THE COMBINED INFLUENCE OF THE KNOWLEDGE OF COPING STRATEGIES ON THE PSYCHOSOCIAL WELL-BEING OF PATIENTS IN NATIONAL ORTHOPAEDIC HOSPITAL, IGBOBI, LAGOS.

 $\mathbf{B}\mathbf{y}$

Dim, U. M. E., Ph.D

Department of Human Kinetics and Health Education, Faculty of Education, University of Uyo, Nigeria

Prof. Dim, E. M.

Department of Orthopaedics and Traumatology, Faculty of Clinical Sciences, University of Uyo, Nigeria.

And

Oforjigha-Dim, C. W.

Department of Medical Laboratory Sciences, Federal Medical Centre, Ebute-Metta, Lagos, Nigeria.

ABSTRACT

The study examined the combined influence of the knowledge of coping strategies on the psychosocial well-being of patients in National Orthopaedic Hospital, Igbobi, Lagos. The study used Ex-Post Facto research design. This study took place in Lagos State. The target population for this study consisted of 5,391 male and female adult patients with musculoskeletal impairment, drawn from the various out-patient clinics and in-patient wards of the National Orthopaedic Hospital, Igbobi, Lagos Sate. The sample size for the study was determined using the Cochrane formula. The study's sample size was the whole pool of 5,391 patients. The instrument used for data collection in this study was questionnaire titled "Coping Strategies and Psychosocial Well-Being Ouestionnaire" (CSPWO). Data collected from the respondents were subjected to a reliability test, and the Cronbach Alpha Statistical Tool was used to determine the reliability of the CSPWO instrument. Demographic information was analysed using charts. The independent ttest analysis was used to test hypotheses, and the mean and standard deviation were used to resolve the research questions The study found out that there is a significant combined influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of patients in the study group. It was recommended that the entire concept of coping strategies should be incorporated into public health education curricula of the various training programmes for health care personnel.

Keywords: Knowledge of coping strategies, Psychosocial well-being, Patients, National Orthopaedic Hospital, Igbobi and Lagos.

Introduction

Coping strategies as the specific efforts, both behavioural and psychological, that people employ to master, tolerate, reduce, or minimize stressful events. Interestingly, coping strategies do not only play an important role in the psychosocial adjustment of individuals with disabilities but also influence the health related quality of life of people with disorders. Together with the knowledge and awareness of coping strategies, it becomes a vital factor in improving the ability to deal successfully with situations by minimizing its impact on social and psychological functioning (Corn *et al.*, 2020).

Generally speaking, adaptive strategies help patients to reduce pain and stress, while promoting or improving function (Mahmoud Alilou*et al.*, 2022). Adaptive coping strategy might involve problem solving, including collecting information and refocusing on the problem, or regulation of emotion by focusing attention on the emotional response aroused by the stressor). Maladaptive coping strategies are those that attempt to manage stress, but end up decreasing function despite temporary respite from certain symptoms (Jensen *et al.*, 2011).

Emotion-based coping style involves the management of stress through emotion, frequently by avoiding the issue. When the individual engages in emotion-based coping, he or she is actively regulating the emotional reaction that the problem elicits rather than attempting to change the stressful situation itself (Perez, 2017).

Avoidance coping strategies involve active efforts to ignore or withdraw from the distressing situation and its associated emotions (Stanisławski, 2022). Avoidance activities involve, "procrastination, passivity, or inaction, and dependency." An individual who rates high on these types of activities, "puts off solving problems as long as possible, waits for problems to resolve themselves, and attempts to shift responsibility to others" (Lazarus and Folkman, 1984).

This coping style has received strong support (Endler and Parker, 1999), and has been identified as an independent coping style in several different coping instruments (Brands et al., 2014). Hence, avoidance coping, including the use of denial and withdrawal, are associated with maladaptive behaviours and psychological distress (Rückholdt*et al.*, 2019).

Active coping strategies include securing social support, biofeedback, active distraction, problem solving, gathering information, prioritizing tasks, turning to religion, requesting and accepting help from family and friends. Active coping mechanisms usually involve an awareness of the stressor and conscious attempts to reduce stress. Active coping refers to cognitive and behavioural attempts to deal directly with problems and their effects (Prellet al., 2021).

