

Anxiety Disorder in Homemakers of Kumaon Region of Uttarakhand, India

Abstract

Background: Anxiety is graded as the sixth major contributor to nonfatal health loss worldwide and is included in the top ten causes of years lived with disability. National Mental Health Survey 2015–2016 too reported the prevalence of anxiety spectrum disorders as 3.5%, and way higher among females than males. The present study was undertaken to find the prevalence of anxiety disorders in homemakers aged 15–59 years and identify factors causing anxiety disorders in this population. **Methods:** In the present cross-sectional study, a total of 324 ever-married, apparently healthy women aged less than 60 years were included using systematic random sampling from the four selected urban areas after applying proportional sampling. A generalized anxiety disorder-7 (Hindi version) questionnaire was used for screening the anxiety disorders. Additional information was collected using a pretested questionnaire for assessing determinants. The data so collected were coded and compiled in MS Excel and analyzed using IBM®SPSS®Statistics (version 17.0). **Results:** Forty-four (13.6%) out of 324 women were screened positive for anxiety disorder. Moderate anxiety was present in 10.2% and severe anxiety in 3.4% of study subjects. Anxiety symptoms were significantly higher among women with perceived economic instability 4.3 (95% CI 1.5–12.2) and non-cordial relation with family members (11.5 [95% CI 2.4–55.5] with in-laws and 20.2 [95% CI 4.3–94.2] with husband) Health of the children was also seen to be major reason of anxiety (31.1 [95% CI 3.8–256.6]). **Conclusion:** Anxiety disorder is a significant mental health problem affecting over 13% homemaker women in the Kumaon region of Uttarakhand, India.

Key words: Determinants, ever-married, female, prevalence, primary health care, risk factors

Introduction

Occasional anxiety is a normal reaction in a stressful situation and plays a protective role to initiate self-defense/self-improvement. Anxiety disorders are characterized by persistent and disproportionate worry about a number of different things that ordinarily do not upset most individuals. Worldwide, approximately 20% of the people who receive primary health care have depression or anxiety disorders.^[1]

The term “anxiety disorder” refers to specific psychiatric disorders that involve extreme fear or worry and includes generalized anxiety disorder (GAD), panic disorder and panic attacks, agoraphobia, social anxiety disorder, separation anxiety, and specific phobias. Around 264 million people are living with anxiety disorders worldwide; which are graded as the sixth major contributor to nonfatal health loss and are included in the top 10 causes of Years Lived with Disability (YLD).^[2] In India, it

is estimated that 3% population is suffering from anxiety disorders which accounts for 3,519,527 (2.5% of total) YLD.^[2]

Anxiety disorders are more common among females than males.^[2] Reproductive, societal, and cultural factors are likely contributors to this increased vulnerability.^[3] National Mental Health Survey 2015–2016 reported prevalence of anxiety spectrum disorders (anxiety disorders along with neurotic symptoms) as 3.5%, and twice as common among females than males.^[4] These disorders are strongly associated with functional impairment, poor quality of life, suicidal ideation, and excessive utilization of health care resources.^[3] As the housewives are the backbone of a family and primary caregivers, the costs of overlooked anxiety outspread from individual women to their families in terms of both monetary and nonmonetary costs.

Antecedent risk factors for anxiety in women, especially the homemakers, in community settings are not well known. There are gaps in information about the psychosocial origin of anxiety due to the

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Access this article online

Website:
www.ijpvmjournal.net/www.ijpvm.ir

DOI:
10.4103/ijpvm.IJPVM_563_18

Quick Response Code:



How to cite this article: Kaur A, Das M, Solanki HK, Awasthi S, Hyanki A. Anxiety disorder in homemakers of kumaon region of Uttarakhand, India. *Int J Prev Med* 2021;12:76.

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lack of community-based studies among apparently healthy housewives. The objectives of this study were to identify the prevalence of anxiety disorder and the factors giving rise to such anxiety disorder among homemakers that will further recognition, prevention, and treatment and at the same time increase awareness about the same.

Methods

Study design

A community-based cross-sectional study conducted from June 2016 to May 2017.

