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Evaluating the Anxiety and Depression Level Among General Surgery Patients Attendants In Tertiary Care Hospital Lahore, Pakistan

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ABSTRACT

Background: *The hospitalization and surgical treatment of patients not only affect the individuals undergoing surgery but also place a considerable emotional and psychological burden on their attendants. Attendants often experience heightened levels of stress, anxiety, and depression due to concerns about the patient's health, possible complications, and outcomes. Understanding the relationship between the patient's health status and the mental well-being of their attendants is essential for providing holistic care and improving both patient and family outcomes.*

Purpose: *To evaluate the anxiety and depression level among the general surgery patient's attendants.*

Methods: *A cross-sectional descriptive study conducted in a tertiary care hospital with a sample of 53 attendants selected using simple random sampling. The levels of anxiety and depression have been assessed using validated scales Generlized Anxiety Disorder-7 and Patient Health Questionnaire-9. Data was analyzed using SPSS version 23.*

Results: *The findings of this study revealed that all depression and anxiety questions received favorable answers from the majority of respondents, with a score of (43%) depressive and (34%) anxiety symptoms. While 13% participants have no depression symptoms and (8%) have no anxiety symptoms.*

Conclusion: *The study concluded that majority of participants have experienced high level of anxiety and depression. These results highlight the need for targeted psychological support and interventions to address the mental health challenges faced by attendants in surgical settings.*

Background

Around 121 million individuals worldwide are currently depressed. Anxiety and depression account for over 90% of mental health disorders, with co-morbidity being widespread. Five of the top ten disorders causing the most disability-adjusted life years (DALYs) are mental in origin, including depressive disorders, which will rank second by 2020. Two-thirds of the affected persons live in developing nations, and this proportion is anticipated to grow. Pakistan is a developing country where 25% to 30% of the study population suffer from anxiety and sadness. (Murray et al., 2020). The self-reported changes in depression (4% to 10%) and high anxiety (5% to 20%) are less than these projections in the overall Canadian population, despite the difficulties in making direct comparisons (Dozois et al., 2021).

In China, the frequency of anxiety and depression discovered that 12.9% among surgery patient attendants was associated with considerably higher anxiety and depression in both adults and children (Silverberg et al., 2019). Another study on anxiety and depression During the first wave of COVID-19, 84 attendants of Alberta residents reported a five-time rise in self-reported moderate-severe anxiety (measured with the State Anxiety Scale) (Anderson et al., 2021). A study in Central India focused on the family members of individuals with mouth cancer. According to the study, a large proportion of attendants suffered depressive symptoms: 22.9% had mild depression, 27.7% had moderate depression, and 13.3% had severe depression. Anxiety was reported by 34.1% of attendees as mild, 32.9% as moderate, and 2.4% as severe. 45.8% reported moderate stress levels, while 27.7% reported high stress levels (Ferlay et al., 2020). In a study conducted in Pakistan, the frequency of depression in attendants of surgery patients was found to be 33.4%. This was connected with low financial position, unemployment, and marital status (Saeed et al., 2021).

Anxiety is a natural stress response marked by excessive worry, anxiety, or apprehension about future uncertainties. When it persists, becomes overwhelming, and gets in the way of everyday activities, it is considered a disorder. Anxiety disorders are generalized anxiety disorder (GAD), panic disorder, and social anxiety disorder (APA et al., 1980). Major depressive disorder is a common mental illness characterized by feelings of worthlessness or hopelessness, changes in eating or sleep patterns, exhaustion, and a chronic melancholy. It has a major impact on day-to-day activities and life quality (Salik et al., 2022). Anxiety disorders typically manifest as restlessness, fear, and symptoms like palpitations and exhaustion (Labrague et al., 2020).

Depression is distinguished by chronic pessimism, low self-esteem, and suicide ideation (Xie et al., 2020). Major depressive disorder (MDD) is commonly followed by decreased strength and focus, feelings of sadness, hopeless, depressed mood, food and sleep disorders, and feelings of guilt and self-blame (Lu et al., 2023). As the primary point of contact with patients, doctors and nurses are responsible for their health and care. However, the unpredictable daily work conditions, demanding responsibilities, and care for emergency patients create highly stressful environments for these medical professionals who may suffer from depression, anxiety, and other psychological issues (Sexton et al., 2022). An attendant is a person who cares for a chronically ill patient. An informal attendant meets the patient's physical, mental, and financial requirements without compensation. They can be family members or acquaintances, whereas formal attendants are paid and professionally appointed. Attendants of general surgery patients must administer medicines on time, monitor their diet, and bring their patients to clinic follow-ups while preserving their lifestyle (Adejumo et al., 2019).

