International Journal of Africa Nursing Sciences 13 (2020) 100223

Contents lists available at ScienceDirect

International Journal of Africa Nursing Sciences

journal homepage: www.elsevier.com/locate/ijans

Depression, anxiety, stress and coping strategies among family members of patients admitted in intensive care unit in Nigeria

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A B S T R A C T

Background: Hospitalization of a patient in the Intensive Care Unit (ICU) negatively affects the mental health of the family caregivers and they might eventually come up with psychological disorders. This study aimed to assess the relationship between depression, anxiety, stress and coping strategies of family members of hospitalized critically ill patients.

Methods: A descriptive study was conducted among 107 family members of patients admitted to ICU in Lagos State University Teaching Hospital. The Depression Anxiety Stress Scale (DASS-21) and Coping Inventory for Stressful Situation (CISS-21) were administered to the respondents. Data collected were analyzed using descriptive statistics, one-way analysis of variance and correlations statistics.

Result: The mean scores and standard deviation of the family members' stress level is 8.7 (SD = 4.4); anxiety 8.5 (SD = 3.9) and depression 1.3 (SD = 1.9); 41% were anxious and 10% were stressed. There was a significant negative correlation between task oriented coping strategies and the mental health factors (depression; $r = -0.193$, $p = 0.046$; anxiety $r = -0.456$, $p = 0.000$, stress $r = -0.485$, $p = 0.000$). Family members who utilized emotion oriented coping strategies reportedly experienced anxiety ($r = 0.450$, $p = 0.000$) and stress ($r = 0.564$, $p = 0.000$). Age, income, nature of the family types, residential area and the level of education influenced the level of emotional distress.

Conclusion: Patients' relatives of different socio-demographic characteristics such as age and family size experienced psychological distress and family members who used more task coping strategies experienced low level of depression, anxiety and stress.

1. Introduction

The Intensive Care Unit (ICU) environment is stressful and complex to cope with for the patients' families (Beesley et al., 2017; Tabakakis, Mcallister, Bradshaw, & To, 2019). Hospitalization of a patient in the ICU negatively affects the health of the family caregivers who might be diagnosed with psychological conditions (Hudson et al., 2013; Konstanti, Gouva, Dragioti, Nakos, & Koulouras, 2016; Mcadam & Puntillo, 2009; Tabakakis et al., 2019; Wartella, Auerbach, & Ward, 2009). A high prevalence of anxiety, depression and post-traumatic stress symptoms have been documented among families of critically ill patients (Beesley et al., 2017; Hudson et al., 2013; Wartella et al., 2009). It has been revealed that mental health care of family members of the patients in the intensive care unit is one of the major concerns for nurses to providing holistic nursing care in developed countries (Mcadam & Puntillo, 2009).

A study showed that thirty days after discharging patients from ICU, the family members might still develop post-traumatic stress disorder (PTSD) (Rego, Fumis, Ranzani, & Martins, 2015). Specific coping strategies utilized by the family members of critically ill patients predict the severity of PTSD 60 days after hospitalization (Petrinec, Mazanec, Burant, Hoffer, & Daly, 2016).

A study has shown that spouses of the patients in ICU are more prone to psychological distress compared to others (Rego et al., 2015) and family members with previous experience of intensive care have higher psychological distress (Lewis & Taylor, 2017). High satisfaction with an open visit policy among the families of critically ill patients have been reported to reduce the rates of anxiety, depression and stress (Rego et al., 2015).

A literature review done over five years on nursing intervention in the stress control of critically ill patients' families revealed that the inclusion of the family members in the care plan of the patients reduces

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https://doi.org/10.1016/j.ijans.2020.100223
Received 18 September 2019; Received in revised form 24 June 2020; Accepted 28 June 2020
Available online 03 July 2020
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the level of stress (Pedro, Gonçalves, Maria, Cristina, & Rabiais, 2017).

Teaching families' resilience as an intervention to reduce psychological distress among families of critically ill patients is found to be effective (Hudson et al., 2013). A study in a developed country has also indicated that problem-focused coping strategies is effective in lowering psychological distress (Wartella et al., 2009).

In Nigeria, there are limited studies assessing psychological distress and the coping strategies or resources to deal with the problem among the family members of ICU patients. The majority of previous research focused mainly on families of patients with mental disorders, while neglecting those with acute and chronic medical conditions in a special ward like ICU (Ajibade et al., 2016; Osundina et al., 2017; Chukwu, Okoye & Onyeneho, 2019).