Study settings

The present study was conducted in Haldwani tehsil of Nainital district in the Kumaon Division of Uttarakhand, India. As per census 2011, the Nainital district has a population of 9,54,605. The population of Haldwani tehsil is 364,129—which is highest among the eight tehsils of the Nainital district. More than half (67.3%) population of Haldwani tehsil lives in urban areas. Government Medical College and Hospital, Haldwani is the only government tertiary care center in the Kumaon Division of Uttarakhand. The department of Community Medicine provides community outreach services through two urban health training centers (further divided into four sectors) situated in different urban areas of Haldwani. Detailed information of the households in its field practice areas is maintained by the health workers under the Community Medicine department.

Sample size

This study was part of a larger study to determine prevalence and determinants of depression and anxiety in ever-married women aged less than sixty years residing within the field practice area for at least six months before data collection.^[5] A sample size calculation was done for both depression and anxiety. However, as the sample size determined for the depression component was larger; that was taken as a sample size for the anxiety part of the study as well. We took the anticipated prevalence (P) of depression as 24.9%.^[6] For 95% confidence interval (CI) and with 5% precision, the sample size thus estimated was 288 participants using the formula $4P(1 - P)/d^2$; where P represents the expected prevalence and d represents precision. Assuming a 10% nonresponse rate the final sample size was determined to be 317, which was rounded off to 320.

Inclusion criteria

All ever-married homemakers, aged less than 60 years, residing in the study area for at least 6 months from the date of the interview and gave consent to participate in the study.

Exclusion criteria

Women pregnant during the data collection period or having childbirth within the last three months of data

collection or were not able to cooperate due to illness or mental disabilities were excluded.

The women were selected by proportionate sampling based on a population of purposively selected four sectors of the urban field practice area under the department of community medicine. The households were selected using systematic random sampling from the list of households present with the health workers. The consent of the interview was taken from the eligible women after explaining the purpose of the study. If any household had more than one eligible woman, only one woman was interviewed, who was selected randomly by the draw method. If the women did not give consent for the study or if there were no eligible women, women of the adjacent household were contacted. The process repeated until the desired sample size was reached. A total of 324 women were interviewed.

For screening anxiety, the GAD-7 questionnaire was used. Additional information was collected using a semi-structured, pre-tested questionnaire for assessing determinants. Data collectors were medical doctors trained by a specialist psychiatrist working at Government Medical College, Haldwani and supervised by the principal investigator. Ethical approval for the study was obtained from the institutional ethics committee. Privacy and confidentiality were maintained at all stages of the study. Women who were likely to have significant anxiety based on cutoff used in our study were given preliminary advice at their homes and referred to the psychiatry clinic at the nearby tertiary health care facility.

Study tool

GAD-7 questionnaire was used to screen the study subjects for anxiety. Scores of 5, 10, and 15 represent cut-points for mild, moderate, and severe anxiety, respectively. The cutoff point of 10 was used for clinically significant anxiety.^[7] Using the threshold score of 10, the GAD-7 has a sensitivity of 89% and a specificity of 82% for GAD. GAD-7 is also used for screening three other common anxiety disorders—panic disorder (sensitivity 74%, specificity 81%), social anxiety disorder (sensitivity 72%, specificity 80%), and post-traumatic stress disorder (sensitivity 66%, specificity 81%).^[8] The Hindi version of GAD-7 for India is freely downloadable from the authenticated website of Patient Health Questionnaire Screeners.^[9]

Ethical issues

Informed consent was taken from participants after explaining the purpose of the study. Data confidentiality and anonymity was maintained throughout the study. The study was cleared by the institutional ethics committee vide letter number 345/GMC/IEC/2017/Reg.no. 311/IEC/R-29.09.2016.

Statistical analysis

The data collected were coded and compiled in MS Excel and analyzed using IBM®SPSS®Statistics for Windows,

version 17.0 (SPSS Inc., Chicago, Ill., USA). The prevalence of anxiety was calculated and the dependent variable (anxiety) was dichotomized. Crude odds ratios (OR) and 95% (CI) were estimated in the univariate analysis using logistic regression. Important predictors of univariate analysis (variables with $P < 0.25$) were considered in the multivariate logistic regression analysis to evaluate associations.

