with age less than 16 were excluded as the pathways schedule was not validated for younger age group. Besides, our out-patient department is relatively new and mainly deals with adults patients. The patients with pediatric and adolescent age groups are dealt with other department. On the other hand, old age was excluded to minimize the recall bias due to declining memory. Patients with psychotic disorder due to substance use disorder, organic psychosis (delirium and dementia), and intellectual disability were excluded. A caregiver was defined as a family member or a relative who has stayed with the patient for more than a year since the diagnosis and is primarily concerned with the treatment process and brings the patient for follow-ups. A carer on pathways was defined as a health professional providing mental health service to the patient.

# **Technical information**

Supernatural Attitude Questionnaire is a Hindi version of a 28 item scale that assesses the beliefs of caregivers of the patients that takes around 8-10 min to complete the questionnaire. It was developed by Kulhara and colleagues [24]. It was used to assess the various magicoreligious beliefs on black magic (jadu-tona), ghosts (Bhut-pret), spirit intrusion (oparikasar), celestial influences, and wrath of God/Goddess and their causation into mental illness. It also assesses treatment taken from faith healers and rituals performed to ward off evil influences. This scale was considered appropriate because of the culturally prevalent supernatural beliefs seen during clinical practice. Hindi scale was used so as to cover both Nepalese and Indian populations of the region. Hindi is a locally spoken language in day-to-day activities and is the common language of communication between the diverse populations of the Terai belt with

varying dialects like Bhojpuri, Maithili, Marwadi, and Awadhi.

Pathway to care was assessed using a modified WHO Encounter form which was developed by Gater et al [25]. It has been validated and used in another study in Europe [26]. It takes around 8–10 min to complete the form. The scales were administered by either a psychiatrist or a psychiatric resident during interviewing the patients. The Encounter form was used to collect systematic information about the sources of care used by patients before visiting a mental health professional.

Different pathways are traced as depicted in Figs. 1 and 2. The duration of untreated psychosis (DUP) was defined as the period in months between the first appearance of positive psychotic symptoms and the initiation of psychiatric treatment by a mental health professional. For this study, the definition of a non-medical person was operationalized to include faith healers (who without using medicine attempt to heal psychiatric illness either by performing some ritual or giving enchanted food items to eat), spiritual gurus, service providers at religious shrines/temples/mosques/monasteries, or any help sought at home without medicine.

Statistics SPSS version 22.0 was used for data analysis. Descriptive statistics were conducted to illustrate socio-demographic details and a non-parametric test (Mann-Whitney *U* test) was used for comparison between means of DUP and contacts before visiting a psychiatrist.

#### Results

The mean age of the study sample was 29 (SD 10.06) years and the mean duration of education was 5.77 (SD 3.58) years. The majority of the participants were employed (71.4%), married (55.6%), Hindus (83.5%), males (70.7%), and from joint and extended families

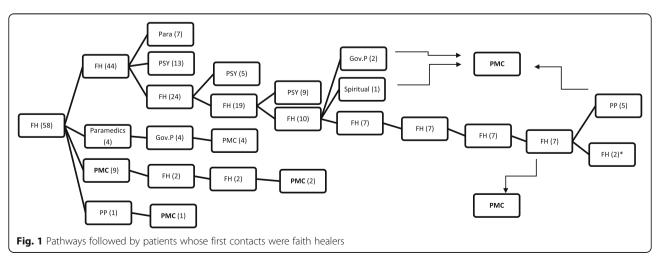
(63.2%). Almost half of them (49.6%) were from middle socioeconomic status. Similarly, 51.2% of the caregivers were male and the mean age was 47 (SD 20.2). The other details are tabulated (Table 1).

