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Research Article

Rural Women's Mental Health: Status and Need for Services

Astrid Van Montfoort[*,1], **Michael Glasser**[2]

[1]*Faculty of Health, University of Maastricht, The Netherlands;*[2]*University of Illinois College of Medicine Rockford, Illinois, USA*

ABSTRACT

Background: Depression remains an issue worldwide. Women are at greater risk than men of experiencing depression, especially women living in rural areas. Mental health care in rural populations is less easily addressed than in urban areas. This descriptive study examined the prevalence of depression in women living in rural areas of Illinois. Additionally, it examined whether existing mental health care services meet the needs of rural women, as well as possible barriers preventing women from seeking help when needed.

Methods: A survey was distributed to women ages 18 and older living in rural communities of Illinois.

Results: 189 women completed the survey. 26.1% self-reported depression; when combined with previously diagnosed depression and the Center for Epidemiologic Studies Depression Scale Revised (CESD-R) scores, 50.9% were at-risk for depression. Over one-quarter of study participants did not think available mental health care was sufficient.

Discussion: Prevalence of depression in rural women is high. There is an inconsistency between need for and use of health care services. Screening for depression in rural primary care settings might help more women receive adequate treatment. Further research with additional rural communities is necessary.

Keywords: Depression; Women; Rural; Primary care; Mental health

INTRODUCTION

Depression is a problem globally, especially among women [1]. Previous research also shows that rural women are more likely to develop depression than their urban counterparts [2].

Mental health care in rural areas remains less accessible than in urban areas. "The programs that attempt to address the distribution of professional resources (…) run against a tide of stronger forces that draw capital, people and services into central places- the cities- and away from rural areas" [3]. Receiving care from a specialist is more problematic in rural areas; given population size and related distribution of healthcare providers, there are limited options for referrals by general practitioners for the depressed patient [2,3].

Past research has also shown there is stigma associated with depression in rural areas. There are two main types of stigma: personal and public. Women have indicated being unable to discuss depression due to their own or because of community perceptions. Being depressed might reveal weakness causing feelings of shame [4,5]. Stigma related to depression can prevent rural women from seeking mental health care; additionally, mental health care in rural areas may not be sufficient to meet the needs of rural women [2,3,6].

Overall women's mental health in rural areas is a relatively unexplored topic [7]. The national depression rate in the USA for women is 12.9 percent [8] with past studies demonstrating a significantly higher rate in rural women. The limited research shows that depression in rural women is a growing health issue [9]. These studies have shown over double the percentage of depression in rural women in comparison to the national rate. A study in South Carolina, with a sample size of 982, found 41.4 percent of women living in rural areas suffering from depression [10]. Another study conducted in the USA focusing on Louisiana rural farm women (N=657) demonstrated a depression prevalence of 24.0 percent [11]. In a study of rural women living in the Midwest, a 36.4 percent rate was observed (N=140) [7]. Studies also indicate that further research is needed [7].

[*]**Correspondence to:** Astrid Van Montfoort, Faculty of Health, University of Maastricht, The Netherlands, Tel: +31642276116, E-mail: astridvanmontfoort0739@gmail.com

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Research on depression in rural Illinois, focusing on older adults, demonstrated 23.3 percent of this group was at-risk for depression [12]. In other research, examining data from a survey of the National Center for Health Statistics of the Centers for Disease Control and Prevention, which is representative of the US population, it was found that younger adults were more likely to become depressed than older adults [2]. No previous research has been conducted specifically on rural women in Illinois.

In addition to prevalence of depression, it is important to examine possible factors influencing depression. Age, as mentioned above, might be a factor. Furthermore, earlier research reported a correlation between depression and poverty/lower household income and poor health status or one or more chronic health conditions [9,13] Unemployment as well as being unmarried are factors also found to influence risk of depression. Research showed a higher depression rate in unemployed and poor rural women than their employed counterparts. Rural women are more likely to have lower education and some studies indicate that this might be associated with depression [14,15]. On the other hand, living alone is not necessarily a factor in developing depression. One study found living alone is not always viewed as negative; in fact, attitudes towards living alone were more positive or at least neutral [16]. Finally, pregnancy can influence depression. Research on depression during pregnancy as well as postnatal depression shows a high prevalence of depression in women at 62.0% and 31.4%, respectively [17,18].

In this context, the present study was conducted to 1) examine the prevalence of depression in women in rural Illinois and 2) determine if mental health care services were meeting the needs of rural women. Two main questions are addressed in the present study:

1. What percentage of women 18 years or older in rural areas of Illinois report adulthood depression, either past or present?

