Predictive Factors for Psychological Adjustment among Caregivers of Psychiatric Patients

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Abstract:

Background: Psychiatric disorders are become a high global prevalence. Caregiving responsibilities of mentally ill patients seriously affects family caregivers and causes a different problems and challenges such as stress, anxiety, depression, and burnout and a significant decrease in their psychological adjustment. **Aim:** The present study aims to investigate the predictive factors for psychological adjustment among caregivers of psychiatric patients. **Design**: A descriptive research design was utilized in this study. **Setting**: The study was conducted in the psychiatric outpatient clinic at Port Said Psychiatric Health Hospital and Addiction Treatment. **Subjects**: A purposive sample of 66 psychiatric patients' caregivers. **Tools:** The data collection tools consisted of Tool I: The Psychological Adjustment Scale, in addition to the Personal and Clinical Data Sheet of the studied caregivers. **The Results**: The current study revealed that more than two-thirds of the caregivers of psychiatric patients had a low level of psychological adjustment. Additionally, the study clarified that the age of psychiatric patients' caregivers, gender, education level, income, number of family members, and duration of caregiving was a statistically significant predictor factor with psychological adjustment score (p= 0.045, 0.030, 0.002, 0.034, 0.014, 0.026 respectively). **Conclusion**: The study concluded that age, gender, education, income, number of family members, duration of caregiving considers a predictive factor for psychological adjustment among studied caregivers of psychiatric patients. **Recommendations:** The study recommended that explore the long-term psychological effects of caregiving and identify more predictive factors influence caregiver mental health to provide future intervention strategies.

Keywords: Caregivers, Psychiatric illness, Psychological adjustment.

Background

Globally, over 450 million individuals suffer from mental disorders with projected increase by 2030 mostly in developing countries. There are increasing cases of mental disorders across all works

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of life and age range with depression being the most common with 300 million cases. In most developing countries, the conditions of living are far below standard, sources of psychological trauma and emotional upset are on the increase resulting in overwhelming rate of mental disorders across countries (Stanley, Chinedu, Ada, & Aguiyi, 2022). Psychiatric illness has a negative impact on the functioning of the entire family, because the family is seen as the primary caregiver and a pillar of support for mentally ill patients (Rahmani, Roshangar, Gholizadeh, & Asghari, 2022).

Caregivers are exposed to high levels of stress and many report feelings of social isolation, stigma, grief, shame, guilt, anger, and helplessness Besides this, additional challenges are brought on by unpredictable and problematic behaviors associated with the illness (e.g., hyperactivity, aggression, self-destructive behaviors) (Tyo & McCurry, 2020). Regardless of the age of the patient (e.g., children, adolescents, or adults), the caregiver role is associated with feelings of burden, health-related difficulties, and lower well-being (Tsai et al., 2021).

Caregiver burden is a concept that refers to the physical, emotional, and mental exhaustion or depersonalization a caregiver can experience and it has been shown to have a negative impact on both the caregiver and the patient (Radu et al., 2022). A study reported that 73.6% of the family caregivers of individuals with mental disorders suffered from moderate to high levels of mental strain which result in a significant negative effect on different aspects of family caregivers' lives, such as their quality of life, life expectancy, roles, and social interactions (Bagheriamiri, Mirsepassi, & Sayadi, 2024).

In Egypt, A study carried out at Assiut University Hospital showed that the most study caregivers of psychiatric patients (92.5%) suffered from moderate to severe burden (Ebrahim, Al-Attar, Gabra, & Osman, 2020). Psychological adjustment is crucial for caregivers to manage their caregiving burden. The psychological adjustment can be defined as the behavioral process through which individuals maintain a balance between their different needs and the obstacles of their environments. On the same line, the concept of psychological adjustment refers to an individual's state of mind and overall well-being. It reflects the relative adaptation of an individual to changing environmental conditions. The psychological adjustment not only states of happiness and satisfaction, but also the achievement of a balance in which the individuals able to adapt functionally with the both favorable and unfavorable situations, always within reasonable limits (Giraldo, 2020).