Passive coping responses are often used when individuals decide that the basic circumstances cannot be altered and, thus, they need to accept a situation as it is (Kavčičet al., 2022). Passive coping responses to depressive symptoms can interfere with treatment outcomes (Mannes et al., 2020), since the feelings and behaviours associated with learned helplessness can contribute to worsening cognitive distortions about the level of threats from a minor adverse event and negatively affect one's sense of control over life stressors and self-efficacy related to the outcomes of treatment (Xieet al, 2022).

Coping strategies are usually classified as active or favourable, and passive or unfavourable (Prellet al., 2021). Of these, the "passive avoidant" and "active positive" strategies predominate in patients with stressful and chronic diseases. The "passive avoidant" strategies are also associated with diseases with the worst health outcomes (Adnan et al., 2013). According to Burns (2016), psychosocial well-being is about lives going on well. It has to do with inter-individual and intraindividual levels of positive functioning that can include one's relatedness with others and selfreferent attitudes that include one's sense of mastery and personal growth. Subjective well-being reflects dimensions that affect judgments of life satisfaction. Chang *et al.*, (2022) viewed psychological well-being as some combination of positive affective states such as happiness (the hedonic perspective) and functioning with optimal effectiveness in individual and social life (the eudaimonic perspective).

Obviously, when trauma is involved, varying coping strategies are commonly deployed to match specific situational demands by intuition (American Psychiatric Association, 2013). Traumatic and orthopaedic injuries can significantly affect physical, emotional, functional, social, and economic outcomes. The researcher, with more than two decades of experience as a nurse in an orthopaedic hospital, observed that patients with musculoskeletal impairments at the National Orthopaedic Hospital in Lagos react differently to pain, which is the commonest source of stress among these patients. Therefore, the rationale for this study was to understand how coping strategies were associated with psychosocial distress among the studied patients population, so that educational and supportive interventions can be formulated for the purpose of future planning of patient rehabilitation as part of the holistic care of musculoskeletal impairments. Coping strategies can be applied to alleviate psychological impacts, emotional impacts and social impacts on traumatic and orthopaedic patients.

Statement of Problem

Trauma is the stress a patient passes through during and after illness, and many healthcare practitioners have varying degrees of experience of this stress to which the patients are subjected. Sometimes there may be increased prevalence of post-traumatic stress disorder (PTSD), anxiety, depression, psycho-physiological disturbances such as nightmares and trouble sleeping, fear, grief, behavioural problems, change in school and work performance, lack of hope and personality

changes. It is against this background that the study will be conducted to find out how the knowledge of coping strategies following trauma influence orthopaedic patients, and how it improved their psychosocial well-being.

Research Objectives

1. Examine the combined influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of patients in National Orthopaedic Hospital, Igbobi, Lagos.

Research Questions

1. What is the joint influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of orthopaedic patients in National Orthopaedic Hospital, Igbobi, Lagos?

Research Hypothesis

 Knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies do not significantly influence the psychosocial well-being of orthopaedic patients.

Theoretical Framework

Coping Strategies

Weiten et al., (2011) referred to coping strategies as those reactions or efforts made to master, reduce or tolerate the demands created by stress. According to the American Psychological Association (2018), coping strategies are an action, a series of actions, or a thought process used in meeting a stressful or unpleasant situation, or in modifying one's reaction to the situation. Additionally, Yu et al., (2020) defined coping strategies as the specific efforts, both behavioural and psychological, that people employ to master, tolerate, reduce, or minimize stressful events..

The extent to which a stressor affects an individual's physical, psychological and behavioural outcomes is accounted for, in part, by one's coping resources and strategies. Coping skill is necessary for students' educational, professional and personal development. The ability and skill to manage imposed stresses effectively will lead to high levels of psychological well-being, while inability or skill deficits to manage it leads to lower levels of psychological well-being (Weitenet al., 2011).

