

PREVALENCE AND EFFECTS OF ANXIETY RELATED NECK PAIN & DISABILITY IN HOUSEWIVES

Original Research

Ayesha Yousaf¹, Kashaf Razaq², Hajra Shahid³, Wajeeda Fatima³, Rabia Islam⁴, Fidra Tahir Sherazi⁵, Zarish Younas^{6*}

¹DPT, MS-CPPT, Gulab Devi Institute of Physiotherapy, Gulab Devi Educational Complex, Lahore, Pakistan.

²Bachelors in Physical Therapy, Gulab Devi Institute of Physiotherapy, Gulab Devi Educational Complex, Lahore, Pakistan.

³DPT, Gulab Devi Institute of Physiotherapy, Gulab Devi Educational Complex, Lahore, Pakistan.

⁴DPT Bachelor's, Gulab Devi Institute of Physiotherapy, Gulab Devi Educational Complex, Lahore, Pakistan.

⁵DPT, MS-NMPT, Gulab Devi Institute of Physiotherapy, Lahore, Pakistan.

⁶Doctor of Physiotherapy, Johar Institute of Professional Studies, Pakistan.

Corresponding Author: Zarish Younas, Doctor of Physiotherapy, Johar Institute of Professional Studies, Pakistan. dr.zarishyounas@gmail.com

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ABSTRACT

Background: Housewives frequently experience anxiety-related neck pain and disability due to prolonged stress, improper posture, and repetitive household tasks. The interaction of psychological distress and muscle tension contributes to chronic pain, significantly affecting daily activities. Anxiety-induced musculoskeletal pain can impair concentration, work efficiency, and social engagement, leading to long-term functional limitations. Identifying the prevalence and impact of anxiety-related neck pain is essential for improving quality of life and developing targeted interventions.

Objective: To determine the prevalence and effects of anxiety-related neck pain and disability among housewives.

Methods: A cross-sectional study was conducted on 216 housewives, selected based on specific inclusion and exclusion criteria. Participants aged 17–55 years were recruited using a convenience sampling technique. Those with menopausal status, carcinoma, congenital disorders, psychological conditions, joint deformities, or soft tissue pathologies were excluded. The Generalized Anxiety Disorder-7 (GAD-7) and Neck Disability Index (NDI) questionnaires were used as assessment tools. Ethical approval was obtained, and informed consent was taken. The study was conducted from August 2020 to February 2021. Data were analyzed using SPSS version 22, with a p-value <0.05 considered statistically significant.

Results: The mean age of participants was 31.35±8.75 years. A significant association was found between anxiety symptoms and functional limitations. Feeling nervous correlated with concentration difficulty ($p<0.005$), while excessive worrying was linked to reading impairment ($p=0.000$) and headache frequency ($p=0.001$). Trouble relaxing showed a significant impact on reading ability ($p=0.000$), and being restless was associated with concentration problems ($p=0.003$), recreation limitations ($p=0.006$), and pain intensity ($p=0.003$). Irritability was significantly linked to reading difficulties ($p=0.000$) and recreation limitations ($p=0.007$). Work-related challenges were significantly associated with reading difficulties ($p=0.000$) and concentration impairment ($p=0.001$).

Conclusion: The findings suggest that anxiety significantly contributes to neck pain and functional disability among housewives. Anxiety symptoms not only lead to musculoskeletal discomfort but also impact cognitive functions and social interactions. Addressing anxiety-related physical health issues through early intervention and integrated treatment approaches may help mitigate disability and enhance overall well-being.

Keywords: Anxiety, Disability Evaluation, Housewives, Mental Health, Neck Pain, Postural Disorders, Quality of Life.