The peoples with high levels of psychological adjustment tend to have a better ability to positively function in their daily lives. Researchers has shown that a higher positive psychological adjustment is

associated with increase satisfaction and quality of life and decreased stress, anxiety, and depression (Arslan, Yıldırım, & Zangeneh, 2022).

Significance of the study

Caring for patients with mental disorders places an enormous burden on family caregivers and has been shown to have a significant effect on the family's well-being. So, the caregivers often experience high levels of stress, anxiety, and depression due to the constant demands of looking after individuals with psychiatric conditions. This study can provide valuable insights into how caregivers cope with these challenges and identify specific factors that influence their psychological well-being, and adjustment such as social support, coping mechanisms, and personal resilience.

By investigating the psychological adjustments of caregivers, this research can inform the interventions that reducing caregiver burden and improving mental health outcomes. The findings can guide the development of support programs, training, and resources that promote healthy coping strategies and reduce negative psychological impacts. Furthermore, understanding these psychological adjustments can help in creating policies that address the needs of caregivers, ultimately contributing to better care for both patients and caregivers in the psychiatric healthcare system. Therefore, the present study was conducted to investigate the predictive factors for psychological adjustment among caregivers of psychiatric patients

The Study Aim:

The aim of this study is to investigate the predictive factors for psychological adjustment among caregivers of psychiatric patients.

Research Objectives:

1. Assess levels of psychological adjustment among psychiatric patients' caregivers.
2. Find out the predictive factors for psychological adjustment among caregivers of psychiatric patients.

SUBJECTS AND METHOD

Research design:

A descriptive research design was utilized in the present study.

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Study setting:

This study was conducted in the psychiatric outpatient clinic at Port Said Psychiatric Health Hospital and Addiction Treatment. The hospital is affiliated with the General Secretariat of Mental Health and Addiction Treatment (GSMHAT), Ministry of Health. The psychiatric outpatient clinic was accessible all days of the week from 10 AM to 2 PM.

Study Subjects:

A purposive sample of psychiatric patients' caregivers (family members) who attended to the outpatient clinic with their psychiatric patients either for receiving the treatment or regular follow-up at Port Said Psychiatric Health Hospital and Addiction Treatment.

Inclusion criteria:

- Being responsible for providing direct care to psychiatric patients for at least one year.
- Age (not less than 30 years).
- Agree to participate in the study.

Sample Size:

The sample size was determined by the Epi-info 7 programs using the following parameters:

1. Population size =900 (The number of psychiatric patients' caregivers who repeatedly visit the outpatient clinic over a period of three months at Port Said Psychiatric Health Hospital and Addiction Treatment).
2. Expected frequency =50%
3. Acceptable error =10%
4. Confidence coefficient =90%

The program revealed that the sample size = **63** psychiatric patients' caregivers. Due to the expected dropout or non-participating rate of 5%, the final sample size was ⟹ **66** psychiatric patients' caregivers who attended the Port Said Psychiatric Health Hospital and Addiction Treatment.

So, the estimated sample size is 63, after adding the (5%) to avoid dropping out and/or incomplete responses or withdrawal, the final number for the sample size will be = 63 +3= **66** psychiatric patients' caregivers.

Tools for data collection:

The data collection instruments were used:

Tool I - The Psychological Adjustment Scale (PAS):

The psychological adjustment scale was developed by sari (1986). in the Arabic language to assess individual adjustment to psychological stressors. The psychological adjustment scale consisted of 40 items and was divided into four subscales, the first subscale assesses personal adjustment (1-9), and the second subscale assesses social adjustment (10-20). The third subscale assesses family adjustment (21-30), and the fourth subscale assesses emotional adjustment (31-40). This scale used a two-point type scale "yes" (1) and "no" (0). The scale comprising 20 positive items and 20 negative items as follows:

Positive items: 1, 3, 6, 7, 8, 12, 15, 16, 18, 19, 22, 23, 25, 27, 29, 31, 32, 34, 35, 40.

Negative(reversed) items: 2, 4, 5, 9, 10, 11, 13, 14, 17, 20, 21, 24, 26, 28, 30, 33, 36, 37, 38, 39.