According to Liu et al., 2023, support from family and friends serves an important function as a coping resource during adolescence. Any change in the social relationships with parents, siblings and peers during adolescence would have an impact on the extent to which those relationships will serve as sources for emotional support, even into adulthood. For individuals with brain injury, coping can be influenced by cognitive and interpersonal consequences of the head trauma. When accompanied by decreased perceived control, these individuals are more easily prone to use maladaptive coping styles, which can lead to a downhill spiraling into emotional instability (Murray, 2019; Roth and Hardin, 2019). For example, research has found that one of the main contributing factors to the presence of enduring post-injury emotional complaints in this population is their use of maladaptive coping styles (Velikonja*et al.*, 2013).

Adaptive and Maladaptive Coping Strategies

The term adaptive coping strategy has been replaced by many other words and includes such words as active, problem-oriented, task-based, etc. Generally speaking, adaptive strategies help patients to reduce pain and stress, while promoting or improving function (Mahmoud Alilou*et al.*, 2022). Adaptive coping strategy might involve problem solving, including collecting information and refocusing on the problem, or regulation of emotion by focusing attention on the emotional response aroused by the stressor). Maladaptive coping strategies are those that attempt to manage stress, but end up decreasing function despite temporary respite from certain symptoms. Several reviews have concluded that responding to traumatic pain with "passive" strategies has been associated with poor overall adjustment (Jensen *et al.*, 2011). Similarly, Zeidner and Saklofske (2015) unequivocally referred to avoidance coping as "maladaptive," a stance that self-help websites and magazine articles are quick to agree with. The difference between adaptive and maladaptive coping strategies are not the strategies themselves, rather the outcomes they produce. Adaptive/Maladaptive are descriptors of the outcomes of applying said coping strategy with respect to the particular stressor involved. In other words, if the strategy manages stress while

promoting optimal function in the user, it is in that sense an adaptive strategy. On the other hand,

if the strategy manages stress symptoms but produces an overall decrease in function in the user,

Emotion-based Coping Strategy

it is referred to as maladaptive.

Emotion-based coping style involves the management of stress through emotion, frequently by avoiding the issue. When the individual engages in emotion-based coping, he or she is actively regulating the emotional reaction that the problem elicits rather than attempting to change the stressful situation itself (Perez, 2017). Strategies can include distraction, suppression of feelings, thinking comforting thoughts, avoidance, and expression of emotions. Emotion-based coping does not refer to dealing with stress by using emotional control. Instead, it refers to using coping skills that address emotional reactions, and are less cognitive in nature, including sleeping, wishful thinking, worrying, and ignoring the problem.

For individuals living with brain injury, it has been suggested that emotion-based strategies, particularly denial, can be more adaptive during the acute phase following brain injury, although these strategies are not useful in the long term. Instead, task-based styles in the chronic

phases are more suitable (Krpan*et al.*, 2007; Whiting, 2016; Watson *et al.*, 2020). Emotion-based coping strategies, such as emotional worry and escape avoidant coping may increase in the first six months post brain injury, and such increase has been linked to diminished productivity (Dawson *et al.*, 2006; Whiting, 2016; Watson *et al.*, 2020). In addition, other similar strategies such as self-blame, preoccupation, ignoring a problem, and keeping to oneself have been associated with increased stress, depression and anxiety in these patients. Because emotion-based coping has been related to poor outcomes following brain injury in the post-acute phases, it is considered a maladaptive coping style (Krpan*et al.*, 2007; Whiting, 2016; Watson *et al.*, 2020).

Hobfall's Conservation of Resources theoretical model (COR) suggests that individuals strive to retain, protect and build resources and that what is threatening to them is the potential or actual loss of valued resources (O'Brien and Cooper, 2022). After people experience potentially traumatic events, they are at risk for a loss of material, social and psychological resources and with each resource loss, additional loss can occur creating a spiral of loss that can negatively impact mental health (O'Brien and Cooper, 2022). Emotion-focused coping is commonly a strategy to reduce stress and provide safety or conservation of resources, particularly in humanitarian contexts with ongoing conflict (Elnakibet al., 2021). In this way, emotion-focused coping allows youth to have control over emotional resources that can be particularly important when youth are facing resource loss at the individual, family and community level as a result of conflict. Emotion-focused coping may also be particularly effective when used in conjunction with other coping strategies (Elnakibet al., 2021).