Therefore, this study aimed at describing the mental health factors (depression, anxiety and stress) and the socio demographic variables among the family members; comparing the mean score of stress, anxiety, depression, coping strategies and how they are related to the demographics; and determining the correlations of subscales of coping strategies (task oriented, emotion oriented and avoidance oriented) resource or intervention on the mental health factors (anxiety, depression and stress) among the family members. The findings from this study would give an insight on the health and wellbeing of the family members of patients admitted to ICU and coping strategies which could be suggested to teach the family members.

In order to address this purpose, we sought answers to the following questions:

What are the levels of depression, anxiety and stress experienced by the family members of patient admitted to Intensive Care Unit?

Do demographic factors have an influence on depression, anxiety, and stress level of patient's family members when admitted in Intensive Care Unit?

What is the influence of demographic characteristics on task coping, emotion coping and avoidance coping among family members when their relative is admitted in Intensive Care Unit?

What is the relationship among depression, anxiety, stress and coping strategies sub scales utilized by family members when their relative is admitted in Intensive Care Unit?

2. Materials and method

A cross sectional study design was conducted to assess the relationship among stress, depression, anxiety, demographics and coping strategies in family members of patients admitted to Intensive Care Unit in Lagos State University Teaching Hospital between January 2019 and June 2019. Inclusion criteria include the family members of: (1) patients with a length of stay of at least 48 hours (2) had to be at least 18 years old, and (3) able to read English. This study protocol was approved by the Health Research Ethics Committee (H19rea364) of the hospital. The total number of patients admitted during the study period were 59 patients. Each patient has at least two family members caring for them usually on rotational basis during the twenty-four hours in a day. The family members are responsible for procuring any materials needed by the health practitioners during the admission. A relative would stay with the patient while the other would be responsible for payment and other activities. Each patient has at least two family members caring for them which make the total number of target participants 118 family members. Three of the family members did not meet the inclusion criteria and eight members declined to participate in the study. One of the researchers visited the waiting room at different interval to discuss participation in the project with the family members. The purpose and process of the study was explained to them, informed consent was obtained among the willing respondents. The respondents were informed of their right to refuse participation with no repercussions before the distribution of the questionnaires. The researcher thereafter distributed the questionnaires to the willing respondents with writing materials and envelopes. The respondents were informed to put the filled questionnaire in a sealed envelope provided and drop it in a specially made questionnaires box at the waiting room.

Table 1
Socio-demographic of the Respondents among Family Members of Patients admitted in Intensive Care Unit.

Variables	N (%)
Age	
18-24	26(24.3)
25-31	16(15.0)
32-37	40(37.4)
38-above	25(23.4)
Marital status	
Married	55(51.4)
Single	37(34.6)
Widowed	15(14.0)
Occupation	
Trader	21(19.6)
Civil	32(29.9)
Professional	23(21.5)
Entrepreneurial	31(29)
Family type	
Nuclear	66(61.7)
Extended	36(33.6)
Single parent	5(4.7)
Area	
City	86(80.4)
Suburbs	21(19.6)
Relation to patient	
Dad	20(18.7)
Mum	31(29.0)
Daughter	20(18.7)
Son	14(13.1)
Others	22(20.6)
Income in Naira	
< 100,000	61(57.0)
101 – 200,000	32(29.9)
> 200,000	14(13.1)
Level of education	
Primary	10(9.3)
Secondary	27(25.3)
Tertiary	70(65.4)

Table 2
Mental health factors (stress, depression and Anxiety level) among Family Members of Patients admitted in Intensive Care Unit.

Mental health factors	Level	N(%)
Stress	Normal	96(89.7)
	Mild	11(10.3)
Stress Mean (standard deviation) 8.7(SD = 4.4)		
Anxiety	Mild	5(4.7)
	Moderate	34(31.8)
	Normal	63(58.9)
	Severe	5(4.7)
Anxiety Mean (Standard deviation) 8.5(SD = 3.9)		
Depression	Normal	107(100)
Depression Mean (SD) 1.3 (SD = 1.9)		

3. Instruments

The questionnaire comprised three sections:

Section A: Socio demographic questionnaire: It was designed by the authors to obtain variables such as age, marital status, level of education and occupation.