Scoring System:

If the total score is less than 17; it is counted as a low level of psychological adjustment. If the total score is between 17 and less than 34; it is counted as a moderate level of psychological adjustment. If the total score is 34 and above, it is counted as a high level of psychological adjustment (Fateel, 2019)

Tool validity:

The psychological adjustment scale proved to be valid Fateel (2019) as the content validity of the translated tools was ascertained by a panel of experts of three specialists in the field of psychology**.**

Tool reliability:

The psychological adjustment scale proved to be reliable Fateel (2019) as Cronbach's Alpha coefficient was (0.765) which indicates that the scale demonstrates a satisfactory internal consistency.

In addition, the Personal and Clinical Data Sheet; was developed in Arabic language after a review of the literature by the researcher and was revised by supervisors. The personal data of psychiatric patients' caregivers includes (Age, gender, marital status, level of education, working status, residence, monthly income, number of family members, relationship between psychiatric patient & caregiver, and number of years for providing caregiving). As well as, clinical data; it includes: Medical health status, diagnosis of the psychiatric patient, and psychiatric family history.

Pilot study:

A pilot study was undertaken before starting the data collection phase. It was carried out on seven caregivers (10%) of the total sample of the studied caregivers of psychiatric patients who were selected randomly at Port Said Psychiatric Health Hospital and Addiction Treatment. The pilot study

was conducted from the first of October to the end of October 2022. The purpose of the pilot study was to test the applicability and feasibility of the study tools, and it served to estimate the time needed to complete the tools. It also helped to find out any obstacles and problems that might interfere with data collection. Based on the findings of the pilot study, the tools were applicable and clear. Thus, there are no modifications were made.

Ethical considerations:

Approval was taken from the Scientific Research Ethics Committee in the Faculty of Nursing at Port Said University. All ethical issues were taken into consideration during all phases of the study and were included: Approval was taken from the General Secretariat of Mental Health and Addiction Treatment after an explanation of the study's aim to conduct the study. In addition to this, written consent was taken from each participant (caregivers) after an explanation of the study aim and data collection process to be familiar with the importance of their participation. The studied caregivers were informed that their participation is voluntary, and they have the right to withdraw from the study at any time without rationalization. Additionally, all data collected from the studied subjects were processed in total confidentiality and used only for the purpose of the study.

Fieldwork:

Data collection was carried out at Port Said Psychiatric Health Hospital and Addiction Treatment from the beginning of November to the end of November 2022, in this stage, the researcher obtained official permission to carry out the study and visited the study settings, and arranged with the nursing director for the actual implementation of the study. The researcher met the psychiatric patients' caregivers who attended the outpatient clinic for receiving the treatment or regular follow-up at Port Said Psychiatric Health Hospital and Addiction Treatment two days/week (Monday and Tuesday). The orientation was done about the researcher's name, the purpose of the study, the content of the study tools, and finally obtaining the written formal consent to participate in the study. The researcher began to fill in the written pre-mentioned tools individually in the form of the Arabic language from psychiatric patients' caregivers, ranging from 8 to 9 members per day. The time needed for filling each one extended from 30 to 45 minutes, depending on the response of each caregiver. Finally, the studied caregivers were thanked for the effort and the time they offered.

Statistical design:

The collected data was organized, revised, stored, tabulated, and analyzed using SPSS for Windows version 20.0 (SPSS, Chicago, IL). Continuous data were normally distributed and are expressed as the

mean ± standard deviation (SD). Categorical data are expressed numbers and percentages. Data was presented using suitable tables and figures. The chi-square test (X^2) was used for comparison of variables with categorical data. Pearson's correlation coefficient was used to test the correlation between variables. Multiple linear regression (step-wise) was also employed to predict factors influencing the psychological adjustment levels. A significant level value was considered when the p-value ≤ 0.05 and highly statistically significant at P value ≤ 0.01.

The results:

Table 1: Reveals the personal characteristics of the studied psychiatric patients' caregivers, as shown, more than two-thirds of them (68.2 %) were female. As regards the caregivers' age, their age ranges between 30–63 years old, with mean ± S. D of 47.12±8.58, less than half of them (45.5%) were aged from 40 to less than 50 years old .According to their residence, less than three-quarters of the psychiatric patients' caregivers (71.2%) lived in the urban.