INTRODUCTION

Anxiety and its associated mental health disorders are among the most frequently overlooked psychiatric conditions affecting both men and women. These disorders have been recognized as a significant global health concern, with their prevalence steadily increasing over time. Current estimates suggest that approximately 14% of the global population experiences anxiety-related disorders, with a notably higher incidence among women compared to men (1,2). Anxiety is not a singular condition but rather a spectrum of disorders, including Social Anxiety Disorder (SAD), Generalized Anxiety Disorder (GAD), Obsessive-Compulsive Disorder (OCD), Panic Disorder, Post-Traumatic Stress Disorder (PTSD), and specific phobias (3,4). Despite the established gender differences in anxiety disorders, this aspect has received limited clinical attention. Existing literature highlights that women are more susceptible to certain anxiety disorders, such as SAD, than men (5). Neck pain is one of the most commonly reported musculoskeletal complaints, particularly among women. While mild neck pain often resolves spontaneously within days, a significant proportion—approximately 10%—progresses into chronic pain and physical disability. Individuals experiencing persistent neck pain are at an increased risk of developing anxiety and stress-related conditions (6). However, a comprehensive global assessment quantifying the prevalence of anxiety-related disorders among individuals suffering from chronic neck pain remains lacking. Several prognostic factors contribute to the persistence and severity of neck pain, including age, pain intensity, sex, history of previous injuries, duration of symptoms, concurrent low back pain, and age-related degenerative changes observed on radiographic imaging (7).

The evaluation of anxiety in patients experiencing musculoskeletal pain relies on standardized psychometric tools. Among them, the Generalized Anxiety Disorder-7 (GAD-7) questionnaire is widely regarded as a reliable and valid instrument for assessing anxiety symptoms in individuals with pain-related disorders. This tool consists of seven items, each rated on a four-point Likert scale (0–3), with total scores ranging from 0 to 21. Higher scores indicate greater severity of anxiety symptoms (8). To assess the extent of disability resulting from neck pain, the Neck Disability Index (NDI) is frequently employed. This self-reported measure comprises ten items evaluating functional impairment due to neck pain, with higher scores reflecting greater disability. The NDI has demonstrated strong reliability, validity, and responsiveness in measuring disability among patients with neck pain (9,10). Given the rising prevalence of anxiety-related neck pain and its significant impact on daily functioning, it is essential to investigate the association between anxiety and neck disability in housewives. This study aims to determine the prevalence of anxiety-related neck pain and assess its impact on disability levels, thereby contributing to a deeper understanding of this multifaceted health issue.

METHODS

A cross-sectional study was conducted to assess the prevalence and effects of anxiety-related neck pain and disability among housewives. A total of 216 participants were recruited using a convenience sampling technique. Housewives aged between 17 and 55 years residing in Lahore were included in the study. Participants with a history of menopause, carcinoma, congenital disorders, diagnosed psychological illnesses, joint deformities, or soft tissue pathologies were excluded to ensure a homogenous sample and minimize confounding variables. Ethical approval was obtained from the relevant institutional review board (IRB), and informed consent was taken from all participants before data collection. Data collection was carried out between August 2020 and February 2021 using validated assessment tools. The Generalized Anxiety Disorder-7 (GAD-7) questionnaire was employed to assess anxiety levels, while the Neck Disability Index (NDI) was utilized to evaluate neck pain-related disability. The GAD-7, a widely recognized screening tool, consists of seven items scored on a four-point Likert scale (0–3), with total scores ranging from 0 to 21, where higher scores indicate greater anxiety severity. Similarly, the NDI, a self-reported questionnaire, comprises ten items assessing functional impairment due to neck pain, with higher scores reflecting greater disability.

Statistical analysis was conducted using SPSS version 22. Descriptive statistics, including mean and standard deviation for continuous variables and frequency distributions for categorical variables, were used to summarize the data. Inferential statistics, such as independent t-tests and chi-square tests, were applied to examine associations between anxiety levels and neck disability. The normality of data distribution was assessed before applying parametric tests, and a significance level of $p < 0.05$ was considered statistically significant.