Results

Three hundred and fifty-six women were contacted and 324 women participated in the present study (response rate—91%). Forty-four (13.6%) women of the total were screened positive for anxiety symptoms on GAD-7. The bar of pie-chart [Figure 1] shows the severity of anxiety symptoms according to the GAD-7 scale.

Half of the interviewed women belonged to 25–34 years of age group; the mean age of study participants was 32.9 (7.2) years, with a mean age at marriage of 20.2 (3.6) years. The majority of the subjects were Hindus (83%) and others were mainly Muslims; only one woman of Sikh religion was interviewed. The detailed sociodemographic and reproductive profile of interviewed women along with unadjusted OR is given in Tables 1-3.

Table 4 shows the results of the multivariable model adjusted for various covariates selected on the basis of the predecided cutoff for unadjusted OR, that is, P value < 0.25 . Increasing the literacy status of the woman was found to have a protective effect on the development of anxiety, as was residence in the pukka house (0.49 [0.12–2.07]), although not statistically significant. Comparatively more of anxiety symptoms were seen in women belonging to faiths other than Hinduism (2.8 [0.79–9.67]). Higher age at marriage was also found to have a protective influence in the multivariate analysis [Tables 1 and 4]. Although anxiety disorders increased with an increase in a number of conceptions and living children, they were not statistically significant [Tables 2 and 4].

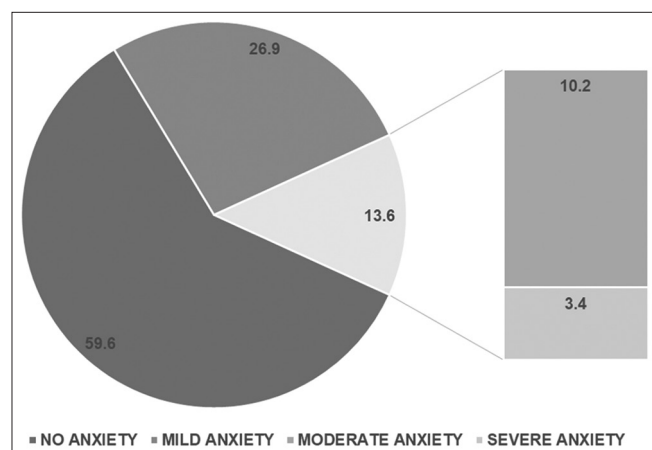


Figure 1: Bar of pie-chart showing severity of anxiety

Anxiety symptoms were significantly higher among women with perceived economic instability 4.3 (1.5–12.2) and non-cordial relation with family members (11.5 [2.4–55.5] with in-laws and 20.2 [4.3–94.2] with husband). The health of the children was seen to be the major reason of worry [31.1 (3.8–256.6)] [Tables 3 and 4].

Discussion

In the present study, 13.6% of the total 324 women were screened positive for significant anxiety. Patel *et al.* have reported a 40% prevalence of anxiety in homemakers, which was 1.2 times the anxiety in working women.^[10] The variance may be due to the different scale used in their study. A community-based prevalence study, using the GAD-7 scale, conducted in Sweden by Johansson *et al.* found 17.9% of women suffering from anxiety.^[11] One-third of females were screened positive for anxiety in the mental health survey in Iran by Noorbala *et al.*^[12] Another study conducted in Malaysia, using GAD-7 found 8.4% of women suffering from anxiety.^[13] The variation in the findings of the said studies may be attributed to different socio-cultural backgrounds.