The same table shows that, 65.2% of the studied caregivers were working and 78.8% reported that their monthly income was not enough. The table also illustrates that, less than two-thirds of them (60.6%) their mothers consider the primary direct caregiver provider.

Table 2: Presents distribution of the psychiatric patients' caregivers according to clinical characteristics, the results revealed that, 56.1% of the studied caregivers had their patient diagnosed with schizophrenia. The table also clarifies that, 43.9% of the studied caregivers had a psychiatric family history and more than three-quarters of them (79.3%) were second-degree relatives.

Figure 1 Reveals the total psychological adjustment score among the caregivers of psychiatric patients, the figure clarifies that, a minority of caregivers (9.1%) had a high level of psychological adjustment. However, 66.7% had a low level of psychological adjustment.

Table 3: Presents the step wise multiple linear regression for predicting factors affecting psychological adjustment level among the caregivers of psychiatric patients. The result illuminates that the age of psychiatric patients' caregivers (40 - <50), gender (female), education level (university education), number of family members, and duration of caregiving (5years or more) was a statistically significant positive predictor for high psychological adjustment score (p= 0.045, 0.030, 0.002, 0.014, 0.026 respectively). While, the insufficient income, was a statistically significant positive predictor for low level of psychological adjustment (p= 0.034). The model explains 37% of the variation in

psychological adjustment, as shown by the value of r-square. Other caregiver's characteristics had no influence on the psychological adjustment score.

Table 1: Personal characteristics among the caregivers of psychiatric patients.

Personal Characteristics	Psychiatric patients' caregivers n=66	
	No.	%
Gender:		
Male	21	31.8
Female	45	68.2
Age/ years:		
30 - <40	12	18.2
40 - <50	30	45.4
50 - < 60	17	25.8
>60	7	10.6
Range **Mean ± SD**	**30-63** **47.12±8.58**	
Marital status:		
Single	7	10.6
Married	27	40.9
Widow	14	21.2
Divorced	18	27.3
Educational levels:		
Not read and write	6	9.1
Basic education	10	15.2
Secondary	27	40.9
University	23	34.8
Residence:		
Urban	47	71.2
Rural	19	28.8
Working status:		
Working	43	65.2
Not working	23	34.8
Monthly income:		
Enough	14	21.2
Not enough	52	78.8
Number of family members:		

3-4	38	57.5
5 and more	28	42.5
Range **Mean ± SD**	**3-8** **4.51±1.05**	
Relation between caregiver and psychiatric patient:		
Father	14	21.2
Mother	40	60.6
Brother/sister	7	10.6
Husband/wife	5	7.6
Duration for providing caregiving/years:		
2-<5	12	18.2
5 and more	54	81.8
Range **Mean ± SD**	**2-8** **5.06±1.65**	

Table 2: Clinical characteristics among the caregivers of psychiatric patients.

Clinical characteristics	**Psychiatric patients' caregivers** **n=66**	
	No.	**%**
Chronic medical condition:		
Yes	34	51.5
No	32	48.5
Psychiatric diagnosis:		
Schizophrenia	37	56.1
Mania	18	27.3
Depression	11	16.6
Psychiatric family history:		
Yes	29	43.9
No	37	56.1
Psychiatric family relation: N= 29		
First degree relative	6	20.7
Second degree relative	23	79.3