RESULTS

The study included 216 housewives with a mean age of 31.35 ± 8.75 years, ranging from 17 to 58 years. The majority of participants (92.6%) belonged to the middle socioeconomic class, while 6.5% were from a high socioeconomic background, and only 0.9% were classified as low socioeconomic status. Assessment using the Generalized Anxiety Disorder-7 (GAD-7) questionnaire revealed that 24% of participants reported feeling nervous nearly every day, while 92% experienced nervousness on several days. Additionally, 74% struggled to stop worrying for several days, and 43% reported excessive worrying nearly every day. Regarding specific anxiety symptoms, 89% reported worrying about different things several days a week, while 46% and 51% reported experiencing this over half the days and nearly every day, respectively. Evaluation of neck pain-related disability using the Neck Disability Index (NDI) showed that 36.57% of participants reported no pain, while 29.17% had mild pain, 14.35% had moderate pain, 11.57% had fairly severe pain, 7.8% had very severe pain, and 0.46% reported the worst imaginable pain. In terms of functional limitations, 37.96% of participants could read with slight neck pain, whereas 2.77% could hardly read due to severe pain. Additionally, 40.28% experienced slight headaches infrequently, while 3.7% had headaches almost all the time. Concentration difficulties were reported by 31.48% of participants, while 3.7% were unable to concentrate at all. Analysis of work-related disability showed that 37.04% could perform their usual work, while 36.57% could work without any limitations. However, 19.44% could perform most of their usual tasks, and 0.46% were unable to work at all. In terms of driving ability, 46.43% could drive without neck pain, while 34.29% reported experiencing pain while driving. Statistical analysis demonstrated a significant association between worrying too much about different things and pain intensity ($p=0.003$), reading difficulty ($p=0.000$), and headache frequency ($p=0.001$). However, no significant associations were observed between excessive worrying and personal care ($p=0.008$) or lifting ability ($p=0.044$).

Table 1: Age of Participants

Mean	31.3472
Std. Deviation	8.75160
Minimum	17.00
Maximum	58.00

Table 2: Socioeconomic Status

	Frequency	Percent
Low	2	.9
Middle	200	92.6
High	14	6.5
Total	216	100.0

Table 3: Worrying Too Much About Different Things * Pain Intensity

		Pain Intensity at the moment						Total	P value
		I have no pain	The pain is very mild	The pain is moderate	The pain is fairly severe	The pain is very severe	The pain is worst imaginable		
Worrying too much about different things	not at all	13.9%	20.6%	9.7%	8.0%	5.9%		13.9%	0.003
	several days	50.6%	36.5%	38.7%	40.0%	17.6%	100.0%	41.2%	
	over half days	24.1%	9.5%	32.3%	32.0%	17.6%		21.3%	
	nearly everyday	11.4%	33.3%	19.4%	20.0%	58.8%		23.6%	
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Table 4: Worrying Too Much About Different Things * Personal Care

		Personal care						Total	P value
		I can look after normally without causing extra pain	I can look after myself normally, but it causes extra pain	it is painful to look after myself and I am slow and careful	I need some help but can manage most of my personal care	I need help everyday in most aspect of self care	I do not get dressed with difficult and stay in bed		
Worrying too much about different things	not at all sure	18.3%	6.9%	4.8%	7.7%		25.0%	13.9%	0.008
	several days	47.3%	37.9%	42.9%	26.9%			41.2%	
	over half days	15.3%	34.5%	33.3%	26.9%	40.0%		21.3%	
	nearly everyday	19.1%	20.7%	19.0%	38.5%	60.0%	75.0%	23.6%	
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Table 5: Worrying Too Much About Different Things * Lifting

		Lifting						Total	P value
		I can lift heavy weights without extra pain	I can lift heavy weights but give extra pain	Pain prevents me lifting heavy weights off the floor, but I can manage if they are conveniently placed e.g on a table	Pain prevents me from lifting heavy wts but I can manage light to medium weights conveniently positioned	I can only lift very light weights	I cannot lift or carry anything		
Worrying too much about different things	not at all sure	25.0%	7.8%	17.2%	8.3%	3.1%	33.3%	13.9%	0.044
	several days	42.2%	51.6%	31.0%	37.5%	34.4%		41.2%	
	over half days	18.8%	18.8%	27.6%	25.0%	25.0%		21.3%	
	nearly everyday	14.1%	21.9%	24.1%	29.2%	37.5%	66.7%	23.6%	
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Table 6: Worrying Too Much About Different Things * Reading

		Reading						Total	P value
		I can read as much as I want to with no pain in my neck	Can read as much as I want to with slight pain in my neck	I can read as much as I want with moderate pain in my neck	I cannot read as much as I want because of moderate pain in my neck	I can hardly read at all because of severe pain in my neck	Cannot read at all		
Worrying too much about different things	not at all sure	28.6%	11.0%	10.3%	4.8%			13.9%	0.000
	several days	42.9%	52.4%	25.6%	23.8%	33.3%	41.7%	41.2%	
	over half days	14.3%	19.5%	33.3%	23.8%	50.0%	8.3%	21.3%	
	nearly everyday	14.3%	17.1%	30.8%	47.6%	16.7%	50.0%	23.6%	
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