Section B: Depression Anxiety Stress Scale-21 (DASS-21)

DASS 21 is a set of scale designed to measure three types of mental health states: Depression, anxiety and stress level (Lovibond & Lovibond, 1995). It consists of 21 items, divided into 7 units each for the three subscales and rated on 4-point Likert scale. The depression

Table 3
A comparison of demographic characteristics, depression, anxiety and stress among Family Members of Patients admitted in Intensive Care Unit.

Variables	N	Depression		F-test	P-value	Anxiety		F-test	P-value	Stress		F-test	p-value
		M	SD			M	SD			M	SD		
Age(years)													
18–24	26	1.4	1.3	**16.22**	**0.000****	8.3	3.2	**9.27**	**0.000****	9.2	4.4	**4.65**	**0.004***
25–31	16	3.8	3.2			12.8	3.9			11.9	3.9		
32–38	40	0.6	0.9			7.5	2.9			7.8	3.0		
> 38	25	0.8	1.4			7.6	4.5			7.4	5.5		
Education													
Primary	10	3.0	0.0	**3.20**	**0.030***	9.2	0.0	**3.91**	**0.011**	13.0	0.0	**6.42**	**0.000****
Secondary	27	0.9	1.4			8.6	3.0			9.19	3.9		
Tertiary	70	1.2	2.1			7.9	4.2			7.7	4.4		
Marital													
Married	55	1.4	2.3	**0.1**	**0.90**	8.4	4.5	**2.05**	**0.134**	8.1	4.5	**3.3**	**0.04**
Single	37	1.2	1.4			7.9	3.4			8.5	4.4		
Widowed	15	1.4	1.5			10.3	2.4			11.3	3.2		
Occupation													
Trader	21	1.5	1.5	**8.8**	**0.000****	10.3	2.4	**12.2**	**0.000****	11.9	2.8	**14.9**	**0.000****
Civil servant	32	1.0	1.1			9.2	3.3			8.7	3.4		
Professional	23	0.0	0.0			4.7	2.8			4.6	2.8		
Entrepreneura	31	2.4	2.8			9.4	4.5			9.5	5.0		
Family													
Nuclear	66	0.0	2.1	**2.5**	**0.09**	7.8	4.1	**4.33**	**0.100**	8.1	4.7	**6.42**	**0.002**
Extended	36	1.8	1.6			10.3	3.1			10.3	3.3		
Single Parent	5	2.0	0.0			5.0	0.0			4.0	0.0		
Area													
City	86	1.2	2.0	**0.95**	**0.35**	8.0	4.1	**2.6**	**0.012**	7.8	4.3	**4.38**	**0.000****
Suburbs	21	1.7	1.7			10.4	2.6			12.1	3.0		
Relations to the patients													
Dad	20	0.4	0.5	**18.9**	**0.000****	9.2	2.2	**12.2**	**0.000****	9.5	2.6	**7.535**	**0.000****
Mum	31	3.2	2.3			11.5	4.1			11.0	4.7		
Daughter	20	0.6	0.9			7.6	1.7			8.5	2.9		
Son	14	0.0	0.0			5.1	1.5			4.4	2.0		
Others	22	1.0	1.4			6.8	4.5			7.4	5.3		
Income(naira)													
< 100,000	61	2.3	2.1	**13.6**	**0.000****	10.5	3.5	**23.1**	**0.000****	10.9	4.0	**21.77**	**0.000****
101,000– 200,000	32	0.0	0.0			6.8	2.0			6.7	2.2		
> 200,000	14	0.0	0.0			7.0	1.0			10.0	0.0		

subscale assesses hopelessness, self-depreciation, and devaluation of life, dysphoria and lack of interest/involvement. The anxiety subscale assesses skeletal muscle effects, autonomic arousal and subjective experience of anxious effects while the stress subscale measures nervous arousal, difficulty relaxing and impatience. Scores for each subscale is calculated by multiplying the sum total by 2 to get the final score. The score ranges from 0 to 42 and is divided into normal, mild, moderate, severe and extremely severe. The score ranges for normal are: 0–9, 0–7 and 0–14 for depression, anxiety and stress respectively; mild: 10–13, 8–9 and 15–18 for depression, anxiety and stress respectively. The range for moderate are: 14–20, 10–14 and 19–25 for depression, anxiety and stress respectively. The range for severe are: 21–27, 15–19 and 26–33 for depression, anxiety and stress respectively. The range for the score of extremely severe are: 28 +, 20 + and 34 + for depression, anxiety and stress respectively (Lovibond & Lovibond, 1995).