In a metanalysis done by Ganguly, the prevalence of anxiety was found to be 16/1000 in the urban population.^[14] Reddy and Chandrashekhar also established the burden of anxiety to be around 5.8% in their metanalysis.^[15] However, the studies included in the two metanalyses were conducted in the later half of the twentieth century and were not gender-specific; a lot has changed in the lifestyle of Indians thence. The proportion of health loss caused by anxiety disorders in women has risen to 1.1% of disability-adjusted life years (DALY) in 2016 from 0.6% in 1990 in India. Overall, it has been estimated that the mean percent increase in DALY rate 1990–2016 for anxiety disorders was 6.2% with a mean percent change in the number of DALYs being 61.9%.^[16]

No significant effect of age was seen on the presence of anxiety; but it was observed that OR of anxiety is minimum in women belonging to 25–34 years and maximum in women less than 25 years of age. A systematic review by Remes *et al.* has reported a sharp rise in the prevalence of anxiety disorders in younger people.^[17] Brenes *et al.* noted the prevalence of GAD being lowest for older adults.^[18] The reason deduced in the interviews during the present study is that marriage in the early twenties and burden of responsibilities of managing the family incurs stress on women which increases the probability of anxiety in younger women; with the passage of time, women learn to cope with the stress of daily life. Anxiety starts to rise again in later thirties when the future settlement of children preoccupies the minds of the homemakers.

In our study, OR of suffering from anxiety symptoms was minimum if the age-difference with their husband was 4–6 years. It is conventionally accepted that females

Table 1: Association of selected socioeconomic variables with anxiety disorders among homemakers

Variable	Frequency <i>n</i> (%)			Unadjusted odds ratio	
	Total	No Anxiety	Anxiety	Odds ratio (95% CI)	<i>P</i>
Women's Age					
<25 years	27 (100.0)	22 (81.5)	5 (18.5)	1	
25-34 years	163 (100.0)	144 (88.3)	19 (11.7)	0.581 (0.197-1.714)	0.325
35-44 years	105 (100.0)	90 (85.7)	15 (14.3)	0.733 (0.241-2.235)	0.585
>=45 years	29 (100.0)	24 (82.8)	5 (17.2)	0.917 (0.233-3.600)	0.901
Age difference with husband					
0-3 years	46 (100.0)	38 (82.6)	8 (17.4)	1	
4-6 years	155 (100.0)	136 (87.7)	19 (12.3)	0.664 (0.270-1.634)	0.372
7-9 years	80 (100.0)	69 (86.3)	11 (13.8)	0.757 (0.281-2.044)	0.583
>=10 years	43 (100.0)	37 (86.0)	6 (14.0)	0.770 (0.244-2.436)	0.657
Women's education					
Illiterate and primary	88 (100.0)	69 (78.4)	19 (21.6)	1	
middle and sec./sen. sec.	154 (100.0)	132 (85.7)	22 (14.3)	0.605 (0.307-1.194)	0.147
graduate and post-graduate	82 (100.0)	79 (96.3)	3 (3.7)	0.138 (0.039-0.486)	0.002
Husband's education					
Illiterate and primary	51 (100.0)	40 (78.4)	11 (21.6)	1	
middle and sec./sen.sec.	174 (100.0)	150 (86.2)	24 (13.8)	0.582 (0.263-1.288)	0.181
graduate & post-graduate	99 (100.0)	90 (90.9)	9 (9.1)	0.364 (0.140-0.946)	0.038
Religion					
Hindu	269 (100.0)	239 (88.8)	30 (11.2)	1	
Others	55 (100.0)	41 (74.5)	14 (25.5)	2.720 (1.330-5.565)	0.006
Type of family					
Nuclear	273 (100.0)	236 (86.4)	37 (13.6)	1	
Joint	51 (100.0)	44 (86.3)	7 (13.7)	1.015 (0.425-2.421)	0.974
Type of house					
Pucca*	294 (100.0)	257 (87.4)	37 (12.6)	1	
Kuchha/Semipucca**	30 (100.0)	23 (76.7)	7 (23.3)	2.114 (0.848-5.270)	0.108
Ownership of house					
Self	202 (100.0)	177 (87.6)	25 (12.4)	1	
Rented	122 (100.0)	103 (84.4)	19 (15.6)	1.306 (0.686-2.487)	0.417
Marital status					
Currently married	307 (100.0)	268 (87.3)	39 (12.7)	1	
Widow/separated	17 (100.0)	12 (70.6)	5 (29.4)	2.863 (0.957-8.567)	0.060
Age at marriage					
<18 years	57 (100.0)	39 (68.4)	18 (31.6)	1	
18-20 years	132 (100.0)	117 (88.6)	15 (11.4)	0.278 (0.128-0.603)	0.001
21-23 years	86 (100.0)	79 (91.9)	7 (8.1)	0.192 (0.074-0.498)	0.001
24-26 years	30 (100.0)	27 (90.0)	3 (10.0)	0.241 (0.064-0.899)	0.034
>26 years	19 (100.0)	18 (94.7)	1 (5.3)	0.120 (0.015-0.973)	0.047
Duration of marriage					
<=5 years	65 (100.0)	58 (89.2)	7 (10.8)	1	
6-10 years	83 (100.0)	72 (86.7)	11 (13.3)	1.266 (0.462-3.471)	0.647
11-15 years	68 (100.0)	58 (85.3)	10 (14.7)	1.429 (0.509-4.010)	0.498
>=16 years	108 (100.0)	92 (85.2)	16 (14.8)	1.441 (0.559-3.715)	0.450