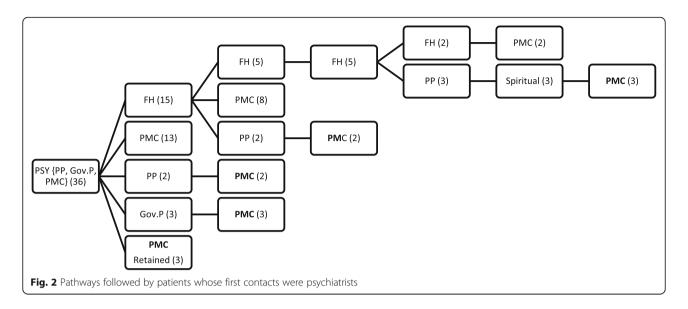
Participants were diagnosed with paranoid schizophrenia (36.1%) and undifferentiated schizophrenia (33.1%) mainly. Olanzapine was the most commonly used antipsychotic drug (61.7%) followed by risperidone (12.8%) and amisulpride (8.3%). Concomitant faith healing was done by 81 (60.9%) patients despite psychiatric treatment.

The mean duration of illness at the time of assessment was 6.49 (SD 6.65) years and the mean age of onset of psychosis was 22.51 (SD 7.79) years. Overall, 59.4% of the participants had a non-medical person as the first treatment contact (Table 2). Most of the patients were accompanied by their parents (68.2%) while others were with spouse (25.1%) and siblings (6.7%).

Out of 58 patients who had faith healer as the first contact, 44 (75.86%) visited another faith healer (Fig. 1). A maximum of 40 visits was made before reaching psychiatric care. Figure 2 shows the pathways followed when the first visit was a psychiatrist either of government setup, private or medical college. Out of 36 patients, only 15 (41.67%) sought faith healers' help. It was also found that few patients went to faith healers leaving psychiatric treatment, only to return to medical college at the end.

DUP for the whole study sample was 6.04 (SD 15.14) months. When the mean DUP of those with the first contact with a medical person (mean 4.43; SD 14.39) and non-medical person (mean 7.15; SD 15.63) were compared, the later was significantly longer (Mann-Whitney  $U=1278;\ p<0.001$ ). The DUP for females (mean 6.89; SD 16.87; median 2.00) was higher than in males (mean 5.69; SD 14.45; median 0.66), but the difference between the two was non-significant (Mann-Whitney  $U=1670;\ p=0.42$ ).





In terms of supernatural beliefs, more than half of the caregivers had one or more supernatural beliefs, about four-fifths (79.7%) of which had at least one of the supernatural beliefs. In terms of the etiological model, more than two-thirds (72.2%) of the participants, attributed mental illness to one or more supernatural causes (Table 3).

When the DUP of those with and without various supernatural beliefs were compared, it was seen that DUP was longer for those caregivers who believed that bad deeds in the previous life could cause mental illness. Similarly, significantly longer DUP was found in patients whose caregivers believed or talked about evil spirits. DUP was longer for those patients also whose locality believed in black magic and its influences (Table 3). When the numbers of contacts before reaching the mental health professionals were compared for those with and without various supernatural beliefs, it was seen that those who believed in

ghosts, spiritual intrusion, the curse of God/Goddess, celestial influences, dissatisfied or evil spirits, bad deed in a previous life as the cause of mental illnesses had a significantly higher number of contacts, compared to those with lack of such beliefs (Table 3). Similarly, any act of faith healing done during current illness, caregivers' beliefs or talking about celestial influences, evil spirits, talking or believing in above things, belief in the local community or patient's visit to any guru or local sect had a significantly higher number of contacts, compared to those with lack of such beliefs (Table 3).

### Discussion

This study assessed the pathways of care, duration of untreated psychosis, and supernatural beliefs in patients with schizophrenia. Additionally, an attempt was made to evaluate the association of these variables.