Researchers have shown that the DASS 21 has good internal consistency and temporal stability in a study conducted in Italy (Botesi et al., 2015) and Nigeria (Coker, Okunrinboye, Adesokan, & Azegbebor, 2019). The scale showed satisfactory internal consistency reliability in this study; Cronbach's alpha for the DASS 21 scale was 0.93 and ranged from 0.78 to 0.91 for the three subscales: depression, anxiety and stress.

Section C: Coping inventory for stressful situation (CISS-21)

CISS is a 21 items assessment tool with a 5-point Likert type scale (1 = not at all" to 5 = "very much") widely accepted to evaluate the coping style with stressful situation under three main components / subscales consisting of 7 items each: task-oriented coping, emotion-oriented coping and avoidance coping. The psychometric properties have been reported to have good validity (Boysan, 2012). The Cronbach's alpha for CISS-21 in this study was 0.89. Scores for all items per scale are summed to form scale scores; higher scores indicate a greater use of that particular coping strategies.

4. Data analysis

Statistical analyses of the data were carried out with Statistical Package of Social Science (version 21.0, SPSS Inc., Chicago, IL) software. Simple descriptive statistics including frequency, percentages, mean and standard deviation were used to describe the demographics variables and the distribution of the three mental health factors (depression, anxiety and stress) of the patients' family members. Pearson correlation was used to examine the relationship among stress, anxiety, depression and coping strategies (task oriented coping, emotion-oriented coping and avoidance oriented coping). Analysis of variance and independent *t*-test were used to compare the mean score of stress, anxiety, depression, coping strategies and how they are related to the demographics variables.

5. Results

Family members who participated in this study are one hundred and seven (107); of these, the majority 37% (n = 40) were between age 32–37 years and 70% (n = 65) had a tertiary education certificate; about 20% (n = 21) were traders and 51% (n = 55) were married; also 80% (n = 86) resided in the city (Table 1). The mean scores and standard deviation of the family member's stress level is 8.7 (SD = 4.4); anxiety 8.5 (SD = 3.9) and depression 1.3 (SD = 1.9) are found to be normal. However, 41% were anxious, 10% were stressed and none was depressed (Table 2).

Table 4
A comparison of demographic characteristics, task coping, emotion coping and avoidance coping among Family Members of Patients admitted in Intensive Care Unit.

Variables	N	Task coping M	SD	f-test	p-value	Emotion coping M	SD	f-test	p-value	Avoidance coping M	SD	f-test	p-value
Age (years)													
18-24	26	26.4	4.8	**4.73**	**0.000****	8.8	4.3	**4.29**	**0.000****	19.2	1.4	**26.35**	**0.000****
25-31	16	25.9	3.9			17.6	1.4			18.7	1.7		
32-38	40	29.3	5.7			16	3			22.1	2		
> 38	25	30.2	3.1			18.4	3.5			20.2	0.9		
Education													
Primary	10	29	0			17	0			23	0		
Secondary	27	26.1	5.3	**3.043**	**0.032***	19.3	4.71	**11.99**	**0.000****	19.22	1.42	**8.363**	**0.000****
Tertiary	70	29.3	4.9			16.3	2.4			20.9	2.2		
Marital													
Married	55	28.6	5.6			16.7	2.18			21.3	2.2		
Single	37	27.4	4.7	**0.97**	**0.383**	17.2	4.5	**7.32**	**0.001****	19.7	2.1	**6.72**	**0.002***
Widowed	15	29.3	2.3			20.4	3.3			19.7	0.8		
Occupation													
Trader	21	26.2	5.1			21	4.2			19.4	1.9		
Civil servant	32	29.5	4.8	**1.9**	**0.13**	18.1	2.9	**20.63**	**0.000****	21.4	2.8	**4.18**	**0.008***
Professional	23	28.3	5.2			14.9	2.4			20.3	1.7		
Entrepreneurial	31	28.5	4.6			16.1	1.4			20.3	1.2		
Family													
Nuclear	66	27.4	5.3	**3.19**	**0.045**	17.6	3.6	**0.53**	**0.59**	20.7	2.3	**4.39**	**0.015***
Extended	36	29.6	4.1			17.3	3.7			20.3	1.7		
Single Parent	**5**	31	0			16	0			18	0		
Area													
City	86	29.5	4.5	**6.04**	**0**	16.5	2.6	**6.25**	**0.000****	20.8	2.1	**3.7**	**0.000***
Suburbs	21	23.2	3.3			21.1	4.4			19	1.3		
Relations to the patients													
Dad	20	27	5.5			18.4	3.4			22.4	2.1		
Mum	31	29.3	3.9			17.5	1.3			20.4	2.3		
Daughter	20	23.5	4.8	**10.93**	**0**	19.3	4.8	**5.33**	**0.001****	18.7	1.6	**10.6**	**0.000***
Son	14	30.5	3.5			14.4	0.5			20.3	1		
Others	22	31.1	3.1			16.7	4.2			15.3	3		
Income(naira)													
< 100,000	61	26.8	4.7			18.9	3.2			20.4	2.5		
101,000 – 200,000	32	30.8	4.5	**8.351**	**0.000****	15.3	3.4	**8.35**	**0.000****	20.3	1.7	**0.224**	**0.924**
> 200,000	14	28	0			17	0			20	0		