*Pucca: all structure built with bricks and concrete. **Kuchha/Semipucca: walls and/or roof and/or floor-not made of concrete

mature earlier than males,^[19] so with age difference of maturity levels, resulting in lesser conflicts, thence 4–6 years a male and a female are likely to have similar anxiety.

Table 2: Association of reproductive variables with anxiety disorders among homemakers

Variable	Frequency n (%)			Unadjusted odds ratio	
	Total	No Anxiety	Anxiety	Odds ratio (95% CI)	P
Conceptions					
0	10 (100.0)	9 (90.0)	1 (10.0)	1	
1-2	52 (100.0)	48 (92.3)	4 (7.7)	0.750 (0.075-7.511)	0.807
2-3	188 (100.0)	167 (88.8)	21 (11.2)	1.132 (0.136-9.384)	0.909
>=4	74 (100.0)	56 (75.7)	18 (24.3)	2.893 (0.343-24.722)	0.329
Living children					
0	12 (100.0)	11 (91.7)	1 (8.3)	1	
1-2	210 (100.0)	189 (90.0)	21 (10.0)	1.222 (0.150-9.943)	0.851
3-4	102 (100.0)	80 (78.4)	22 (21.6)	3.025 (0.370-24.722)	0.302
Living male children					
0	64 (100.0)	57 (89.1)	7 (10.9)	1	
1-2	239 (100.0)	208 (87.0)	31 (13.0)	1.214 (0.508-2.900)	0.663
3-4	21 (100.0)	15 (71.4)	6 (28.6)	3.257 (0.952-11.142)	0.060
Living female children					
0	101 (100.0)	87 (86.1)	14 (13.9)	1	
1-2	203 (100.0)	179 (88.2)	24 (11.8)	0.833 (0.411-1.690)	0.613
3-4	20 (100.0)	14 (70.0)	6 (30.0)	2.663 (0.877-8.085)	0.084

Table 3: Association of other miscellaneous variables with anxiety disorders among homemakers