Table 7: Worrying Too Much About Different Things * Headaches

		Headaches						Total	P value
		I have no headache at all	I have slight headache which comes infrequently.	I have moderate headache which comes infrequently	I have moderate headache which comes frequently	I have severe headache which comes frequently	I have headaches almost all the time		
Worrying too much about different things	not at all sure	33.3%	9.2%	11.1%	7.4%	15.8%		13.9%	0.001
	several days	33.3%	54.0%	30.6%	25.9%	36.8%	50.0%	41.2%	
	over half days	23.1%	16.1%	36.1%	18.5%	21.1%	12.5%	21.3%	
	nearly everyday	10.3%	20.7%	22.2%	48.1%	26.3%	37.5%	23.6%	
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	

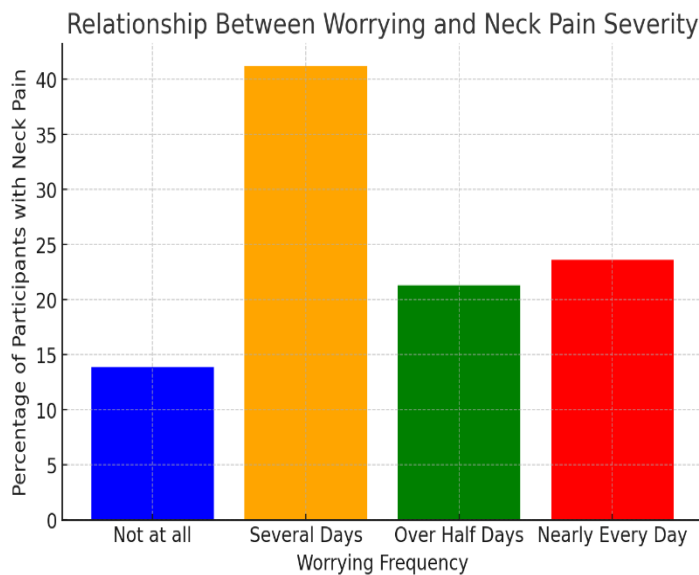


Figure 1 Relationship Between Worrying and Neck Pain Severity

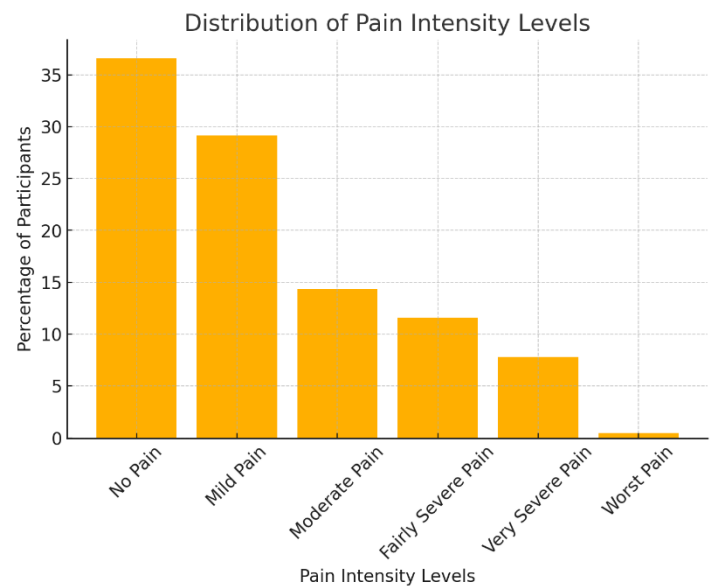


Figure 2 Distribution of Pain Intensity Levels

DISCUSSION

This study aimed to explore the correlation between anxiety and neck pain-related disability among housewives using the Generalized Anxiety Disorder-7 (GAD-7) and Neck Disability Index (NDI) questionnaires. The findings highlighted multiple significant associations, reinforcing the interplay between anxiety symptoms and musculoskeletal discomfort, particularly in relation to concentration, headaches, and reading difficulties. Existing literature has demonstrated that anxiety and depressive disorders are not strictly dependent on residential location. Previous research comparing urban and rural populations found no significant difference in the prevalence of anxiety and depression, suggesting that these conditions are influenced by multifaceted socio-environmental and personal factors rather than mere geographical distribution (11). However, studies have indicated that women living in rural areas may experience higher rates of depression due to factors such as lower literacy levels, separation, or divorce, while urban populations with lower socioeconomic status and unemployment show greater anxiety prevalence (12,13). The findings of this study align with these observations, as a significant association was found between anxiety and socioeconomic status.

