

Survey of Chinese persons managing depressive symptoms: Help-seeking behaviours and their influencing factors



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ABSTRACT

Objectives: To explore help-seeking behaviours of Chinese persons managing depressive symptoms and factors that influence these behaviours.

Methods: A survey of residents living in communities in Wuhan, China was conducted using stratified random sampling. The Patient Health Questionnaire (PHQ-2), the Actual Help-Seeking Questionnaire (AHSQ) and a socio-demographic questionnaire were completed by participants. Descriptive statistics were analyzed. A multiple linear regression model was used to explore factors associated with help-seeking behaviours.

Results: Of the 1785 respondents, 672 (37.6%) reported that they experienced depressive symptoms during the past year, and of these respondents, 517 (76.9%) indicated that they sought assistance. Among help-seeking sources utilized by participants, informal help was sought most frequently (72.9%), followed by hotline/Internet assistance (14.3%), mental health professionals (MHPs) (7.9%) and general physicians (GPs) (3.7%). The results of multilinear regression analysis showed that participants who were adults (aged 25–64 years), attended junior and high school (7–12 years education), and lived in urban areas were more likely to seek additional assistance for their depressive symptoms.

Conclusion: Mental health promotion and education efforts are needed to improve the public's mental health literacy and to promote appropriate utilization of informal sources of assistance in managing depressive symptoms such as a hotline or the Internet. Further interventions need to be considered to reinforce use of social supports and mental health professionals, especially in rural areas.

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1. Introduction

Depression is a prevalent mental disorder affecting more than 300 million people of all ages worldwide [1], and is the leading cause of disability and a major contributor to the overall global burden of disease [2–5]. Although effective treatment is available for depression [6], fewer than half of those affected receive help [1]. The estimate of the percentage of respondents who seek assistance ranges dramatically: out of 17 surveyed countries, 1.6% of respondents in Nigeria and 17.9% in the US sought assistance with depression [5], whereas 34% of teenagers in Norway with depres-

sion sought help [7]. In China, the rate of mental health service utilization is low, even in the two most developed metropolitan cities (i.e., 2.7% in Beijing and 3.1% in Shanghai) [8]. Results from Liu et al. [9] supported this trend as they found that the rate of mental health service utilization in northwestern China was 2.33%. Despite the differences in help-seeking behaviours in various regions in China and the level of economic development [5], it is evident that the rate of help-seeking behaviours is very low.

In recent years, an understanding of help-seeking behaviours for depressive symptoms has received increasing attention [10]. Help-seeking behaviours are those used in response to a problem or distressing experience when people actively pursue assistance from various resources, such as communicating with other people [11]. Examples of resources that are used in the treatment and management of depressive symptoms include: (1) mental health professionals (MHPs; e.g., psychologists, psychiatrists), (2) general

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physicians (GPs), and (3) informal sources (e.g. family, friends). A fourth resource, which has developed recently, is the Internet [3].

In seeking assistance, people with depressive symptoms will utilize a variety of resources, for example, the use of informal resources ranges from 60% to 70% across various studies [12–14]. In contrast, a smaller proportion of people seek help from MHPs, with some studies estimating between 25% and 40% of people relying on MHPs [5,9,12,14], whereas others estimates are as low as 2.33% [5,9,12,14]. Evidence from Burgess et al. [15] indicated that 49.7% of participants sought help from GPs. The Internet was used by approximately the same percentage of respondents to manage depressive symptoms (55.2%) [16].

In China, the resources utilized by people with depressive symptoms were consistent with findings from studies in other countries. A study in four provinces showed that only 8% of participants had sought professional help in 2001–2005 [17]. This finding was consistent with other research in China that people were less likely to seek help from MHPs [9,10,18]. In recent years, both hotlines and the Internet were frequently used methods for seeking help with depression [19,20]. In fact, in 2014, there were 632 million Internet users in China, and this rate is expected to increase each year [20]. Therefore, the Internet as a source for depression management has become increasingly accessible.

How people seek help for psychological problems is influenced by many factors, including socio-demographic factors, such as gender [21], age [11], education [22], geographic location [23], and social support [24]. Some studies have demonstrated that when compared to females, males consistently exhibit less positive attitudes toward seeking help [23,25]. There are variations in help-seeking behaviours across age groups; some studies have indicated that young adults and adolescents often seek informal help [14], middle-aged people prefer to use mental health services [25,26], and older adults are more likely to seek help from GPs [27].