Table 5
Mean, SD and Correlation of Depression, anxiety, stress and Coping strategies sub scales (N = 107) among Family Members of Patients admitted in Intensive Care Unit.

Coping Style	M	SD	Depression	Anxiety	Stress
Task oriented coping	28.30	4.94	r = −0.193* p = 0.046	r = −0.456** p = 0.000	r = −0.485** p = 0.000
Emotion oriented coping	17.42	3.50	r = 0.137 p = 0.161	r = 0.450** p = 0.000	r = 0.564** p = 0.000
Avoidance oriented coping	20.44	2.10	r = −0.041 p = 0.678	r = 0.047 p = 0.631	r = −0.021 p = 0.829

** Correlation is significant at the 0.01 level (2-tailed).
*Correlation is significant at the 0.05 level (1-tailed).

5.1. Relationship of mental health factors (depression, anxiety and stress) with coping strategies, and demographics

Family members whose age ranges from 25 to 31 years reported higher level of anxiety (F = 9.27; P = 0.000) and stress (F = 4.65; P = 0.004) while those in the age range 32 to 48 years were least depressed (F = 16.22; P = 0.000); family members whose income was less than #100,000 per month and mothers were more anxious (F = 23.1; P = 0.000; F = 12.2; P = 0.000) stressed (F = 21.77; P = 0.000; F = 7.535P = 0.000) and depressed (F = 13.6; P = 0.000; F = 18.9; P = 0.000) respectively. Widowed and extended family members experienced more stress. Professionals' were least depressed; traders experienced higher stress and anxiety than other workers; family members residing in suburbs were more anxious (t = 2.6; P = 0.012) and depressed (t = 4.38; P = 0.000) than those in cities (Table 3). Family members older than 38 years; had tertiary education and earned between #101,000 and #200,000 used more task oriented coping strategies than others while those of 32 to 38 years of age; residing in cities; married; civil servants; and nuclear family background used avoidance more. Traders; those with secondary school level qualifications; widowed; and who earned more than #100,000 per month used emotional coping strategies (Table 4).

5.2. Correlations of depression, anxiety, stress and coping strategies

There was a significant negative correlation between task oriented coping strategies and the mental health factors (depression; r = -0.193, p = 0.046; anxiety r = −0.456, p = 0.000, stress r = −0.485, p = 0.000). Family members who utilized emotion oriented coping strategies reportedly experienced anxiety (r = 0.450, p = 0.000) and stress (r = 0.564, p = 0.000) (Table 5).

6. Discussion

We studied the mental health of the family members of patients hospitalized in Intensive Care Unit. Stress, anxiety and depression experienced by the family members are influenced by various socio-demographic variables such as age, income, nature of the family relationship, residential area and the level of education. These should be taken into consideration while addressing psychosocial problems of patients' relatives in Intensive Care Unit. In addition, most previous studies suggested more support for different family members of critically ill patients (Rego et al., 2015; Pedro et al., 2017; Ribeiro et al., 2014). Low income or poverty occur when an individual lack sufficient