**Table 1** Socio-demographic profile of the study participants (N = 133)

Parameters	Mean (±SD)/frequency (%) For patients	Mean (frequency %) for caregivers		
Gender (male)	94 (70.7%)	68 (51.2%)		
Age (years)	29.00 (± 10.06)	47 (± 20.2)		
Education (years)	5.77 (± 3.58)	10.4 (± 2.8)		
Employed	95 (71.4%)	122 (91.73%)		
Married	74 (55.6%)	118 (88.72%)		
Hindu religion	111 (83.5%)	111 (83.5%)		
Non-nuclear family type	84 (63.2%)	84 (63.2%)		
Family income (in Nepalese rupees) mean (SD)	23,917 (± 37,359) [median 15,000]	23,917 (± 37,359) [median 15,000]		
Locality (rural)	112 (84.2%)	112 (84.2%)		
Middle socio-economic class (modified Kuppuswamy, 2012)	66 (49.6%)	66 (49.6%)		

Table 2 First contact on the pathways to care

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First contact person	N (%)	
Psychiatrist at private setup	23 (17.3)	Medical person
General practitioner including MBBS	5 (3.8)	54 (40.6%)
Psychiatrist at government hospital	3 (2.3)	
Psychiatrist at medical college	10 (7.5)	
Paramedics (CMA, HA, ANM) <sup>a</sup>	13 (9.8)	
Faith healer	58 (43.6)	Non-medical person
Spiritual guru	6 (4.5)	79 (59.4%)
Others (alternative therapy)	3 (2.3)	
Help at home	8 (6.0)	
Visit to temple/mosque/religious shrine	4 (3.0)	
Total (N)	133 (100)	

<sup>a</sup>CMA certified medical assistant, HA health assistant, ANM auxiliary nurse midwifery

Most of the patients in this study were males. As males are the main earning members, possibly they are more often brought for treatment. Similar trends are seen in previous studies from India [13]. This also possibly explains why the duration of untreated psychosis was shorter in males, when compared to females. Most of the subjects in the current study were married, from middle socioeconomic status, employed, staying in the non-nuclear family and from rural backgrounds. This demographic profile is similar to previous studies from this part of the country [20], unlike single and unemployed males from Indian studies [13, 27]. The possible reasons could be the severity of illness, social acceptability, and cultural differences.

As expected, most of the patients had faith healer as the first contact, which is similar to the previous study from Nepal [20], Asian countries [27, 28], and other lower- and middle-income countries [29]. These findings are unlike Western studies where emergency staff, general physician, or police are first contact [30, 31].

The earlier studies done in Nepal reveal that most of the people with mental disorders who went to the public psychiatric facility had initially visited the nonpsychiatric treatment centers as their first point of contact before visiting the formal public mental health service center [22, 23].

Dhungana and colleagues report that the study population in western Nepal believed that schizophrenia was a non-psychiatric illness, resultantly visited faith healers [20]. Findings also suggest that it is not only the beliefs but lack of services also that force patients to visit faith healers in Nepal [21]. The argument in later study can be valid because there are only 1.11 psychiatrists per million populations in the province where this study was carried out. Stigma and lack of knowledge and awareness are other

possible reasons for visiting faith healers [32, 33]. These findings suggest that there is a need to improve mental literacy in the general public and also increase the number of mental health professionals to cater to the needs of patients with mental disorders.

However, when one compares the findings of the present study with existing data, it is evident that a higher proportion of patients with psychosis from Nepal visit faith healers when compared to those from India. A study from India reported that the first contact was a private or government psychiatrist in more than half of the patients [27]. These differences could be due to the study setting, i.e., the study from India was done in a tertiary care center in a big city, catering to both urban and rural areas. In contrast, the majority of the patients catered at our center belong to the semi-urban or rural areas.

Although, there could be various reasons for these differences, when one compares the findings of the present study with the previous Nepalese study, the current study suggests that there is an improvement in the rate of visiting psychiatrists on first contact (8% versus 27.1% in the present study) possibly because of increase in the number of private psychiatrists and awareness [20].