Emotion-focused coping strategies aim to reduce and manage the intensity of the negative and distressing emotions that a stressful situation has caused rather than solving the problematic situation itself. These coping strategies thus help the subject to feel better but do not solve the

ISSN: 2653-7446, UNITED KINGDOM

source of the distress. Emotion-focused coping often gets utilized when the problem is out of the subject's control as maybe seen in terminal illness or sudden death of a loved one, in which condition the subject has no other option but to cope with and accept the situation. Among the terminally ill, it has been proven that emotional coping combined with actively expressing and processing emotions has psychological adjustment benefits, decreases depression, hostility and increases life satisfaction (Stanisławski, 2022). Sometimes, the strategies are used when one cannot use problem solving strategies or when the stressor is perceived to be overwhelming.

Avoidance Coping Strategy

Avoidance coping strategies involve active efforts to ignore or withdraw from the distressing situation and its associated emotions (Stanisławski, 2022). Avoidance activities involve, "procrastination, passivity, or inaction, and dependency." An individual who rates high on these types of activities, "puts off solving problems as long as possible, waits for problems to resolve themselves, and attempts to shift responsibility to others" (Lazarus and Folkman, 1984). This coping style has received strong support (Endler and Parker, 1999), and has been identified as an independent coping style in several different coping instruments (Brands et al., 2014). Hence, avoidance coping, including the use of denial and withdrawal, are associated with maladaptive behaviours and psychological distress (Rückholdt et al., 2019). Endler and Parker (1999), particularly, specified that individuals can engage in inactive avoidance coping either by getting away from the stressor or by engaging in other tasks (distraction) or by using other people as means to evade it (social diversion).

In a cohort study by Cherewicket al., (2016), they found that avoidance coping reduced internalizing and externalizing problems in girls, but also resulted in lower empathy in girls. No change in outcome measures was observed in boys using avoidant coping. Therefore, for girls,

consideration of adaptive trajectories in coping warrants further research (Sirois and Kitner, 2015).

coping strategies may be more adaptive in the short term but less adaptive in the long term and

Active Coping Strategies

According to Grommischet al. (2020), coping strategies reflect the repertoire of responses available to the individual and which can be successfully deployed in times of stress. Whereas personality is relatively fixed, coping strategies can be taught explicitly or through modelling. The effect of coping strategies is usually classified as active or favourable, and passive or unfavourable (Prellet al., 2021). Active coping strategies include securing social support, biofeedback, active distraction, problem solving, gathering information, prioritizing tasks, turning to religion, requesting and accepting help from family and friends. Active coping mechanisms usually involve an awareness of the stressor and conscious attempts to reduce stress. Active coping refers to cognitive and behavioural attempts to deal directly with problems and their effects (Prellet al., 2021)

Passive Coping Strategies

Passive coping responses to depressive symptoms can also interfere with treatment outcomes (Mannes *et al.*, 2020), since the feelings and behaviours associated with learned helplessness can contribute to worsening cognitive distortions about the level of threats from a

minor adverse event and negatively affect one's sense of control over life stressors and selfefficacy related to the outcomes of treatment (Xieet al., 2022). One previous study that examined the primary care of post-traumatic stress disorder (PTSD-PC) and coping styles (related to the general life stress) among primary care patients (average age of 55.2 ±16.0; 64% employed at least part time) with minor depression found that those who were high in avoidant coping, but not those low in avoidant coping, showed greater improvement with PTSD-PC than those who received usual care consisting of routine physician practice (Oxmanet al., 2008). The authors credited PTSD compensatory effect on those with avoidant coping style. The compensatory effect of PTSD-PC may be lower for depressed, low-income home-bound older adults with limited personal and social resources than for younger, mostly employed primary care patients. Passive coping responses are often used when individuals decide that the basic circumstances cannot be altered and, thus, they need to accept a situation as it is (Kavčičet al., 2022). Previous studies found that individuals under pressure typically use multiple tactics to deal with the stressors, especially when they appraise the stressors as severe threats, with potentials for harm and loss (Folkman and Lazarus, 1980; Kavčičet al., 2022). Furthermore, certain coping strategies have both active and passive components. For example, ruminative and distracting responses to depression are largely passive coping styles as they tend to aggravate depressive symptoms, may also be considered active, as even ruminative individuals focus on their symptoms of depression to try to assess and remedy their depressed state (Morrow and Nolen-Hoeksema, 1990). Nevertheless, a high level of passive coping responses to depressive symptoms, with or without active coping, may amplify a depressed mood among homebound older adults in many ways. Firstly, given that the cognitive symptoms of the feelings of hopelessness, helplessness, and worthlessness tend to be more sensitive to depression in older than younger adults, passive coping may prolong the course of depression by reinforcing these feelings.