Anxiety and depression are two of the most prevalent mental disorders, affecting millions of individuals around the world. Anxiety and depression can cause physical health problems, social isolation, and a decline in quality of life. In severe circumstances, fear and depression can result in suicide thoughts and behaviors (Sadowska et al., 2021).

On Mental Health Day, chronically ill patients, such as those with end-stage renal disease, are typically married and range in age from middle to elderly. Their companions are generally spouses of comparable ages; the majority of them are unwell, have no community connections, and are financially restricted. Such obligations can lead to sadness, unsatisfactory well-being, and stress, all of which have a negative impact on their level of living, making it lower than the general population. It is similar to the attendants of other chronic illnesses; therefore they are frequently referred to as hidden patients (Hoang et al., 2019).

A number of factors contribute to stress and depression in attendants, such as low educational attainment, advancing age, the ability of the attendant to care for patients, comorbid conditions such as ischemic heart disease (IHD), irregular office hours for those who work, taking time off, losing their jobs, retirement, family financial circumstances, having children, and comorbidities (Gerogianni et al., 2021).

Purpose

To evaluate the level of anxiety and depression among general surgery patients attendants.

Significance

Supported attendants can provide better care and support to patients, leading to improved patient outcomes. When attendants are supported, patients tend to be more satisfied with their care. By supporting attendants, nurses can improve their overall quality of life, enabling them to care for their loved ones more effectively. Organization helps attendants to allocate time effectively, ensuring they can attend to their loved ones needs. By promoting mental health awareness and support, policy makers can help attendants manage anxiety and depression. Stakeholders can help reduce stress and anxiety in attendants by providing resources and guidance.

Research Question

What is the level of anxiety and depression among general surgery patients' attendants?

Materials & Methodology

Null Hypothesis (H_0)

There is no significant relation between anxiety and depression level among general surgery patients attendants.

Alternative Hypothesis (H_1)

There is significant relation between anxiety and depression level among general surgery patients attendants.

Objectives

To evaluate the anxiety and depression level among the general surgery patients attendants.

Study Design

The descriptive cross-sectional study that was conducted used a questionnaire based on the evaluation of anxiety and depression level among the general surgery patients attendants.

Study setting

The study was conducted in a teaching hospital Lahore.

Study population

The study population consists of general surgery patients attendants.

Duration

The study duration was six months from November 2024 to April 2025.

Sample size

Sample sizes of 53 attendants from a teaching hospital, Lahore, were selected for this research. Confidence level on this population size was 95%.

Formula use for this calculation was:

$$n=\frac{Z^2_{1-\partial\div 2}(1-P)}{d^2}$$

z-= confidence level [95%]

P= anticipated population portion [0.066]

d= absolute precision required [0.05]

Research /Sampling Strategy

In this study all the attendants of surgery ward was participate through simple random sampling. The simple random sampling is most basic probability sampling design. In simple random sampling the sampling frame is established by the researchers. In which the list of elements from which the sample was be choosen and all the participants have equal opportunities of selection.

Sample Selection

The criteria for inclusion and exclusion will guide the sample selection process.

Inclusion criteria

- The attendants of general surgery patients in Arif Memorial Teaching Hospital.
- Willingness to participate in the study of general surgery patients attendants.

Exclusion criteria

- The study was not conduct the data from Nurses and Healthcare providers.
- The study was not conduct by Medical ward and OPD attendants of Arif Memorial Teaching Hospital.

Methodology

Data Collection Procedure

The data was collected from the recruited participants after briefing the study's description including objective, significance, potential benefits, and risks. Researchers explained the questionnaire after providing the attendants and set 30 minutes, time for responses and then collect the data in safe files.

Data Collection Tool

The Patient Health Questionnaire 9-item depression scale (PHQ-9) The PHQ-9 is a 9-item questionnaire that assesses the severity of depressive symptoms Patients rate each item from 0 (not at all) to 3 (nearly every day), and scores range from 0 to 27. Higher scores indicate more severe depression. Generalized Anxiety Disorder scale (GAD-7) The GAD-7 is a 7-item questionnaire that assesses the severity of anxiety symptoms. Patients rate each item from 0 (not at all) to 3 (nearly every day), and scores range from 0 to 21. Higher scores indicate more severe anxiety is among the best validated and most commonly used depression and anxiety measures. They have been used in hundreds of research studies, incorporated into numerous clinical practice guidelines, and adopted by a variety of medical and mental health care practice settings.