Education is an important factor in how people seek assistance. A higher education was positively associated with help-seeking behaviour [23,25]; respondents with tertiary education were more likely to seek assistance with managing depressive symptoms than respondents without tertiary education. An Australian national study in rural areas showed that people with low mental health literacy (MHL) were less likely to seek help for depressive symptoms [28]. Several studies have explored social support in their association with health and behavioural outcomes [29,30]. Lindsey and Joe [31] found that family social support played a key role in whether African American boys with depressive symptoms would seek assistance from professional and informal sources. This finding was consistent with results in a systematic review [24]. In another systematic review, the influence of family social support was identified as a key factor on marital status and the severity of depressive symptoms [23].

2. Aims

The current study explored the help-seeking behaviours of people with depressive symptoms and the factors influencing their help-seeking behaviours.

3. Methods

3.1. Sample size and sampling

The sample size calculations were performed using G*Power 3.1 [32], taking into account the gender difference in help-seeking behaviours for MHPs. The power and Type 1 error probability were set at 0.80 and 0.05, respectively. According to previous research, the odds ratio of seeking assistance was 0.68 [13], and the rate of

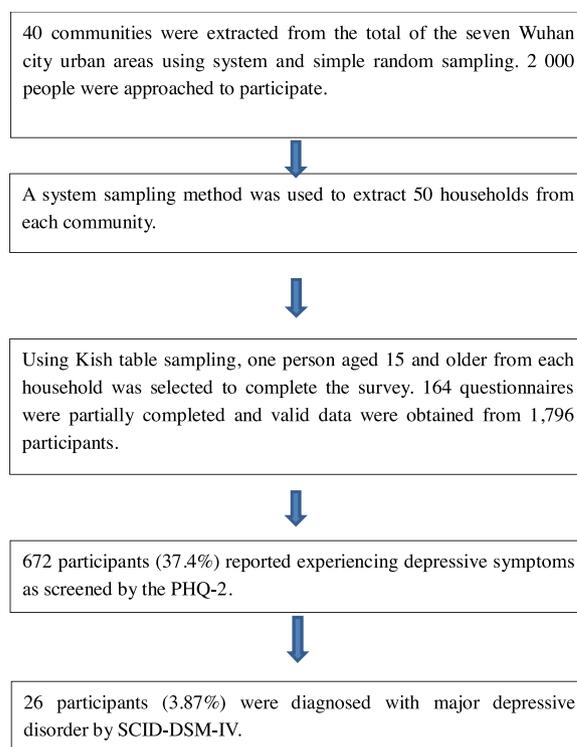


Fig. 1. Flowchart of the Sampling Method.

help-seeking behaviour for females, compared to men, was 0.60. [33]. With these assumptions, it was estimated that at least 678 persons with depressive symptoms were necessary to test the difference between seeking assistance and not seeking assistance. Based on the findings of a previous study which found that 37.9% of the adult Chinese population experienced depressive symptoms [34], the calculated sample size needed for the current study was at least 1785 participants. A 10% non-response rate was considered; therefore, to ensure an adequate sample size and avoid invalid data, 2000 participants were anticipated as the target sample size.

A stratified two-stage systematic selection scheme was applied. To ensure an equal probability for every eligible individual in the target population to be included in the sample, system and simple randomly sampling was utilized (see Fig. 1). Inclusion criteria were that participants were age 15 years or older according to the list of community residents and had resided in their present location for at least six months. Exclusion criteria were: having a severe physical illness, mental retardation, psychosis and related disorders, dementia and mental impairment due to substance dependence. These illnesses were screened in a review of medical records and confirmed by treating physicians.

3.2. Ethical approval

Ethical approval for this study was obtained from the Institutional Review Board Committee of Wuhan University. Written informed consent was obtained from participants and their guardians (for those 15 – 17 years of age) prior to the interview. Participation was voluntary and participants were informed that privacy and anonymity would be maintained. Participation in the survey was remunerated by a small gift (i.e., a sealed glass cup). Questionnaires were numbered and stored in a locked area and only researchers had access. Participants were fully informed that they could withdraw from the investigation at any time without prejudice.