Secondly, as late-life depression is also characterized by anhedonia and a depletion syndrome, manifested by withdrawal, apathy, and a lack of vigour (Devitaet al., 2022), passive coping can aggravate these tendencies. Rather than engaging in pleasurable activities with or without seeking help from social support networks to alleviate depressed mood, those with passive coping responses may choose to further withdraw from activities and interactions with others, resulting in increased social isolation and worsening depressed mood (Saravananet al., 2019).

Methodology

The study used Ex-Post Facto research design. This study took place in Lagos State. The target population for this study consisted of 5,391 male and female adult patients with musculoskeletal impairment, drawn from the various out-patient clinics and in-patient wards of the National Orthopaedic Hospital, Igbobi, Lagos Sate. The sample size for the study was determined using the Cochrane formula. The study's sample size was the whole pool of 5,391 patients. The instrument used for data collection in this study was questionnaire titled "Coping Strategies and Psychosocial Well-Being Questionnaire" (CSPWQ). Data collected from the respondents were subjected to a reliability test, and the Cronbach Alpha Statistical Tool was used to determine the reliability of the CSPWQ instrument. Demographic information was analysed using charts. The independent t-test analysis was used to test hypotheses, and the mean and standard deviation were used to resolve the research question.

Results and Discussion

Research Question One: What is the combined influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of patients in National Orthopaedic Hospital, Igbobi, Lagos.

Table 1: Mean and standard deviation of the combined influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on psychosocial well-being of patients

Adaptive Coping strategy	N	X	SD	Mean diff.
Adequate knowledge	488	18.72	4.29	1.201
Inadequate knowledge	12	14.33	2.15	4.39*
Maladaptive Coping strategy				
Adequate knowledge	470	18.86	4.20	
Inadequate knowledge	30	14.76	4.02	4.1*
Emotion-based coping strategy	30	14.70	4.02	
Adequate knowledge	465	19.04	3.967	
	25	12.00	4.52	6.04*
Inadequate knowledge	35	13.00	4.63	
Avoidance coping strategy Adequate knowledge	415	19.07	4.039	
Adequate knowledge	413	19.07	4.039	2.71*
Inadequate knowledge	85	16.36	4.815	2.71
Active coping strategy				
Adequate knowledge	466	18.71	4.290	
				1.45*
Inadequate knowledge	34	17.26	4.244	
Passive coping strategy				
Adequate knowledge	378	19.07	4.017	
Y 1 , 1 1 1	100	17.00	4.00	1.87*
Inadequate knowledge	122	17.20	4.82	

^{*} Remarkable mean difference Source: Field data, 2023.

The summary of Table 1 is a summary of the mean values of psychosocial well-being in subjects with adequate and inadequate knowledge of the different coping strategies. The differences in the mean values of the psychosocial well-being between the two categories of knowledge of coping strategies were statistically significant.

Hypothesis Testing

Hypothesis 1: The null hypothesis states that combined knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies does not significantly influence the psychosocial well-being of patients in the study group. This hypothesis was tested by the multiple regression analysis (Table 4.14).