2. Does or did the care for rural women with depression meet their needs for treatment?

This research therefore will provide additional evidence with regard to prevalence of depression in rural woman and access to mental health care in rural areas. Overall, this study provides a clearer picture of both mental health care and possible barriers in meeting the mental health needs of rural women in establishing programs and policy related to rural mental health care for women.

RESEARCH METHODOLOGY

Study population

All women ages 18 or older living in rural Illinois were eligible for study inclusion. Areas were defined as rural according to Rural-Urban Commuting Area (RUCA) codes, where a score of 4 or higher indicates rural [19].

Data collection

Data collection took place at a primary care clinic in rural Illinois. The medical clinic was located in Pittsfield (population=4493). Women in the waiting room were approached and asked to complete the survey. If potential participants did not have the time to immediately complete a survey at the clinic, there was an option to complete it at home and send the survey back in a prepaid postage envelope. Informed consent was provided by completion of the survey. This was a convenience sample of women who were interviewed.

Study instrument

The study instrument was a self-report, self-administered four-page questionnaire taking 20-25 minutes to complete. The questionnaire had been reviewed by a psychiatrist practicing in rural Illinois for comments and input. The survey consisted of three major parts: 1) the Center for Epidemiologic Studies Depression Scale Revised [20] to screen for depression; 2) perceptions regarding health care; and 3) background information, including age, marital status as well as zip code to confirm participants were living in a rural area. Women were asked whether or not they had the feeling they were currently depressed or had experienced depression in the past.

The CESD-R scale is a 20-item tool to screen for depression, but does not diagnose depression. Research has demonstrated it is an accurate test to screen for depression in the general population [21]. The CESD has a cut-off point of 16, which is used in many studies as an indication of possible depression. The CESD-R uses a similar scale to the original CESD score [20]. Recent research has shown that a cut-off point of 20 might be more accurate with a better balance between sensitivity and specificity. The specificity is better when the cut-off point of 20 is used but the sensitivity is better with a cut-off point of 16. The goal of this research was not to diagnose depression but to have a better idea of how many women might be at-risk of depression; therefore, the higher sensitivity was the preference. The cut-off score of 16 was used with a sensitivity of 0.87 and specificity of 0.70 [22].

Data analysis

The Statistical Package for the Social Science version 24 (SPSS 24) was used to analyze the collected data. Analysis included the overall characteristics of the population, the CESD-R score and depression status, and perceptions of mental health care services. For the analysis, independent t-tests and chi-square tests were used as appropriate. Additionally, a composite variable was created examining women at-risk for depression which was comprised of one or more of the following: a score of 16 or higher on the CESD-R, self-report of depression or a diagnosis of depression in the past.

Ethics approval

This study was approved by the University of Illinois College of Medicine at Rockford IRB, Rockford, Illinois (approval no. 20170020).

RESULTS

Of 265 women approached at the clinical, primary care site in Pittsfield, 204 agreed to participate (77.0%); 198 completed the survey (74.7%). Nine women were excluded because their RUCA code was urban, resulting in a study sample of 189 women.

Table 1 presents demographic background and information on the study participants. Average age was 45.8 years, with most women married or living with their partner: 62.1%. 103 women (56.0%) had some college or a college degree. Only 8.7% had not completed high school. 89 (49.7%) of the women reported that they were currently working, with 31 (17.3%) retired and the remaining 59 (33.0%) currently not employed.

The majority of respondents (78.1%) classified their health as excellent, very good or good, with 21.9% indicating health as fair or poor. The mean number of chronic health problems in all women was 2.3, with the list of chronic health problems including: asthma, arthritis, back pain, cancer, chronic pain, diabetes, headaches, heart disease, high cholesterol, hypertension/high blood pressure, obesity, stroke and the option of mentioning other. 23.2 percent of women reported no chronic health problems. Arthritis and hypertension/high blood pressure were the most common chronic diseases with both 30.3 percent. Back pain (29.7%) and headaches (28.6%) were also often mentioned.

Table 1: Demographic and background information of female participants living in rural Illinois.