Levels of psychological adjustment
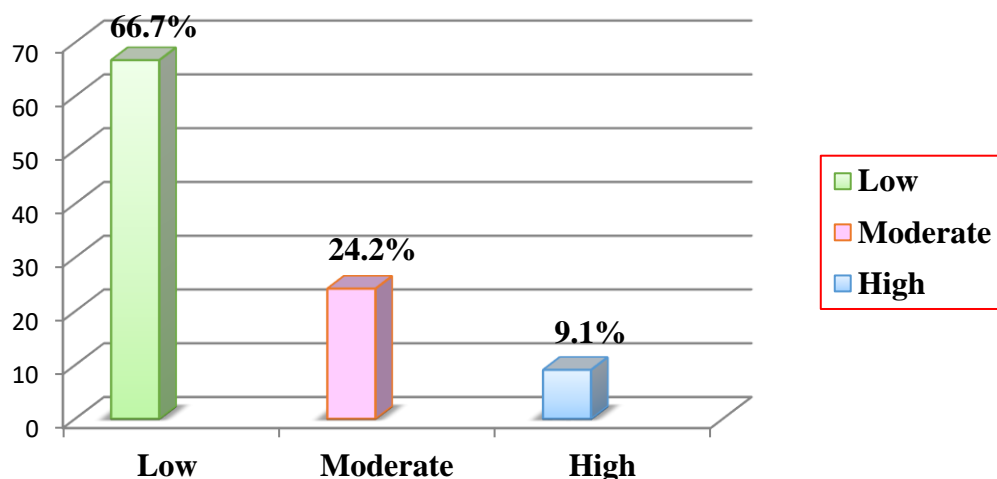
Figure (1): Total psychological adjustment levels among the caregivers of psychiatric patients (n=66)

Table 3: Step wise multiple linear regression for predicting factors that affect psychological adjustment level among caregivers of psychiatric patients (n=66).

Model	Unstandardized Coefficients		Standardized Coefficients	T	P. value
	B	Std. Error	Beta		
Constant	3.614	0.505		7.160	0.000*
Age (40 - <50)	0.205	0.113	0.332	1.819	0.045*
Gender (female)	0.494	0.221	0.423	2.238	0.030*
Educational levels (University education)	0.155	0.048	0.373	2.215	0.002**
Income (insufficient)	-0.556	-0.255	-0.510	-2.184	0.034*
Number of family members (3:4)	4.793	2.100	0.234	2.282	0.026*
Duration of caregiving (5years and more)	0.437	0.172	0.397	2.540	0.014*

a. Dependent variables: Total psychological adjustment score. **b. Predictors: (Constant) Variables entered and excluded**: Caregiver gender, age, marital status, education level, residence, working status, monthly income, number of family members, relation between caregiver and psychiatric patient, duration for providing caregiving, chronic medical condition of the caregiver, psychiatric diagnosis, psychiatric family history, psychiatric family relation, total positive thinking score. **R-square** = 0.375, **ANOVA**: **F** = 10.337, $p < 0.001$

* Statistically highly significant (*p* < 0.05). ** Statistically highly significant (*p* < 0.001).

Discussion:

Mental disorders are become a high global prevalence. Studies show that more than 60% of psychiatric patients who discharged from mental care settings return to their homes, almost 70% of patients with schizophrenia receive care mainly from their family members. Therefore, family caregivers are the main source of caregiving to patients with mental illness and have critical role in maintaining the continuity of care provision to them. Caregiving to patients with mental illness seriously affects   family caregivers and causes them different problems and challenges such as stress, anxiety, boredom, depression, and burnout. These problems and challenges are associated with heavy caregiver burden. A study reported that 73.6% of the family caregivers of individuals with mental disorders suffered from moderate to high levels of mental strain (Bagheriamiri, Mirsepassi, & Sayadi, 2024). Therefore the family caregivers of psychiatric patient require adequate support and training to improve their psychological Adjustment. So, present study was conducted to investigate the predictive factors for psychological adjustment among caregivers of psychiatric patients.

The finding of the present study denoted that, the majority of caregivers of psychiatric patients had a low level of psychological adjustment. This result indicates that a lack of support for the family caregivers to understand and accept their patients' illness, diminished ability to effectively manage their problems due to lack of problem-solving skills, and ability to make proper decisions which negatively result in a decrease of their psychological adjustment skills to everyday life challenges.

The results are approved with the results performed in the United States by Gurtovenko et al. (2021) who reported that, lower levels of psychological adjustment, were linked to severe psychological suffering, depression, stress anxiety, and poor quality of life. The result also is similar to a study conducted by Jiang et al. (2024) in China which mentioned that, more than two-fifths of the studied caregivers had high psychological adjustment scores with their psychiatric patient's condition obtained from the measurements.