Table 2: Multiple regression analysis of the combined influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of the study group patients

Model	R	R^2	Adjusted R ²	SE	R ² Change
1	0.43a	0.19	0.18	3.88	0.19

*Significant at 0.05 level df =498 N =500; critical r-value = 0.113

Source: Field data, 2023

Table 2 shows that the calculated R-value of 0.43 was greater than the critical R-value of 0.113 at 0.05 alpha level with 498 degrees of freedom. The R-squared (R²) value of 0.19 predicts 19% influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of patients in the study groups. This rate of percentage is highly positive and, therefore, means that there is significant combined influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of patients in the study group. The analysis of variance (ANOVA) was deployed to find out the extent of the variance of each class of independent variable as responded by each respondent.

Table 3: Analysis of variance of the differences in the influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of patients in the study group at the National Orthopaedic Hospital Jabobi Lagos

Hospital, Igoodi, Lagos.					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	1765.94	6	294.32	19.46	.000b
Residual	7454.08	493	15.12		
Total	9220.03	499			

Independent Variables/Predictors (Constant): Total Passive, Total Maladaptive, Total Adaptive, Total Active, Total Emotion based and Total Avoidance. **Dependent Variable**: Total psychosocial well-being **Source: Field data, 2023**

The above table presents the calculated F-value as (19.46) and the critical f-value as (000). Since the critical f-value (000a) was below the probability level of 0.05, the result inferred that there was significant difference in the influence exerted by the independent variables (total passive,

total maladaptive, total adaptive, total active, total emotion, total avoidance) on the dependent variable, which is total psychosocial well-being.

The contribution of each of the independent variables to the psychosocial well-being of the subjects in the study population was tested using the coefficient analysis.

Table 4: Coefficient analysis of the influence of each independent variable on the dependent variable

Model	Unstandardized Coefficients			4	Sig.
	В	Std. Error	Beta	t	_
(Constant)	-4.528	0.796		-1.493	0.136
Avoidance coping strategy	1.730	0.072	0.062	1.452	0.147
Active coping strategy	3.603	0.048	0.199	4.862	0.000
Adaptive Coping Strategy	4.752	0.047	0.282	6.244	0.000
Maladaptive coping strategy	0.545	0.094	0.048	1.001	0.317
Passive coping strategy	0.211	0.056	0.012	0.292	0.770
Emotion-based coping strategy	1.232	0.443	0.123	2.778	0.006

a. Dependent Variable: total psychosocial well-being; Source: Field data, 2023

Table 4 shows that the most positive influencing factor was the adaptive coping strategy (t = 6.244; B = 4.752). This was followed by the active coping strategy (t = 4.862; B: 3.603). The third in the list was the emotion-based coping strategy (t = 2.778; B = 1.232). The avoidance coping strategy was the fourth (t = 1.452; B = 1.730), while the fifth was the maladaptive coping strategy (t = 1.001; B = 0.545). The passive coping strategy was the sixth and, of course, the least influencing factor (t = 0.292; B = 0.211) affecting the psychosocial well-being of the patients in the study.

Discussion of Findings

The results of the data analysis in tables were significant because the obtained R-value (0.43) was greater than the critical R-value (0.113) at 0.05 level with 498 degrees of freedom. This implies that there is a significant combined influence of the knowledge of adaptive, maladaptive, emotion-based, avoidance, active and passive coping strategies on the psychosocial well-being of the patients in the study at the National Orthopaedic Hospital, Igbobi, Lagos. Therefore, the null hypothesis was rejected. This agrees with the finding by Amonoo*et al.* (2022) in a study titled "coping strategies in patients with acute myeloid leukaemia". Amonoo*et al.* concluded that the use of approach-oriented coping strategies was associated with less psychological distress and better quality of life.

Conclusion

From the findings of this study, the patients' knowledge of coping strategies was associated with positive psychosocial well-being. This means that coping strategies can be applied to alleviate psychological impacts, emotional impacts and social impacts of musculoskeletal impairments on patients. The knowledge of coping strategies has been shown in this study to grant some measure of control over the psychological state of the patients. All coping strategies do not have the same effect on psychosocial well-being of patients. It is also concluded from this study that the adaptive, active and emotion-based coping strategies, in that order, are more effective than the other strategies in fostering positive psychosocial well-being among patients. The coping strategies in this study were not mutually exclusive, and no single coping strategy was exclusively utilized, as the subjects employed a combination of strategies. From the study, the best single coping strategy was the adaptive coping, and the least effective single strategy was the passive coping.