Characteristics	Frequency and (Percentage)
Age in years (n=182)	Mean 45.81; SD=18.1
18-29	41 (22.5)
30-39	40 (22.0)
40-64	66 (36.3)
≥65	35 (19.2)
Education (n=184)	
> 6th grade, did not complete high school	16 (8.7)
High school	55 (29.9)
Some college	61 (33.2)
College degree	42 (22.8)
Other	10 (5.2)
Marital status (n=182)	
Single	32 (17.6)
Married/living with partner	113 (62.1)
Widowed	16 (8.8)
Divorced	15 (8.2)
Other	6 (3.3)
Employment (n=179)	
Yes	89 (49.7)
No	59 (33.0)
No, retired	31 (17.3)

General health status (n=183)	
Excellent/Very good/ Good	143 (78.1)
Fair/Poor	40 (21.9)
Number of chronic diseases (n=185)	Mean 2.3, Range=0 to 9
0	43 (23.2)
1	40 (21.6)
2	27 (14.6)
>2	75 (40.5)

Prevalence of depression

Out of the 189 women, 81 women (44.3%) indicated they had previously been diagnosed with depression. 39 women (21.7%) had been depressed in the past but did not feel depressed at the time of the study; 47 women (26.1%) indicated they currently felt depressed. 94 women (52.2%) did not indicate depression in the past or present. 129 women (70.9%) had a CESD score of less than 16. 53 women (29.1%) screened positive for signs of depression with a CESD score of 16 or higher.

Table 2 shows the relationship between self-report of depression and screening positive on the CESD-R test. 20 percent with self-reported depression also had a positive CESD-R score; 9.7% who did not self-report depression screened positive on the CESD-R. Additionally, 6.3% did not screen positive on the CESD-R but self-reported depression.

Table 2: Relationship between self-report of depression versus positive screening on CESD.

			CESD score		Total
Variables			0-15	16 and higher	
Depressed	No	Count	112	17	129
		% of Total	64.0%	9.7%	73.7%
	Yes	Count	11	35	46
		% of Total	6.3%	20.0%	26.3%
Total		Count	123	52	175
		% of Total	70.3%	29.7%	100.0%
X^2= 64.254; p<0.001					

Table 3 summarizes who said yes to one of the three options of currently depressed, CESD-R score of 16 or higher and previously diagnosed depression. If one or more indicated yes, the participant was defined as at-risk. This resulted in 50.9% of the women being at-risk for depression.

Table 3: At-risk factor for women, with 0 not at risk. Other at risk with one or more of the three options: Currently depressed, CESD score ≥ 16 and previous diagnosed depression.

Variables		Frequency	Valid Percent
At risk	None of the three options	85	49.1

	One of the three options	32	18.5
	Two of the three options	26	15.0
	All three options	30	17.3
	Total	173	100

The results for each CESD-R question are presented in the Appendix. Items 'my sleep was restless' and 'I was tired all the time' were the most common; 'I wanted to hurt myself' and 'I wished I were dead' were the least frequently mentioned.

Mental health care

There was a question with a list of 8 mental health services, where study participants could indicate awareness and/or use of the mental health service. Additionally, there were 23 questions about mental health care, with an open-ended option where women could describe their own experiences. Table 4 presents the 8 mental health services displayed with percentages of women who had used or were aware of these services.

Table 4: Awareness and use of mental health services of the women living in rural Illinois.

Services	Aware (%)	Have used (%)
Hospital mental health counseling service	80.3	11.1
Counseling from my doctor's office	78.8	20.2
Counseling available from church	75.3	11.1
Family and/or marital counseling services	74.2	10.6
Health department counseling service	74.2	9.6
Bereavement counseling	70.2	5.1
Depression support group	63.1	3.5
Stress management counseling/support group	58.6	6.6

A total of 52.9% of rural women were aware of all the 8 options, with 5.8% unaware of any of the services. One-third had used one or more mental health service. Of the types of services, counseling from the doctor's office was most often used (20.2%), followed by hospital mental health counseling (11.1%) and counseling from church (11.1%).

The results for all 23 questions about the perceptions of mental health care are presented in Appendix 2. Most people agree finding medical help for depression is important (96.6%), and 94.9% agreed with finding help if they suspected they had a mental problem. 83.1% received enough social support and 75.9% indicated there is enough information and support available through the doctor and community about depression.

On the other hand, 25.3% disagreed with the statement that mental health care is good. 30.3% indicated transportation to available health care is a problem. 31.0% mentioned depression is still a taboo, and 44.5% agreed it is preferable not to use the term 'depression' to avoid stigma. Additionally, 60.4% indicated depression in women is under-diagnosed by their physicians.

DISCUSSION

This is a descriptive study, but one providing both confirmative and new information on rural women's mental health. Previous studies have focused on depression rates in rural women or on health care access for the rural elderly but there has not been enough research on the health care accessibility specifically for rural women. It is very important to understand the needs in rural mental health care and this study helps in filling this gap.