The findings are consistent with a study conducted in Tanzania by Clari et al. (2022), which discovered statistically significant relationships between the caregivers' overall psychological adjustment and their level of education. The study also suggested that caregivers with lower levels of education were more likely to use maladaptive coping mechanisms and to exhibit higher levels of psychological distress, anxiety, and depression. Additionally, Zhou et al. (2021) conducted a study in

China to examine the associations between caregiving knowledge and skills with caregiver burden, psychological well-being, and coping styles among family caregivers of people living with schizophrenic patients, the study found that a significant proportion of family caregivers with higher levels of knowledge, experiences, and skills were typically university-educated caregivers who reported higher psychological well-being and high positive coping styles in all facets of daily life.

A low level of psychological adjustment was predicted by increase number of family members and insufficient income. It might be because low income considers a burden on caregivers and causes them to constantly worry, doubt, and be uncertain about their ability to provide care and meet the needs of their psychiatric patients from the other side maintaining a standard of living which contributes to feelings of security and life satisfaction. At the same time, an increase in the number of family leads to a greater physical and financial burden, so the caregivers are afraid regarding their future life needs, education, and employment.

The findings are confirmed by an Egyptian study conducted by Sebaie, Aziz, and Atia. (2024) to evaluate the effect of the intervention program on positive thinking, resourcefulness skills, and future anxiety among the caregivers of children with intellectual disability. The study found that caregivers with low incomes and those with more than three children in their family had higher levels of psychological distress and future anxiety.

Another positive predictor factor of a high psychological adjustment level was increase duration for providing caregiver. This could be due to the caregivers acquired more knowledge and expertise over time, including improved coping and problem-solving techniques. They are able to handle stress better, enhanced resourcefulness, which is associated with improved psychological well-being. These findings align with Fannick (2024), who discovered in the United States that longer duration of caregiving was linked to lower caregiver burden, better physical and mental health, and more psychological resilience among those who care for individuals with dementia. Furthermore, a study conducted in the United States of America found that in comparison to short-term caregivers, long-term caregivers who had been providing care for an average of 7.69 years were able to find meaning in their role. The study also found that longer care duration was associated with higher positive aspects of caregiving, the development of psychological resilience and positive adaptation, higher quality of life, and higher motivation in the role of providing care, even after controlling for perceived stress and strain from providing care (Liu, Marino, Howard, Haley, & Roth, 2023).

Conclusion:

Based on the findings of the present study, it can be concluded that:

More than two-thirds of the caregivers of psychiatric patients had a low level of psychological adjustment. Additionally, the study clarified that the age of psychiatric patients' caregivers, gender, university education level, number of family members, and duration of caregiving was a statistically significant positive predictor with psychological adjustment score. While, the insufficient income, was a statistically significant positive predictor for low level of psychological adjustment.

Recommendations:

Providing ongoing support, adequate guidance, and resources such as support groups or counseling services, which can help psychiatric patients' caregivers to maintain a positive mindset and develop constructive thinking skills to cope with their challenges. Additionally, the further research is necessary to explore the long-term psychological effects of caregiving and identify more predictive factors that could influence caregiver mental health to provide future intervention strategies.

Limitation of the Study:

There are certain limitations to this study. The sample size must first be increased. Second, it was not possible to apply the study in other health sectors, and this issue can lead to bias. To address this issue, further research should be done on a larger sample of family caregivers psychiatric patients in various settings in order to generalize the findings to overcome the concern of bias.

Declarations

Competing interests

The authors declare that they have no competing interests.

Consent for publication

Not applicable.

Availability of data and materials

Due to confidentiality concerns, the data and materials used in the current study cannot be made publicly available. However, they are available from the corresponding author upon reasonable request.

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Author contributions

NH planned the study and prepared the manuscript, Writing the original and final manuscript drafts, educational program training, and administration. AS Supervised, reviewed, and interpreted data, and the manuscript. AE Supervised, reviewed and interpreted data and the manuscript Conceptualization, Methodology, and Data Curation.

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