4. Measures

4.1. Socio-demographic information

The following socio-demographic data was collected: gender, marital status, age, education level and geographic location. Participants were asked to identify their age group according to the Stages of Development of Erikson [35]: 15–24 years (adolescence and early adulthood), 25–64 years (adult) or 65 years and above (older adult). Level of education was noted by years of attainment according to three groups: less than 6 years (primary school), 7–12 years (junior and high school) and 13 years or more (college and above).

4.2. Actual help-seeking questionnaire (AHSQ)

The Actual Help-Seeking Questionnaire (AHSQ) was adapted from Rickwood and Braithwaite [36] to assess recent help-seeking behaviours for depressive symptoms, and comprised 27 items. Participants were asked whether they had sought help for depressive symptoms from a variety of sources during the past 12 months; all responses were coded as binary (0 = no, 1 = yes). For the analysis, sources were categorized into four different groups as done in previous research [13,30]: MHPs (e.g., psychologists, psychotherapists, and psychiatrists); GPs (e.g., other physicians, neurologist); hotline/Internet (e.g., lifeline or helpline, professional mental health website); and, informal sources (e.g., friends, parents). One strength of the AHSQ is that it can be modified to better suit particular research objectives. For the current study, the scale was revised in terms of its properties; the reliability was assessed with a Cronbach's α of 0.795. In summary, the I-CVI (Item Content Validity Index) was 0.83–1.0 and the S-CVI (Scale Content Validity Index) was 0.92, demonstrating that the AHSQ met Lynn's [37] criteria (a minimum I-CVI of 0.78 for 6 to 10 experts) and had an S-CVI/Ave of 0.90 or higher.

4.3. Patient health questionnaire (PHQ-2)

The Patient Health Questionnaire (PHQ-2), comprising the first two questions from the PHQ-9, was specifically developed as a screening instrument for current depressive symptoms and syndromes during the prior two weeks. For the current study, the questionnaire assessed the presence of depressive symptoms during the past year (for example, participants were asked: "Did you experience any of the listed situations for a 2-week time period over the past year?"). Questions are measured using a 4-point Likert scale (0=not at all, 1=several days, 2=more than half the days, and 3=nearly every day) [38]. The total score ranges from 0 to 6, higher scores indicating greater severity of depressive symptoms. The scale had a sensitivity of 0.77 and a specificity of 0.95 [39], as well as acceptable internal consistency (Cronbach's α =0.78) [13]. The Chinese version which was translated by Wang Li was used [40]. Cronbach's α coefficients and test-retest reliability of the PHQ-2 were 0.785 and 0.813, respectively, for screening depressive symptoms in cardiovascular outpatients [40].

4.4. Structured clinical interview for DSM-IV (SCID-DSM-IV)

After screening for depressive symptoms using the PHQ-2, participants were also interviewed by trained psychiatrists to identify a diagnosis of major depressive disorder (MDD) using the Structured Clinical Interview for DSM-IV (SCID) [41]. The SCID is a semi-structured clinical interview that is used as the gold standard method of diagnosing current mood and anxiety disorders [42]. In the current study, the DSM-IV (SCID) was administered to participants by one of five psychiatrists who had at least five

or more years of training and professional experience. According to the SCID-DSM-IV, 26 participants (3.87%) were diagnosed with MDD from the group of 672 participants who were PHQ-2 positive.

4.5. Family APGAR index

Family functioning was measured by the Family APGAR Index developed by Smilkstein [43], which consists of five items of family functioning: adaptability, partnership, growth, affection and resolve. Respondents had to indicate how frequently they felt satisfied with each parameter using a 3-point scale ranging from 0 ('hardly ever') to 2 ('almost always'). The total score ranges from 0 to 10 with higher scores indicating a greater degree of satisfaction with family functioning. More specifically, 0–3 indicates severe family dysfunction, 4–6 indicates moderate family dysfunction and 7–10 indicates good family function. Cronbach's α values reported across studies using the Family APGAR Index have ranged from 0.80 to 0.85 [43]. Lv et al. [44] explored the Family APGAR Index (Chinese version) in 68 family members of patients with cardiovascular disease. Cronbach's α and test-retest reliability was 0.80 and 0.81. This version was used in the current study and Cronbach's α was 0.89.