A strong relationship was observed between anxiety and concentration difficulties, as well as neck pain. Previous studies have similarly concluded that anxiety and depression are strongly associated with musculoskeletal pain, including neck pain (14). The presence of anxiety-related neck pain has been shown to exacerbate nervousness, difficulty in concentration, and other cognitive impairments, further contributing to disability and reduced quality of life. Additionally, a significant relationship between anxiety and headaches was identified, supporting previous research that linked anxiety to increased headache severity using validated scales such as the Visual Analog Scale (VAS) and the Head Impact Test-6 (HIT-6) (15). Anxiety and depression have been associated with tension-type headaches, with a higher prevalence among individuals experiencing chronic headaches compared to those without such complaints. A significant association was also found between anxiety and reading difficulties. Prior research suggests that adults with and without dyslexia who exhibit reading difficulties tend to have higher anxiety levels, particularly among skilled readers (16). Similar findings were observed in this study, emphasizing the detrimental impact of anxiety on cognitive tasks. The inability to relax due to anxiety has been shown to negatively affect reading ability and overall academic performance. Additional research has demonstrated that children with anxiety disorders exhibit impaired reading fluency compared to their non-anxious counterparts, further underscoring the connection between psychological distress and cognitive function (17).

The strengths of this study include the use of validated assessment tools for both anxiety and disability, ensuring reliable measurement of the variables under investigation. The study also adds to the limited literature on the association between anxiety and neck pain disability, particularly among housewives, a population often underrepresented in research. However, certain limitations must be acknowledged. The cross-sectional design restricts the ability to establish causal relationships, as the directionality between anxiety and neck pain remains uncertain. Additionally, the use of a convenience sampling method may introduce selection bias, limiting the

generalizability of the findings. Self-reported questionnaires, although widely used, are subject to response bias, which may influence the accuracy of reported anxiety symptoms and disability levels (18-20). Future research should focus on longitudinal studies to determine the causal relationship between anxiety and neck pain-related disability. Incorporating objective measures such as physiological stress markers or imaging techniques could provide a more comprehensive understanding of the underlying mechanisms. Expanding the study population to include diverse occupational groups and age ranges would enhance the generalizability of findings and contribute to a more inclusive understanding of anxiety-related musculoskeletal disorders.

CONCLUSION

This study provides a deeper understanding of the association between anxiety and neck pain-related disability among housewives, highlighting its impact on daily functioning and overall well-being. The findings suggest that anxiety contributes to increased musculoskeletal discomfort, affecting concentration, social interactions, and personal responsibilities. These results emphasize the need for early identification and management strategies to address anxiety-related physical health concerns, ultimately improving the quality of life for affected individuals. Integrating psychological support with musculoskeletal rehabilitation may offer a more comprehensive approach to mitigating the burden of anxiety-induced neck pain and disability.

AUTHOR CONTRIBUTIONS

Author	Contribution
Ayesha Yousaf	Substantial Contribution to study design, analysis, acquisition of Data Manuscript Writing Has given Final Approval of the version to be published
Kashaf Razaq	Substantial Contribution to study design, acquisition and interpretation of Data Critical Review and Manuscript Writing Has given Final Approval of the version to be published
Hajra Shahid3	Substantial Contribution to acquisition and interpretation of Data Has given Final Approval of the version to be published
Wajeeha Fatima	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Rabia Islam	Contributed to Data Collection and Analysis Has given Final Approval of the version to be published
Fidra Tahir Sherazi	Substantial Contribution to study design and Data Analysis Has given Final Approval of the version to be published
Zarish Younas*	Contributed to study concept and Data collection Has given Final Approval of the version to be published

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