Validity & Reliability

The tool of data collection was distributed in three experts to test the content validity; modification was executed according to the expertise recommendation on clarity of sentences and the suitability. Reliability analysis showed that the PHQ-9 items were highly consistent, Cronbach alpha=0.86.The GAD-7 also demonstrated good internal consistency, Cronbach alpha=0.91.

Statistical Analysis

During the data analysis process, descriptive and inferential statistics will be performed using SPSS software. Frequency, mean, and standard deviation anxiety and depression level scores as well as demographic characteristics will be determined using descriptive statistics.

Ethical Considerations

All participants provided informed consent permission, and study was conducted in accordance with the guidelines established by the teaching hospital Lahore ethical committee, respecting their rights .Confidentiality of all information and data gathering maintained.

- All study participants maintain their anonymity. The subjects were advised that there are no risks or disadvantages associated with the study method.
- They also told them that they could leave the study at any point while it was ongoing.
- This research is not known to pose any risks.
- The privacy of the participants will be safeguarded.
- It is entirely voluntary to take part in this research project.
- Participant has the option to option out of the activity and to change your mind at any moment.

Results

Table 1: Demographic Characteristics of the General Surgery Patients Attendants

Description	Frequency	Percentage
Age		
20-29years	19	36%
30-39years	18	34%
40-49years	10	19%
Above 50	6	11%
Marital status		
Married	34	64%
Unmarried	19	36%
Gender		
Male	27	51%
Female	26	49%
Locality		
Rural	19	36%
Urban	34	64%

Demographic characteristic is shown in table 1. Majority of participants 19 (36%) have age ranges between 20 to 29 years. Thirty- four (64%) were married and nineteen (36%) were unmarried. Twenty-seven (51%) were male and twenty-six (49%) were female. Thirty-four (64%) were urban and nineteen (36%) were rural.

Table 2: Depression level among General Surgery Patients Attendants

Depression	**Not at all**	**Several days**	**More than half the days**	**Nearly every day**
1. Little interest or pleasure in doing things.	20 (37.7%)	12 (22.6%)	12 (22.6%)	9 (17.0%)
2. Feeling down, depressed, or hopeless.	6 (11.3%)	15 (2.3%)	18 (34.0%)	14 (26.4%)
3. Trouble falling or staying asleep, or sleeping too much.	7 (13.2%)	8 (15.1%)	17 (32.1%)	21 (39.6%)
4. Feeling tired or having little energy.	2 (3.8%)	16 (30.2%)	20 (37.7%)	15 (28.3%)
5. Poor appetite or overeating.	4 (7.5%)	18 (34.0%)	19 (35.8%)	12 (22.6%)
6. Feeling bad about patient– or that he/she is a failure or have let himself/herself or his/her family down.	7 (13.2%)	15 (28.3%)	17 (32.1%)	14 (26.4%)
7. Trouble concentrating on things, such as reading the newspaper or watching television.	3 (5.7%)	20 (27.7%)	14 (26.4%)	16 (30.2%)
8. Moving or speaking so slowly that other people could have	1 (1.9%)	24 (45.3%)	19 (35.8%)	9 (17.0%)

noticed. Or the opposite – being so fidgety or restless that you have been moving around a lot more than usual.				
9. Thoughts that you would be better off dead, or of hurting yourself in some way.	11 (20.8%)	12 (22.6%)	18 (34.0%)	12 (22.6%)

Depression Categories	
Mild Depression	13%
Moderate Depression	23%
Moderately Severe Depression	43%
Severe Depression	21%

Table 2 shown that majority of respondent (43) have experience moderately severe depression ratio (43%),while (13) participant have mild depression experience (13%). However (23) respondent report moderate depression (23%),whereas (21) participant have experience severe depression (21%).