4.6. Statistical analysis

All analyses were completed using SPSS (Version 23). Descriptive statistics (frequency, means and standard deviations) were used to describe and explore data, for example, socio-demographic characteristics and help-seeking behaviours. A continuous scale was constructed for each of the four help-seeking behaviours (i.e., MHPs, GPs, hotline/Internet, informal sources) using the responses from participants (e.g., 0= not seeking help, 1= seeking help from one category, 2=seeking help from two categories, 3=seeking help from three categories, 4=seeking help from four categories). The continuous variable of the number of help-seeking behaviours (0–4) was tested by Kolmogorov-Smirnov and exhibited a normal distribution ($p > 0.05$). One-way ANOVA tests and independent sample t-tests were used to compare the responses for the help-seeking behaviours. A multiple linear regression model was used to explore the predictors of help-seeking resources. The independent variables were gender, age, education, marital status, geographic location, family functioning, and MDD, and the dependent variable was the number of help-seeking behaviours. For all statistical analyses, alpha (α) was set to 0.05.

5. Results

5.1. Sample characteristics

In total, 2000 questionnaires were distributed and 1960 were returned for a response rate of 98.0%. Of these, 164 questionnaires were determined to be invalid resulting in 1796 valid questionnaires. From this group, 672 participants (37.4%) reported that they had experienced depressive symptoms during the past year. Therefore, the final sample for the current study was 672, and all analyses were completed using this sample.

The age of participants ranged from 16 to 89 years, and mean age was 28.0 years ($SD = 13.44$). Females comprised a majority ($n = 470$, 69.9%) of the sample. Most of the participants had 13 or more years of education ($n = 465$; 79.6%); the majority of the sample were single ($n = 459$; 68.7%); and, 28.0% ($n = 187$) were cohabiting/ married. Participants were from either a city (42.4.0%), town (24.7%) or village (32.9%).

5.2. Help-seeking patterns of respondents

Of the total sample ($N = 672$), approximately 76.9% ($n = 517$) indicated that they sought assistance and 23.1% ($n = 155$) did not seek any help. Four sources of help-seeking behaviours were listed (MHPs, GPs, hotline/Internet, informal sources), and respondents provided a binary response to each behaviour source (0=did not seek help, 1=sought help). From these responses, the total number of help-seeking resources used by each participant was calculated. The majority of participants reported that they used only one resource (77.6%), followed by two resources (17.4%), three (4.1%) and four (0.9%). The most frequently reported help-seeking behaviour sought was informal assistance (72.9%), followed by the hotline/Internet (14.3%). A minority of participants sought assistance from MHPs (7.9%) and GPs (3.7%).

Of the total sample ($N = 672$), 3.87% ($n = 26$) were diagnosed with MDD using the Structured Clinical Interview for DSM-IV (SCID). Furthermore, of these participants, 84.65% ($n = 22$) sought help from one of the four sources. In total, only 4.6% ($n = 1$) utilized four help-seeking sources; the remaining participants relied on either three (31.8%), two (31.8%) or one (31.8%). Help was frequently sought from informal sources (76.9%), followed by MHPs (50.0%), hotline/Internet (30.8%), and GPs (19.2%) (see Fig. 2).

5.3. Family functioning and help-seeking behaviours

Of the final sample ($N = 672$), 51.2% ($n = 391$) of participants indicated they experienced good family functioning, 27.4% ($n = 184$) of participants experienced moderate family functioning and 14.4% ($n = 97$) of participants experienced severe family functioning. There was no significant statistical difference between help-seeking behaviours among the three levels of family functioning (good, moderate, and severe; $F_{(2, 671)} = 0.10, p = 0.906$).

5.4. Influencing factors of actual help-seeking behaviours

The effects of influencing factors on the number of resources that participants relied upon are listed in Table 1. Of these factors, the number of resources that participants used was significantly influenced by gender ($t = -2.44, df = 670, p = 0.015$), age ($F_{(2, 671)} = 75.1, p < 0.001$), education ($F_{(2583)} = 50.50, p < 0.001$), marital status ($F_{(2667)} = 61.60, p < 0.001$), and geographic location ($F_{(2671)} = 14.65, p < 0.001$). There was no statistical difference in family functioning and MDD (all $p > 0.05$).