The present study also shows that when the first contact was with a faith healer, the subsequent visits were more often with non-psychiatrist and the patient visited several faith healers before reaching mental health professional. On contrary, if the first visit was with a psychiatrist, lesser people went to faith healers. This shows that the treatment delay can be prevented if contact with a psychiatrist is ensured in schizophrenia. In the face of fewer psychiatrists and long distances traveled by patients for psychiatric consultation, it is advisable to promote community mental health programs in remote areas of Nepal to improve mental health care for patients with schizophrenia.

This study also shows that a significant proportion of the caregivers of patients with schizophrenia have supernatural beliefs, which possibly influence their helpseeking and delay in the starting of appropriate psychiatric care. The high prevalence of supernatural beliefs is consistent with previous studies from India [13, 24, 27]. These findings further underscore the need for public awareness programs to improve mental literacy. It is difficult to change such deep rooted beliefs and practices. It appears prudent to incorporate faith healers in the healthcare system [34]. Some of the studies from India show that improving the mental literacy of faith healers and providing mental health services close to the religious/faith healing places can also help in improving the care of people with mental illness by facilitating appropriate referrals [35, 36]. Similar, measures are also required for a country like

**Table 3** Supernatural Attitude Questionnaire (SAQ) and relationship of these beliefs with DUP and number of contacts prior to seeing a psychiatrist

Supernatural Attitude Questionnaire	Prevalence of various supernatural beliefs (N = 133)	DUP of patients with the particular belief (no) Mean (SD)	DUP of patients without the particular belief (yes) mean (SD)	Mann- Whitney <i>U</i> test (2-tailed <i>p</i> value)	Number of contacts prior to seeing a psychiatrist in those having the belief	Number of contacts prior to seeing a psychiatrist in those not having the belief	Mann- Whitney <i>U</i> test (2- tailed significance)
1. Do you believe in <i>JaduTona</i> (black magic)?	86 (64.7%)	3.59 (10.41)	10.53 (20.63)	1941 (0.71)	4.14 (6.95)	2.02 (2.33)	1941(0.70)
2. Do you believe in <i>BhutPret</i> (ghosts)?	73 (54.9%)	3.81 (11.38)	8.76 (18.47)	1876 (0.15)	4.48 (7.48)	2.07 (2.14)	1878 (0.15)