money to access quality health care, housing, food and other needs and is a major stressor in Nigeria (Ogbeide & Agu, 2015). Our study confirms that those with lower income were more stressed, anxious and depressed while taking care of their family members in the Intensive Care Unit and can contribute to discharge against medical advice (Fadare, Babatunde, Olarenwaju, & Busari, 2013). We observed that family members residing in the suburbs are more anxious and stressed. Accessibility to standard and tertiary health care facilities in suburbs in Nigeria is a challenge (Ogbeide & Agu, 2015) and most of the residents in rural area come to the tertiary health institution through referral unlike those in cities who visited the health facilities regularly because of the easy accessibility. However, this is contrary to a study by Lewis and Taylor (Lewis & Taylor, 2017) that those who had visited the health facilities and were familiar with ICU were more anxious than those who were not. Our study also revealed that the mothers of hospitalized patients are more anxious, depressed and stressed than other family members. This might be due to the assertion that a strong maternal child relationship can continue through the life span and started from the mother-infant bond (Barker, Daniels, O'Neal, & VanSell, 2017). The stress level of widows are high in this study and it is in line with a study in Nigeria which revealed that finances, loneliness and depression are the utmost challenges of the widow (Onadeko, Lawoyin, Amodu, & Dairo, 2002). There was a significant negative correlation between task oriented coping strategies and the mental health factors (depression, anxiety, and stress). Family members who utilized emotional oriented coping strategies reportedly experienced anxiety and stress and those who used task oriented coping strategies often experienced a low level of anxiety, depression and stress. The task oriented strategy is also known as a problem –focused, and involves taking direct steps to change the situation and circumstances itself to minimize the level of stress experienced. In the emotional oriented coping strategy, the emotional responses to stressors are being manipulated (Kariv & Hetman, 2005). This finding corroborates the suggestion of Wartella and colleagues (Wartella et al., 2009) that the use of problem – focused coping is effective in reducing the distress level among the family members of Intensive Care Unit patients and also improve their subsequent adjustment whereas emotion focused coping is only effective during the follow up adjustment program with the family members.

7. Limitation

One of the main limitations of the study is the quantitative research design utilized in obtaining the information through the closed ended questionnaire which might have been different from information obtained through a qualitative research design. This is the first study in Nigeria to the best of our knowledge and a multi setting study will further strengthen the findings of the study. Generalizability of the findings can also be inhibited because of the few numbers of the participants.

8. Conclusion

Patients' relatives of different socio-demographic characteristics such as age and family size experienced psychological distress and family members who used more task coping strategies experienced low levels of depression, anxiety and stress. Therefore, a focus on task coping strategies was suggested for family members of patients admitted in ICU. The following are hereby recommended based on the study findings: nurses and other health care workers should be concerned about the psychological health of the family relations as they care for ICU patients. More research studies should be conducted using the qualitative method in multi center settings. There should be advocacy for a social support programme for family members caring for the ICU patients in Nigeria.

Funding

None

Declaration of Competing Interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgement

The authors wish to sincerely thank all the family members of patients admitted to Intensive care unit and critical care unit in Lagos State University Teaching, Lagos between January 2019 and June, 2019 who participated in the study.

References

Ajibade, B. L., Ajao, O. O., Fabiyi, B., Olabisi, O., & Akinpelu, A. O. (2016). Burden experienced by Family Caregivers of Patients with Mental disorders at selected hospitals in Ekiti State, Nigeria. *International Journal of Health and Psychology Research. 4*(2), 14–41.

Barker, J., Daniels, A., O'Neal, K., & VanSell, S. L. (2017). Maternal-newborn bonding concept analysis. *International Journal of Nursing & Clinical Practices, 4*, 229.

Beesley, S. J., Hopkins, R. O., Holt-lunstad, J., Wilson, E. L., Butler, J., Kuttler, K. G., ... Hirshberg, E. L. (2017). Acute physiologic stress and subsequent anxiety among family members of icu patients. *Critical Care Medicine Journal, 1*, 229–235. https://doi.org/10.1097/CCM.0000000000002835.

Botesi, G., Ghisi, M., Altoe, G., Conforti, E., Melli, G., & Sica, C. (2015). The Italian version of depression, anxiety stress scale-21: Factor structure and psychometric properties in community and clinical samples. Comprehensive Psychiatry, 20.

Boysan, M. (2012). Validity of the coping inventory for stressful situations-short form (CISS-21) in a non-clinical Turkish sample. *The Journal of Psychiatry and Neurological Sciences, 25*(2).

Chukwu, N. E., Okoye, U. O., & Onyeneho, N. G. (2019). Coping strategies of families of persons with learning disability in Imo state of Nigeria. *Journal of Health, Population and Nutrition, 38*, 9.