Variable	Frequency (%)			Unadjusted odds ratio	
	Total	No Anxiety	Anxiety	Odds ratio (95% CI)	P
Substance abuse in family					
Not present	277 (100.0)	244 (88.1)	33 (11.9)	1	
Present	47 (100.0)	36 (76.6)	11 (23.4)	2.259 (1.049-4.864)	0.037
Perceived economic stability					
Present	214 (100.0)	199 (93.0)	15 (7.0)	1	
Not present	110 (100.0)	81 (73.6)	29 (26.4)	4.750 (2.419-9.326)	0.000
Family relations					
Good	291 (100.0)	262 (90.0)	29 (10.0)	1	
Discord with in-laws	18 (100.0)	13 (72.2)	5 (27.8)	3.475 (1.156-10.443)	0.027
Discord with husband	15 (100.0)	5 (33.3)	10 (66.7)	18.069 (5.779-56.479)	<0.001
Reasons related to children					
Nil [#]	136 (100.0)	125 (91.9)	11 (8.1)	1	
Health issues	12 (100.0)	8 (66.7)	4 (33.3)	5.682 (1.474-21.901)	0.012
Education	105 (100.0)	86 (81.9)	19 (18.1)	2.511 (1.137-5.541)	0.023
Future wrt* Job, livelihood, marriage	71 (100.0)	61 (85.9)	10 (14.1)	1.863 (0.750-4.625)	0.180
Disease in family					
Nil	232 (100.0)	212 (91.4)	20 (8.6)	1	
Self/husband	47 (100.0)	29 (61.7)	18 (38.3)	6.579 (3.121-13.869)	<0.001
Any other member	45 (100.0)	39 (86.7)	6 (13.3)	1.631 (0.616-4.320)	0.325
Self-image					
Satisfactory	280 (100.0)	245 (87.5)	35 (12.5)	1	
Unsatisfactory	44 (100.0)	35 (79.5)	9 (20.5)	1.800 (0.798-4.061)	0.157

[#]Includes women with no living children. *With respect to

In this study, both women and husband's education was protective against the presence of anxiety, although the result was not significant in multivariate analysis. Studies

by Fahey *et al.*,^[20] Johansson *et al.*^[11] and Noorbala *et al.*^[12] also reported the prevalence of mental disorders, including anxiety to be greater among illiterates. The reason may

Table 4: Predictors of anxiety disorder among homemakers

Variable	Adjusted Odds Ratio	
	Odds ratio (95% CI)	P
Women's education		
Illiterate and primary	1	
middle and sec./sen.sec.	0.794 (0.268-2.346)	0.676
graduate and post-graduate	0.425 (0.069-2.625)	0.357
Husband's Education		
Illiterate and primary	1	
middle and sec./sen.sec.	1.611 (0.448-5.784)	0.465
graduate and post-graduate	5.404 (0.798-36.592)	0.084
Religion		
Hindu	1	
Others	2.774 (0.796-9.665)	0.109
Type of house		
Pucca	1	
Kuchha/Semipucca	0.493 (0.117-2.071)	0.334
Marital status		
Currently married	1	
Widow/Separated	1.343 (0.299-6.029)	0.700
Age at marriage		
<18 years	1	
18-20 years	0.491 (0.161-1.501)	0.212
21-23 years	0.362 (0.096-1.373)	0.135
24-26 years	0.209 (0.026-1.666)	0.139
>26 years	0.215 (0.017-2.738)	0.236
Living male children		
0	1	
1-2	1.306 (0.378-4.512)	0.673
3-4	2.152 (0.323-14.342)	0.428
Living female children		
0	1	
1-2	0.189 (0.062-0.579)	0.004
3-4	0.434 (0.065-2.918)	0.391
Substance abuse in family		
Not present	1	
Present	2.628 (0.843-8.194)	0.096
Perceived economic stability		
Present	1	
Not present	4.278 (1.498-12.222)	0.007
Family relations		
Good	1	
Discord with in-laws	11.504 (2.385-55.489)	0.002
Discord with husband	20.219 (4.340-94.203)	<0.001
Reasons related to children		
Nil	1	
Health issues	31.14 (3.778-256.64)	0.001
Education	2.532 (0.853-7.520)	0.094
Future wrt job, livelihood, marriage	1.349 (0.397-4.584)	0.631

Contd...

Table 4: Contd...

Variable	Adjusted Odds Ratio	
	Odds ratio (95% CI)	P
Disease in family		
Nil	1	
Self/husband	10.353 (3.630-29.526)	<0.001
Any other member	0.902 (0.175-4.654)	0.902
Self-image		
Satisfactory	1	
Unsatisfactory	1.008 (0.297-3.420)	0.917

be already restricted social means and the inability to use effective coping techniques against taxing situations among less educated.