3. Do you believe in <i>Oparikasar</i> (spirit intrusion)?	88 (66.2%)	6.62 (17.71)	4.90 (8.10)	1786.5 (0.36)	4.10 (6.91)	2.00 (2.16)	1656.5 (0.117)
Number of patients with belief in one of the above three	106 (79.7%)	6.01 (16.20)	6.16 (10.23)	1392 (0.83)	3.71 (6.35)	2.15 (2.78)	1204.5 (0.197)
4. Do you think that black magic can cause mental illness in a person?	77 (57.9%)	4.16 (11.20)	8.63 (19.11)	2014 (0.52)	4.39 (7.29)	2.02 (2.20)	1815 (0.114)
5. Do you think that ghosts can cause mental illness in a person?	61 (45.9%)	4.37 (12.56)	7.46(16.99)	2164 (0.89)	5.31 (7.93)	1.76 (2.08)	1363 (< 0.001)***
6. Do you think that spirit intrusion can cause mental illness in a person?	77 (57.9%)	7.42 (18.91)	4.15(7.07)	2028 (0.90)	4.65 (7.23)	1.66 (2.04)	1385 (< 0.001)***
7. Do you think that mental illness can be caused by <i>Devi Devtaprakop</i> (curse of God or Goddess)?	76 (57.1%)	2.89 (3.48)	10.25 (22.20)	1943 (0.31)	4.76 (7.23)	1.56 (2.04)	1256 (< 0.001)***
8. Do you think that mental illness can be caused by <i>graha-nachhatra</i> (celestial influences)?	83 (62.4%)	2.65 (3.61)	11.68 (23.32)	1793.5 (0.19)	4.35 (7.08)	1.80 (1.95)	1617 (0.03)*
9. Do you think that mental illness can be caused by effects of dissatisfied or evil spirit?	64 (48.1%)	3.42 (3.89)	8.47 (20.46)	1689.5 (0.02)*	5.20 (7.83)	1.71 (1.84)	1492 (0.001)***
10. Do you think that one's mental health can be affected as retribution of a bad deed in previous life?	82 (61.7%)	6.36 (15.23)	5.54 (15.14)	1460.5 (0.003)**	4.80 (6.99)	1.12 (1.51)	912 (< 0.001)***
Number of patients attributing their mental illness to one of the above	96 (72.2%)	6.53 (17.02)	4.77 (8.57)	1581 (0.33)	4.09 (6.57)	1.57 (2.49)	1080 (< 0.001)***
11. Do you think that the patient's behaviour or abnormal experiences are due to black magic?	19 (14.3%)	2.47 (4.30)	6.64 (16.20)	730.5 (0.23)	1.16 (1.17)	3.76 (6.21)	692.5 (0.011)*
12. Do you think that the patient's behaviour or abnormal experiences are due to ghosts?	7 (5.3%)	5.29 (6.28)	6.09 (15.50)	433 (0.94)	1.43 (0.53)	3.50 (5.98)	349.5 (0.35)
13. Do you think that the patient's behaviour or abnormal experiences are due to spirit intrusion?	31 (23.3%)	11.97(23.76)	4.24 (10.86)	1398.5 (0.33)	3.84 (3.45)	3.25 (6.39)	1129(0.14)
14. Do you think that the patient's behaviour or abnormal experiences are due to wrath of God or Goddess?	20 (15%)	4.00 (4.37)	6.41 (16.31)	969 (0.31)	9.35 (12.52)	2.34 (2.46)	909.5 (0.158)
15. Do you think that the patient's behaviour or abnormal	19 (14.3%)	3.44 (4.15)	6.48 (16.24)	1036.5 (0.76)	2.00 (1.20)	3.62 (6.26)	1063.5 (0.90)