From the results listed in Table 1, multiple linear regression analysis was used to determine how factors predicted help-seeking behaviours. Only the variables with found to have significant differences were entered into the multiple linear regression. Age, education, marital status and geographic location were entered as dummy variables. Table 2 shows the results of the final model, where the resources of support were predicted by age, education and geographic location. Overall, participants who were either aged 15–24 years, had the highest education or lived in rural areas were predicted to be less likely to seek help from various sources. In contrast, participants who were either aged 25–64 years, attended junior and high school (7–12 years education), and lived in cities were more likely to seek various sources.

6. Discussion

6.1. Help-seeking behaviours for informal sources

The majority of participants preferred to seek help from informal sources (72.9%). These results are consistent with other research, which showed that over 60% of participants had sought informal help [13,14]. A possible explanation for why informal

sources are a preferred source of support is that informal sources of help are more accessible [45]. Furthermore, informal sources often provide a trusted source of support [11]. Another explanation is that relying on informal sources helps avoid stigma [31]. Relying on professional help may have negative connotations for patients, such as threatening their social identity and self-esteem [46]. Thus, individuals are inclined to seek help from family members or friends.

Although seeking help from informal sources is meaningful and supportive, it has some disadvantages: a lack of understanding of depressive symptoms specified in general terms (e.g., “Some people do not understand what depressive symptoms are”); not knowing how to help people with depressive symptoms; and ignorance of depressive symptoms or misjudgement of the severity of depression even resulting in serious outcomes, such as suicide [14,47]. Ultimately, these reasons may influence people with depressive symptoms to seek MHPs [24]. Since informal sources were the choice of the majority of participants, it may be beneficial to undertake community education and improve awareness of depressive symptoms among the general population.

6.2. Help-seeking behaviours regarding MHPs

In the current study, 7.9% participants sought help from MHPs. In previous research in Xi'an, a city in northwest China, the mental health services utilization rate was 2.23% [9]. This compares to 15.3% in a study in the United States [8]. One reason for low utilization of MHPs is the stigma of mental illness, which is an important barrier in healthcare utilization [48]. A survey on the stigmatization of mental illness showed that social stigma and discrimination of individuals with mental illness was present world-wide, especially in developing countries [49]. In Chinese societies, individuals with mental illness have long been stigmatized, and this is accompanied by feelings of shame or humiliation, and is often linked with the failure of one's personal or collective moral standing [50,51]. Furthermore, seeking assistance from MHPs and receiving a diagnosis of ‘mentally ill’ is associated with a host of negative connotations [48,52]. When the stigmatized individual internalizes people's negative attitudes, they are afraid of being labeled [21,53]. A further obstacle to seeking help from MHPs is socio-economic development as less-developed areas have a lower level of mental health services [5,54]. Previous research indicated that community-based mental health services are not well developed in China [55,56]. More attention should be paid to combatting the role of stigma in help-seeking behaviours, especially from MHPs, as this may contribute to developing community-based mental health environments that are free of stigma.

6.3. Help-seeking behaviours regarding GPs

Compared to other help-seeking behaviours, GPs were the least sought by respondents (3.7%). This finding differs from previous research that demonstrated that GPs were frequently consulted for assistance with mental health issues in northern Germany (65.1%) [13]. One explanation is that participants in the current study were younger than participants in the study by Tomczyk et al. [13] (2018; $M_{age} = 28.0$ vs $M_{age} = 52.12$), and older adults are usually more likely to seek help from GPs [27]. A second explanation is that there are fewer primary care doctors currently working in China's community health centres than in western countries [57]. Additionally, a cross-sectional survey regarding mental healthcare service provision for depressive symptoms demonstrated that GPs failed to identify mental health problems as a real illness, and their self-perceiving competence in managing mental disorders was low [58]. By improving GPs' depression-related knowledge and preliminary screening ability, GPs may increase the number of referrals to MHPs.