Coker, A. O., Okunrinboye, H. I., Adesokan, A. O., & Azegbebor, J. (2019). Depression, anxiety, stress and self esteem among students in Owo, Southwest, Nigeria. *African Journals Online, 75*(4–6).

Fadare, J. O., Babatunde, O. A., Olarenwaju, T., & Busari, O. (2013). Discharge against medical advice: Experience from a rural Nigerian hospital. *Annals of Nigerian Medicine, 7*(2), 60–65.

Hudson, P., Trauer, T., Kelly, B., O'Connor, M., Thomas, K., Summers, M., ... White, V. (2013). Reducing the psychological distress of family caregivers of home-based palliative care patients: Short-term effects from a randomised controlled trial. *Psycho-Oncology, 22*(9), 1987–1993. https://doi.org/10.1002/pon.3242.

Kariv, D., & Hetman, T. (2005). Task- oriented versus emotion-oriented coping strategies: The case of college students. *College Students Journal, 39*(1), 72–89.

Konstanti, B. Z., Gouva, M., Dragioti, E., Nakos, G., & Koulouras, V. (2016). Symptoms of cardiac anxiety in family members of intensive care unit patients. *American Journal of Critical Care, 25*(5), 448–456.

Lewis, C. L., & Taylor, J. Z. (2017). Impact of prior ICU experience on ICU patient family members' psychological distress: A descriptive study. *Intensive & Critical Care Nursing.* https://doi.org/10.1016/j.iccn.2017.09.008.

Lovibond, S. H., & Lovibond, P. F. (1995). *Manual for the Depression Anxiety and stress scales* (2nd ed.). Sydney: Psychology Foundation.

Mcadam, B. J. L., & Puntillo, K. (2009). Symptoms experienced by family members of patients in intensive care units. *American Journal Critical Care, 18*(3), 200–210. https://doi.org/10.4037/ajcc2009252.

Ogbeide, E. N. O., & Agu, D. O. (2015). Poverty and income inequality in Nigeria: Any casuality. *Asian Economic and Financial Review, 5*(3), 439–452.

Onadeko, M. O., Lawoyin, T., Amodu, M. O., & Dairo, M. D. (2002). Problems of widowood: A study of widows in a tertiary institution in Ibadan, South west Nigeria. *African Journal of Medicine and Medical Science, 31*(3), 201–206.

Osundina, A. F., Fatoye, F. O., Akanni, O. O., Omoreagba, J. O., Akinsulore, A., & Oloniniyi, I. O. (2017). Burden and coping styles among caregivers of patients with major mental disorders and hypertension attending a Nigeria tertiary Hospital. *Indian Journal of Social Psychiatry, 33*, 189–195.

Pedro, J., Gonçalves, A., Maria, S., Cristina, I., & Rabiais, M. (2017). Integrative literature review- nursing interventions in the stress control of the family of the sick person in a critical condition. 4(1), 27–37. doi: 10.15640/ijn.v4n1a5.

Petrinec, A. B., Mazanec, P. M., Burant, C. J., Hoffer, A., & Daly, B. J. (2015). Coping strategies and posttraumatic stress symptoms in post-ICU family decision makers. *Critical Care Medicine, 43*(6), 1205.

Rego, R., Fumis, L., Ranzani, O. T., & Martins, P. S. (2015). Emotional disorders in pairs of patients and their family members during and after icu stay. 1–12. doi: 10.1371/journal.pone.0115332.

Ribeiro, M. R. C., da Silva, A. A. M., E Alves, M. T. S. S. de B., Batista, R. F. L., de Rocha, L. M. L. N., Schraiber, L. B., … Barbieri, M. A. (2014). Psychological violence against pregnant women in a prenatal care cohort: rates and associated factors in Sao Luis, Brazil. BMC Pregnancy and Childbirth, 14, 66. doi: 10.1186/1471-2393-14-66.

Tabakakis, C. K., Mcallister, M., Bradshaw, J., & To, Q. G. (2019). Psychological resilience in New Zealand registered nurses: The role of workplace characteristics. *Journal of Nursing Management,* 1–8. https://doi.org/10.1111/jonm.12815.

Wartella, J. E., Auerbach, S. M., & Ward, K. R. (2009). Emotional distress, coping and adjustment in family members of neuroscience intensive care unit patients. *Journal of Psychosomatic Research, 66*(6), 503–509. https://doi.org/10.1016/j.jpsychores.2008.12.005.