Table 3: Anxiety level among the General Surgery Patients Attendants

Anxiety	**Not at all sure**	**Several days**	**Over half the days**	**Nearly every day**
1. Feeling nervous, anxious, or on edge.	2 (3.8%)	19 (35.8%)	14 (26.4%)	18 (34.0%)
2. Not being able to stop or control worrying.	1 (1.9%)	18 (34.0%)	13 (24.5%)	21 (29.6%)
3. Worrying too much about different things.	4 (7.5%)	11 (20.8%)	20 (37.7%)	18 (34.0)
4. Trouble relaxing.	4 (7.5%)	18 (34.0%)	16 (30.2%)	15 (28.3%)
5. Being so restless that it's hard to sit still.	3 (5.7%)	16 (30.2%)	17 (32.1%)	17 (32.1%)
6. Becoming easily annoyed or irritable.	3 (5.7%)	16 (30.2%)	12 (22.6%)	22 (41.5%)
7. Feeling afraid as if something awful might happen.	12 (22.6%)	15 (28.3%)	12 (22.6%)	14 (26.4%)

Anxiety Categories	
Mild anxiety	8%
Moderate anxiety	31%
Moderately severe anxiety	28%
Severe anxiety	34 %

Table 3 show that the majority of respondent 34 have experience severe anxiety ratio (34%), while 8 participant have mild anxiety experience (8%).However 31 respondant report moderate anxiety (31%), whereas 28 participant have experience moderately severe anxiety.

Discussion

The majority of responders to the current survey were unaware of Anxiety and Depression symptoms. We studied assess the anxiety and depression level using descriptive cross-sectional research methods. Our main goal was to collect information regarding the assess of anxiety and depression level among the attendants .Of the 53 participants, majority of respondents 19(36%) have age ranges between 20 to 29 years. Thirty-four (64%) were married and nineteen (36%) were unmarried. Twenty-seven(51%) were male and Twenty-six (49%) were female. And 43% depressive symptoms, and 34% anxiety symptoms, 23 were moderate depressive symptoms and 13% no symptoms of depression, 31% were moderate anxiety symptoms, and 8% were no anxiety symptoms.

Our findings support past research showing the highest levels of anxiety and despair are found among those who accompany patients undergoing general surgery. According to Chaplin et al. (2022) attendants experience anxiety and depression 79.1%, whereas 18% were female. According to Qarah et al. (2022) the participants 209 males (51%) and 198 females (49%).There were 165 participants, 41% of whom were 26 years old. According to Ali et al. (2020) the study revealed that 55% were females and 50.7% aged between 26 and 44 years and 29.9% were single and 44.3% were unemployed.

According to Adejumo et al. (2019), caregivers experienced 31.6% anxiety and 31.6% depression. Also, 49.1% of caregivers reported mild to moderate caregiving load, while 33.3% reported a high score. Female caregivers also had greater depression scores. Manhas et al. (2019) In this study, depression was found in 80.8% of attendants from rural backgrounds, compared to 63.5% of those from urban backgrounds. This may be because people in rural areas were more likely than those in urban areas to suffer from depression.

Furthermore, this study supported a study by Parchani et al. (2020) that found a significant prevalence of anxiety and depression among attendees, with estimates ranging from 23.2% to 30.5%. Pal et al. (2020) found that 92.6% and 76% of participants, respectively, suffered from anxiety and depression. Using the Hospital Anxiety and Depression Scale (HADS), the study's prevalence of depression among attendants of patients hospitalized to the intensive care unit was 68%.

Conclusion

The study concluded that majority of participants have experienced high level of anxiety and depression. These results highlight the need for targeted psychological support and interventions to address the mental health challenges faced by attendants in surgical settings

The conclusion of the study indicates that most of the people who participated were experiencing high levels of anxiety and depression. These individuals were attendants' likely family members or caregivers of patients in surgical settings. Being in a hospital, especially around surgery, can be extremely stressful due to uncertainty, fear of complications, and emotional exhaustion.

Because of these high levels of mental distress, the study emphasizes the importance of providing proper psychological support. This could include counseling services, stress management programs, or even just more emotional support from medical staff. Without these supports, the

mental health of these attendants may worsen, which can also affect their ability to care for the patients they accompany.

Limitation

The findings of this study are relatively limited because of descripted cross-sectional study.

Due to the shortage of resources this study was conducted in only one setting.

Because the anxiety and depression level the participants were not properly give their information.

One of the main difficulties during research was that we had no experience in research study before.

Recommendations

- The research sample should be conducted in different settings so that biases should be minimized.
- Implement different interventions such as counseling and stress management to further reduce anxiety and depression.
- Media play an effective role to explore many complex health problems and diseases related to anxiety and depression.
- Researchers should be trained to choose right sampling method and best research design in order to minimize the level of error.

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