Depression prevalence in rural women found in this study is higher than the national rate of depression in women in the United States. This is in line with previous research on depression in rural women. Additionally, the observed rates are higher than the 18.2% of mood disorders, with depression being the most common disorder, found in a study involving multiple European countries [23], as well as the 18.0% lifetime prevalence of mood disorders in Australian women [24].

The percentage of current depression as well as the CESD-R score and previously diagnosed depression are all high. Over one-quarter of women in the current study self-reported

depression, with another 20% not currently depressed but having experienced depression at some time in the past. Additionally, when using CESD-R scores, nearly 30% of these rural women would currently screen positive for signs of depression. If the self-report of depression is combined with the CESD-R score, 36% currently screen positive for depression. If the women who had depression in the past are added, one-half of women either are currently at-risk of being depressed or have had depression in the past. Previous research on depression in rural women has demonstrated similar rates. Groh et al. who studied a female population in the Midwest, found that 36.4% self-reported depression, which is higher than the self-report rate but lower than the at-risk rate found in the current study [7].

Looking at the questions regarding perceptions of health care, there appear to be three main themes: accessibility, acceptability and help-seeking behavior. Accessibility or availability of rural mental health care is a problem described in the previous literature, where transportation and restricted availability and information are mentioned [25,26]. Acceptability is also described in other research; the stigma of depression in rural communities makes accepting depression difficult [25]. Help-seeking behavior can be seen as a positive coping strategy, although understanding the need for help is often less present in rural communities [26].

Improvement in mental health care focus and service delivery remains a major concern in rural areas. Just a little over one-half of the women in this study knew of all the available resources for mental health care. Only one-third indicated they had used one or more services, even though a higher percentage indicated having been diagnosed with depression. This inconsistency between need for and use of services is an issue that requires improvement. If depression screening or diagnosis proves positive, it falls on the hands of the primary care provider to try to make sure that rural women obtain needed assistance. This continues to be a challenge in rural settings [27].

Over one-quarter of women stated they did not think mental health care in their area was good or sufficient. Bocker et al. studied mental health care services in rural Illinois for older adults and found that one-half of this population did not agree that the health system met their needs [12]. This is a higher percentage than found in the current study, possibly because older adults have more difficulty with issues like transportation. We also found that a slightly higher percentage of study participants had used one or more services in comparison to older adults.

Current findings also indicate that it is important to use both self-report and a screening tool comparable to the CESD-R in the office setting. Sixteen percent of the women in the current study screened positive for only one of the two tests, indicating both are necessary to avoid missing any women who have feelings of depression. Further, over 60% of the women agreed that depression is under-diagnosed by doctors.

As mentioned earlier, the stigma of depression might prevent women from seeking help. In this project, over 30% of women indicated depression as a stigmatizing condition. Additionally, in this regard, over 40% agreed with the statement that it is preferable not to use the term depression, to avoid stigma. On the other hand, over 95% of the women indicated depression is an important problem.

Again, primary care practitioners need to pay more attention to mental health status and management in rural areas. The Patient Health Questionnaire (PHQ-2) might be a good and quick method for screening for depression in a routine visit. This is an instrument consisting of two questions on mental health status [28]. If this test turns out to be positive, or depression is suspected, further screening and diagnosis is necessary. Information on depression and the treatment of depression should be provided to the patient.

The current research has a number of limitations. Data collection was focused on one rural region of Illinois. Additionally, the sample was not totally representative for rural women. The study participants were asked to complete the survey while attending a primary care physician visit, where they might be more likely to be in poorer health and, therefore, be more at-risk for depression. Also, the rural women had already made some level of contact with the healthcare delivery system, and be more likely to report to know where to go for mental health needs. The option of pharmacotherapy was not measured in this study, which may or may not be available in rural communities. Finally, the study instrument was a self-report questionnaire and the CESD-R was used, which is a good test for screening for depression but not actually diagnosing depression. Despite these limitations, this study examined mental health reports and issues in a very rural population with a high rate of participation - providing an additional look at mental health care for rural women.

CONCLUSION

The next steps in research could include additional rural communities to assess prevalence and access as well as looking at the impact of specific interventions related to the mental health care status and delivery of care for rural women. The prevalence of depression that was found in this study was high, but in line with previous research findings. Mental health care does not completely meet the needs of the rural women and there is an inconsistency between use of and need for services. Screening for depression using the Patient Health Questionnaire (PHQ-2) might be a good way to lower this inconsistency.

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