Recommendations

- 1. The entire concept of coping strategies should be incorporated into public health education curricula of the various training programmes for health care personnel.
- Health care workers should be properly equipped with the knowledge of coping strategies
 to enable them apply it positively in order to facilitate recovery and psychosocial
 wellbeing.

REFERENCES

- Adnan, A., Crawley, A., Mikulis, D., Moscovitch, M., Colella, B. and Green, R. (2013). Moderate-severe traumatic brain injury causes delayed loss of white matter integrity: evidence of fornix deterioration in the chronic stage of injury. *Brain Injury*, 27(12):1415-22.
- American Psychiatric Association. (2013). *Glossary of psychological terms. Arlington, VA: Author.* Retrieved from http://www.apa.org/research/action/glossary.aspx# s.
- American Psychological Association (2018). *APA Dictionary of Psychology*. Retrieved from: https://dictionary.apa.org/ Retrieved on September 8, 2022
- Brands, I. M., Köhler, S., Stapert, S. Z., Wade, D. T. and van Heugten, C. M. (2014). Psychometric properties of the coping inventory for stressful situations (CISS) in patients with Acquired brain injury. *Psychological assessment*, 26(3): 848.
- Burns R. (2016). Psychosocial Well-being. In: Pachana N. (eds) *Encyclopedia of Geropsychology*. Springer, Singapore.
- Chang, S., Sambasivam, R., Seow, E., Subramaniam, M., Ashok Assudani, H., Tan, G. C. Y. and Vaingankar, J. A. (2022). Positive mental health in psychotherapy: a qualitative study from psychotherapists' perspectives. *BMC Psychology*, 10(1): 1-10.
- Cherewick, M., Doocy, S., Tol, W., Burnham, G. and Glass, N. (2016). Potentially traumatic events, coping strategies and associations with mental health and well-being measures among conflict-affected youth in Eastern Democratic Republic of Congo. *Global Health Research and Policy*, 1: 1-18.
- Corn, B. W., Feldman, D. B. and Wexler, I. (2020). The science of hope. *The Lancet Oncology*, 21(9): e452-e459.
- Dawson, D. R., Cantanzaro, A. M., Firestone, J., Schwartz, M. and Stuss, D. T. (2006). Changes in Coping Style Following Traumatic Brain Injury and their Relationship to Productivity Status. *Brain and Cognition*, 60(2): 214-216.
- Devita, M., De Salvo, R., Ravelli, A., De Rui, M., Coin, A., Sergi, G. and Mapelli, D. (2022). Recognizing depression in the elderly: Practical guidance and challenges for clinical management. *Neuropsychiatric Disease and Treatment*, 2867-2880.
- Elnakib, S., Elaraby, S., Othman, F., BaSaleem, H., AlShawafi, N. A. A., Al-Gawfi, I. A. S. and Tappis, H. (2021). Providing care under extreme adversity: the impact of the Yemen conflict on the personal and professional lives of health workers. *Social Science and Medicine*, 272, 113751.
- Endler, N. S. and Parker, J. D. (1999). *Coping Inventory for Stressful Situations (CISS): Manual.* Toronto, ON, Canada: Multi-Health Systems.
- Folkman, S. and Lazarus, R. (1980). An analysis of coping in a middle-aged community sample. *Journal of Health and Social Behavior*. 21:219–239.