**Table 3** Supernatural Attitude Questionnaire (SAQ) and relationship of these beliefs with DUP and number of contacts prior to seeing a psychiatrist (Continued)

seeing a psychiatrist (Continu Supernatural Attitude Questionnaire	Prevalence of various supernatural beliefs (N = 133)	DUP of patients with the particular belief (no) Mean (SD)	DUP of patients without the particular belief (yes) mean (SD)	Mann- Whitney <i>U</i> test (2-tailed <i>p</i> value)	Number of contacts prior to seeing a psychiatrist in those having the belief	Number of contacts prior to seeing a psychiatrist in those not having the belief	Mann- Whitney <i>U</i> test (2- tailed significance)
experiences are due to evil spirit?							
16. Do you think that by worship/rituals/black magic, the patient's behaviour can be changed for the better?	79 (59.4%)	6.93 (18.61)	4.75 (7.67)	1929 (0.35)	2.18 (1.87)	5.17 (8.61)	2018.5 (0.59)
17. During the present illness of the patient, did you or any other member of family visit or consult as faith healer?	110 (82.7%)	6.08 (15.98)	5.88 (10.54)	980 (0.09)	3.92 (6.26)	0.87 (1.39)	616 (< 0.001)***
18. Was any worship/ritual/ black magic performed during the present illness of the patient with a view to make him better?	117 (88.0%)	6.34 (16.05)	3.89 (4.61)	914 (0.88)	3.42 (5.64)	3.19 (7.31)	762.5 (0.22)
19. Does the patient believe in or talk about black magic?	14 (10.5%)	7.13 (18.92)	5.92 (14.73)	741.5 (0.50)	2.71 (1.77)	3.47 (6.14)	675.5 (0.24)
20. Does the patient believe in or talk about ghosts?	89 (66.9%)	6.87 (15.53)	4.37 (14.35)	1703 (0.22)	2.73 (3.83)	4.73 (8.47)	1956.5 (0.99)
21. Does the patient believe in or talk about spirit intrusion?	22 (16.5%)	2,91 (3.99)	6.66 (16.43)	1106 (0.49)	3.59 (6.35)	3.35 (5.76)	1213.5 (0.96)
22. Does the patient believe in or talk about wrath of God or Goddess?	113 (85%)	5.99 (15.11)	6.37 (15.7)	982.5 (0.35)	2.74 (4.43)	7.05 (10.21)	787.5 (0.03)
23. Does the patient believe in or talk about celestial influences?	30 (22.6%)	2.44 (3.61)	7.09 (16.97)	1130 (0.03)	1.27 (1.86)	4.0 (6.43)	902 (< 0.001)***
24. Does the patient believe in or talk about dissatisfied or evil spirit?	16 (12%)	0.65 (0.83)	6.78 (16.01)	386.5 (< 0.001)***	1.13 (1.75)	3.70 (6.13)	566 (0.01)*
25. Did he/she talk about or believe in these things even before falling ill?	18 (13.5%)	2.25 (3.77)	6.64 (16.15)	693.5 (0.02)	2.56 (6.98)	3.52 (5.66)	647.5 (0.001)**
26. During the present illness, did the patient visit a faith healer or was he/she taken there at his/her request?	16 (12%)	4.26 (6.50)	6.29 (15.97)	908.5 (0.85)	3.38 (7.25)	3.39 (5.65)	831.5 (0.46)
27. Do people in your locality and community generally believe in black magic and such influences?	96 (72.2%)	5.36 (12.60)	7.83 (20.43)	1285 (0.01)*	4.35 (6.60)	0.89 (0.99)	784 (< 0.001)***
28. Does the patient belong to any specific or special guru, spiritual or religious sect?	24 (18%)	5.07 (5.76)	6.26 (16.52)	991 (0.06)	3.75 (3.53)	3.31 (6.24)	968 (0.04)*

DUP duration of untreated psychosis

Nepal, which shares local culture and belief system with India. The gap between the service provider and consumer can also be reduced by an advocacy of mental health Gap Action Program (mhGAP) initiated by the World Health Organization.

The present study has certain limitations, which must be kept in mind while interpreting the results. This study was done at a single center and the study sample was relatively small. The information about pathways to care was obtained based on amnestic recall and not on the verification of treatment records. In future, multicentric studies focusing on these issues are required to improve the understanding of pathways of care, DUP, and supernatural beliefs.

#### **Conclusions**

The present study suggests that a significant proportion of patients seek first help for their psychotic or severe mental illness from non-medical persons, especially faith healers. Seeking first help from faith healers is associated with a longer duration of untreated psychosis. Help-seeking and the DUP are possibly influenced by the prevailing supernatural beliefs held by caregivers of persons with schizophrenia. Hence, there is a need to improve mental health literacy and have public awareness programs to address the belief systems and clarify the prevailing myths in society.

#### Abbreviations

ANM: Auxiliary Nurse Midwifery; CMA: Certified Medical Assistant; DUP: Duration of untreated psychosis; HA: Health assistant; PANSS: Positive and Negative Syndrome Scale

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None

#### Authors' contributions

AKG and SG contributed in conceiving the presented idea and development of the methodology. AKG, SS1, SS2, and ST assisted in data collection, drafted the article, and helped shape the research and analysis. AKG obtained the ethical approval, performed computations, data tabulation, contributed to manuscript writing, editing, and critical revision. AKG, SG, SS3, and others contributed to editing and critical revision. All authors have read and approved the manuscript.

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#### Availability of data and materials

Data is available upon request.

#### **Declarations**

#### Ethics approval and consent to participate

The permission for conducting this study was taken from Institutional Review Committee of NMCTH (National medical college teaching hospital): F-NMC/ 405/075/076. Informed consent (written consent) was obtained from all participants voluntarily. Their treatment was not affected on the basis of participation.

## Consent for publication

None

# Competing interests

The authors declare that they have no competing interests.

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