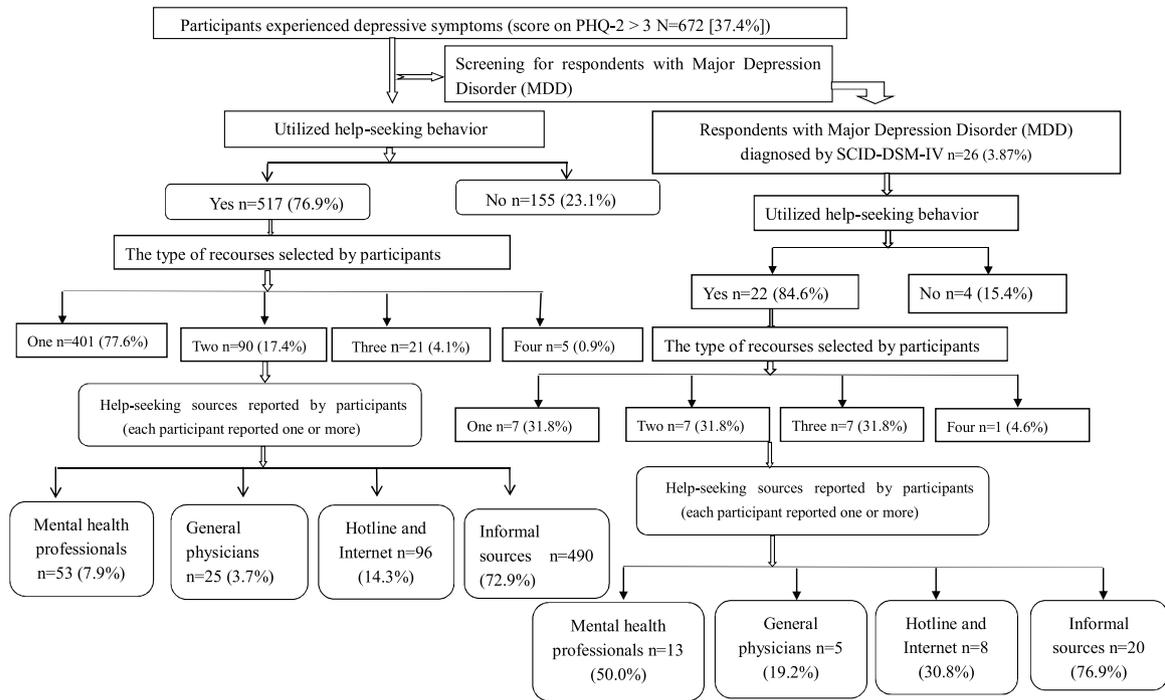


Fig. 2. Flowchart Showing the Break-down of Help-Seeking Patterns of Respondent.

Table 1 Factors analyses of influencing factors of help-seeking resources (N = 672).

Characteristics		Multiple resources*				
		n	M ± SD	df	t/F	P
Gender (n = 672)	Male	202	0.88 ± 0.74	670	-2.44	.015
	Female	470	1.03 ± 0.74			
Age (years) (n = 667)	15-24	412	0.74 ± 0.62	671	75.13	<.001
	25-64	228	1.42 ± 0.76			
	>= 65	27	1.16 ± 0.68			
Education (n = 584)	<= 6	48	1.50 ± 0.65	583	50.50	<.001
	7-12	71	1.75 ± 0.79			
	>= 13	465	1.00 ± 0.61			
Marital status (n = 668)	Single	459	0.79 ± 0.69	667	61.60	<.001
	Cohabiting /married	187	1.42 ± 0.68			
	Separated/divorced/remarried/widowed/other	22	1.50 ± 0.14			
Geographic location (n = 672)	Village	235	0.85 ± 0.65	671	14.65	<.001
	Town	173	0.86 ± 0.69			
	City	264	1.18 ± 0.82			
Family functioning (n = 672)	0-3	97	1.00 ± 0.91	671	0.10	.906
	4-6	184	0.97 ± 0.75			
	7-10	391	0.99 ± 0.70			
MDD**(n = 672)	No	646	2.14 ± 1.57	670	1.01	.321
	Yes	26	1.63 ± 0.96			

Note. M=Mean; SD=standard deviation;

* Multiple resources—including mental health professionals, general physicians, hotline and Internet, and informal sources.

** MDD – major depressive disorder.

Table 2 Analysis of variables as predictors of resources of help-seeking behaviors.