No significant difference was seen in the presence of anxiety symptoms among women having nuclear or joint families. Bansal *et al.* also reported similar findings in Punjab^[21], but a study from Pakistan by Mirza and Jenkins^[22] reported women living in a joint family to have a higher risk of developing mental disorders. The difference may be attributed to the different social and cultural beliefs of the two countries. Although Maideen *et al.*^[13] and Karmaliani *et al.*^[23] have quoted that poor housing and living conditions contribute to anxiety, no significant relation could be found in our study.

Anxiety was more common among widowed or separated women than in currently married women although not significant. A similar finding is reported in other studies.^[12,13,24] Higher age at marriage was seen to be significantly protective against anxiety in univariate analysis. Bansal *et al.* found moderate anxiety more among women married before 18 years.^[21] Shabbir *et al.* also concluded that females who got married at a later age had low scores on the anxiety scale.^[25] Women who marry late, marry at their own discretion, they are more mature and therefore are more likely to settle in the new environment.

More living children acted as a risk factor for anxiety in homemakers, especially in the case of more living males, although not significant. Interestingly, women with one or two female children had significantly lesser chances of having anxiety symptoms. A similar finding was reported in a study from Tanzania.^[24] As assessed during the interviews, women with girl children get helping hands in household chores; also there is like-mindedness of gender to share their ideas and feelings with grown-up daughters. Anxiety increases with more male children as boys are more likely to fall prey to bad company and addictions.

The odds ratio was significantly higher among women whose family had a substance abuse problem. Solati and Hasanpour-Dehkordi have reported GAD to be the second most frequent psychological disorder, among members with the problem of substance use in the family.^[26] The

impact of substance use is felt by the whole family, and housewives are no exception.

The odds of suffering from anxiety were five times in women who thought their family to be financially insecure. Being monetarily limited instills fear of an unstable future, which is compounded by helplessness for not being able to contribute to family income, thereby increasing anxiety. Maideen *et al.* and Duran *et al.* observed anxiety to be higher in the presence of financial constraints and debt.^[13,27]

Women with problematic relations with in-laws and husbands had more probability of developing anxiety. A similar result was found in a study from Malaysia. Unhappy relationships with children, family, and unhappy relationships with a spouse were the strongest events that caused anxiety among participants in that study.^[13]

Anxiety disorder was significantly higher if the woman or her spouse had some health problems. Similar results have been reported by Maideen *et al.* and Duran *et al.*^[13,27] Health status of children was also a major contributor to the development of anxiety among their mothers (study participants). Suffering from anxiety was also high in women who had special concerns about their children's education, job, marriage, and livelihood, although not statistically significant.

Self-image was not found to contribute to anxiety. In a study by de Jong, too, results provide no clear support for the idea that self-esteem plays a role in social anxiety.^[28]

Strengths

This study is a community based with systematic random sampling with proportionate allocation representing all the study areas. To the best of our knowledge, this is the first such study in the Kumaon region of Uttarakhand. As very few studies have tried to determine determinants of anxiety in homemakers that too in community settings with relatively large sample sizes; this study provides very crucial information in filling this gap in the literature.

Limitations

Being a cross-sectional study, any cause and effect of the relationship cannot be assumed. Also, the findings are based on self-reported data which could have cultural influences. As the symptoms of anxiety can be present in other mental disorders, the prevalence of anxiety may have been overestimated.

Conclusion

Anxiety disorders are a significant mental health problem afflicting 13.6% homemaker women in the Kumaon region of Uttarakhand, India. Significant determinants of anxiety disorders identified in our study include poor relationships among family members, health issues or substance abuse in the family members, and perceived economic instability. These factors if encountered in the community or clinical

practice should prompt the health care personnel to assess for anxiety symptoms and provide adequate counseling, treatment and/or referral as appropriate, for timely management of mental disorders. Peripheral health workers like Accredited Social Health Activist (ASHA) or Auxiliary Nurse Midwife (ANM) may be trained to equip them with the capability to suspect mental health disorders in general and anxiety disorder in particular and provide counseling or referral as appropriate.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

Received: 08 Mar 19 **Accepted:** 03 Jan 20

Published: 05 Jul 21

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