Predictors	Multiple resources					
	B	SE	Beta	t	p	95% C.I
Age(years)(reference:15-24)	-	-	-	-	-	-
Age 25-64	0.45	0.08	0.28	5.39	<.001	0.29-0.61
Age >= 65	0.41	0.16	0.11	2.53	.012	0.09-0.73
Education (years):(reference :0-6)	-	-	-	-	-	-
7-12	1.01	0.09	0.42	10.92	<.001	0.83-1.19
13 or more	0.52	0.06	0.32	8.28	<.001	0.39-0.64
Geographic location : (reference : village)	-	-	-	-	-	-
City	0.15	0.06	0.09	2.56	.011	0.03-0.26

Note: Multiple resources include mental health professionals, general physicians, hotline and Internet, and informal sources.

6.4. Help-seeking behaviours for hotline/Internet

In this study, use of the hotline/Internet was the second most frequently reported help-seeking behaviour (14.3%). This is consistent with previous research in Australia, which indicated that more participants tended to use the Internet for managing mental health problems [16]. A possible explanation for the current result was that, with the popularity of online networks and the development of hotline/Internet services, these resources became another option for people managing depressive symptoms. The ReachOut.com service has been providing supportive online content on mental health to people since the 1990s and it indicates the potential benefits of the hotline/Internet in supporting people [59,60]. Furthermore, the Internet does not have geographical or physical constraints, and offers the advantages of anonymity, 24-h access and immediate feedback [60]. Another possible explanation was that people used a hotline/Internet guided self-help intervention to reduce troubling others [61].

In addition to the benefits of seeking help from a hotline/Internet, the negative aspects of Internet use among people and the inherent risks associated with the online environment have been widely discussed in popular media [62]. Further research is needed to evaluate the possible negative influences of hotline/Internet sources in order to establish effective network platforms that are reliable and useful.

6.5. Help-seeking for MDD

In this study, the prevalence rate of MDD was 3.87%, and this is in line with the prevalence rate reported in other research (3.9%; Maske, Busch [63]). The current findings suggest that participants with MDD are more likely to seek help from all resources, and 50% of the participants stated that they sought assistance from MPHs, which is similar to previous studies [64]. One possible explanation for the results of the current study is that participants with MDD, who also have treatment experience, may have significantly higher depression literacy and thus less negative attitudes toward depression [13]. Moreover, a longitudinal population-based study found a positive association between depression literacy and help-seeking behaviour [22]. Another possible explanation is that self-identification is associated with help-seeking behaviour [65]. Participants with experiences with depression have stronger self-identification and lower personal depression stigma, and are more likely to seek help [28,66]. Additionally, the characteristics of the disease (e.g., severity of depression, comorbidity, and duration and number of episodes) promoted help-seeking behaviour [22,23,65]. Higher depression literacy, self-identification and lower personal stigma, and more perceived need could prompt participants to seek more help, especially from MPHs.

6.6. Factors influencing the approaches of help-seeking behaviour

The predictors of help-seeking behaviour are age, education and geographic location for depressive symptoms.

6.6.1. Age

In the current study, adolescents and young adults (aged 15–24 years) are least likely to seek help from various sources whereas adults are willing to seek help from multiple sources. These results are consistent with previous findings that adolescents and young adults are not willing to seek help from a variety of sources [67]. A possible explanation is a lack of mental health literacy [68,69]. Despite the prevalence of mental illness among this age group, young people tend to be poorly informed about mental health [70]. Furthermore, there is a strong societal expectation for adolescents and young adults to deal with problems independently

[11]. Another explanation is low emotional competence, that is, lacking the ability to cope with depression [11]. Therefore, the consequences of not seeking help, at its worst, can lead to suicide, which is the second leading cause of death in 15–29-year-olds [1].

Compared with the elderly, adults are willing to seek help from a variety of sources. This is consistent with findings reported by Wuthrich and Frei [27]. Since personality changes gradually throughout life, adults may be better equipped to manage surrounding circumstances and to seek help from various resources [71]. As a result of better awareness of self-rated health, adults may seek help to ensure their health status [72]. In addition, adults have higher incomes that enable access to available resources, which facilitates their use compared to adolescents and the elderly. A higher income level can promote help-seeking from MPHs [18].

Therefore, these findings suggest that targeted programs should be aimed at adolescents and young adults to increase willingness to seek help from multiple resources.

6.6.2. Education

Earlier studies [22] found that education was an important factor related to help seeking behaviour. In the current study, participants with higher levels of education sought the least number of resources for assistance. This contradicts previous research that well-educated participants were more likely to seek resources [23,73]. The current findings could be explained by stigma; people with higher levels of education are more likely to experience stigma [22,74]. Persons with higher education are often reluctant to admit they have mental health problems, and therefore, they are not willing to seek help [75]. Another explanation may be that persons with higher education may utilize self-help behaviour [76], feeling more self-confident and better equipped to solve their problems rather than seeking other resources [77].

6.6.3. Geographic location

Consistent with Griffiths et al. [28], participants living in cities are more likely to seek help from various resources. The current findings could be explained by depression literacy, since the mental health literacy of residents in cities was higher than other locations [28]. Residents living in rural areas may have less knowledge about effective help strategies, and consequently, are less likely to endorse psychiatrists, psychologists, social workers and GPs as helpful for depression [78,79]. Apart from mental health literacy, a disparity in the availability of mental health service between urban and rural areas is an important contributor to the difference in help-seeking behaviour [15,80,81]. The scarcity of mental health services in rural areas limits residents' access to health resources [18]. A trend analysis in the U.S. showed that support of biological treatment for depression (i.e., seeking help from GPs, seeking help from a psychiatrist) increased significantly between 1996 and 2006 only among people living in urban areas [80]. Mental health services in China are also mostly provided in large hospitals in urban areas and very few mental health services exist in rural areas [81,82]. China is currently experiencing urbanization of an unprecedented scale that may increase the inequality of mental health services between urban and rural areas [83]. Due to this shortage of mental health resources in rural areas, more attention should be paid to establishing these services.

6.7. Implications and limitations

The current research was carried out to explore help-seeking behaviours of Chinese persons managing depression and factors that influence these behaviours. This study showed that age, education and place of residence are important factors in seeking help. The results have important implications for help-seeking behaviour for depressive symptoms. Firstly, people in adolescence and young

adulthood or who have attained higher education are not willing to seek help. A school-based psychological or help-seeking curriculum could focus on adolescents and university students. Secondly, a web-based guided intervention could be reinforced to ensure the efficacy of help-seeking behaviour for depressive symptoms [61]. In addition, the government is expected to promote policies to develop community-based mental health services in rural areas.

The strengths of this study include the large sample size and the standardized method of data collection. However, there are limitations to consider. First, data were self-reported and could be subject to under-reporting or bias. Second, due to the cross-sectional design, causality between help-seeking behaviour and other variables could not be explored. Third, as in any community-based study, participation in the survey depended on certain demographic and socioeconomic characteristics, and only one city was involved in this study. Therefore, the findings clearly cannot be generalized to other parts of China. Fourth, the screening tool used was PHQ-2; however, it is rather simplistic, consisting of only two items.

7. Conclusion

This study is the first epidemiological survey of help-seeking behaviours to manage depressive symptoms in a community population in China. Given the high prevalence of depression, low rates of actual help-seeking behaviours and influencing factors related to help-seeking behaviours, the under-utilization of support sources remains a serious public health problem in Wuhan, China. Chinese healthcare providers, especially MHPs and GPs, are anticipated to identify high-risk individuals and promote their help-seeking behaviours. Social support (friends and family members) would be of additional importance during the help-seeking process, especially for people from rural areas. This social support becomes even more important if it includes recommendations and reflections from friends and family members regarding positive experiences with healthcare providers, such as MHPs.

Contributors

Bing Xiang Yang, Shu Fang and Diana L. Morris designed the study and wrote the research protocol. Shu Fang and Xiao Qin Wang did the literature review, managed the field survey, quality control, statistical analysis and prepared the manuscript draft. Bing Xiang Yang contributed to drafting partly and critically revisions for the manuscript. Xiao Qin Wang, Bing Xiang Yang and Si Hong Yu supervised the survey and checked the data. Xiu Jun Liu conducted interviews using the Structured Clinical Interview for DSM-IV (SCID) for major depressive episode (MDE). All authors contributed to and approved the final manuscript.

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Declaration of Competing Interest

None.

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