- Grommisch, G., Koval, P., Hinton, J. D., Gleeson, J., Hollenstein, T., Kuppens, P. and Lischetzke, T. (2020). Modeling individual differences in emotion regulation repertoire in daily life with multilevel latent profile analysis. *Emotion*, 20(8): 1462 1466.
- Jensen, M. P., Moore, M. R., Bockow, T. B., Ehde, D. M. and Engel, J. M. (2011). Psychosocial factors and adjustment to chronic pain in persons with physical disabilities: a systematic review. *Archives of Physical Medicine and Rehabilitation*, 92(1): 146-160.
- Kavčič, T., Avsec, A. and Kocjan, G. Z. (2022). Coping profiles and their association with psychological functioning: A latent profile analysis of coping strategies during the COVID-19 pandemic. *Personality and Individual Differences*, 185: 111287.
- Krpan, K. M., Levine, B., Stuss, D. T. and Dawson, D. R. (2007). Executive function and coping at one-year post traumatic brain injury. *Journal of Clinical and Experimental Neuropsychology*, 29(1): 36–46.
- Lazarus, R. and Folkman, S. (1984). Stress, appraisal and coping. New York, NY: Springer.
- Liu, D., Cui, Z., Zhang, Q., Liu, F., Chen, H., Wang, J. and Feng, T. (2023). The mediating role of specific coping styles in the relationship between perceived social support and depressive symptoms in adolescents. *Journal of Affective Disorders*, 325: 647-655Mahmoud Alilou*et al.*, 2022).
- Mahmoud Alilou, M., Pak, R. and Mahmoud Alilou, A. (2022). The Mediating Role of Coping Strategies and Emotion Regulation in the Relationship Between Pain Acceptance and Pain-Related Anxiety. *Journal of Clinical Psychology in Medical Settings*, 29(4): 977-990.
- Mannes, Z. L., Ferguson, E. G., Perlstein, W. M., Waxenberg, L. B., Cottler, L. B. and Ennis, N. (2020). Negative health consequences of pain catastrophizing among retired National Football League athletes. *Health Psychology*, 39(5): 452 457
- Morrow, J. and Nolen-Hoeksema, S. (1990). Effects of responses to depression on the remediation of depressive affect. *Journal of Personality and Social Psychology*. 58:519–527.
- Murray, L. (2019). Generalized Anxiety Disorder Following Mild Head Injury: An Investigation into the Relationship Between Physiological Underarousal and Symptoms of Anxiety. (Doctoral dissertation, BROCK UNIVERSITY).
- O'Brien, K. and Cooper, C. (2022). Conservation of resources theory. In Elgar Introduction to Organizational Stress Theories (pp. 109-122). Edward Elgar Publishing.
- Oxman, T. E., Hegel, M. T., Hull, J. G. and Dietrich, A. J. (2008). Problem-solving treatment and coping styles in primary care for minor depression. *Journal of Consulting and Clinical Psychology*, 76:933–943.

- Perez, L. (2017). The Effects of Coping Styles and Perceived Stress on Clinical Outcomes in Individuals with Moderate to Severe Brain Injury in a Post-Acute Rehabilitation Program. PCOM Psychology Dissertations. 414.
- Prell, T., Liebermann, J. D., Mendorf, S., Lehmann, T. and Zipprich, H. M. (2021). Pain coping strategies and their association with quality of life in people with Parkinson's disease: A cross-sectional study. *Plos One*, 16(11): e0257966.
- Rückholdt, M., Tofler, G. H., Randall, S. and Buckley, T. (2019). Coping by family members of critically ill hospitalised patients: An integrative review. *International Journal of Nursing Studies*, 97: 40-54. Saravanan*et al.*, 2019).
- Sirois, F. M. and Kitner, R. (2015). Less adaptive or more maladaptive? A meta-analytic investigation of procrastination and coping. *European Journal of Personality*, 29(4): 433-444.
- Stanisławski, K. (2022). The Coping Circumplex Model: A Theoretical Synthesis of Coping Constructs and Its Empirical Verification. WydawnictwoNaukowe UKSW.
- Velikonja, D., Warriner, E. M., Coulson, S. and Brum, C. (2013). The Relationship between Coping Styles and Affective/Behavioural Symptoms among Individuals with an Acquired Brain Injury. *Brain Injury*, 27(2): 158-168.
- Watson, P. A., Gignac, G. E., Weinborn, M., Green, S., Pestell, C. (2020). A meta-analysis of neuropsychological predictors of outcome following stroke and other non-traumatic acquired brain injuries in adults. *Neuropsychology Review*, 30: 194-223.
- Weiten, W., Dunn, D. S. and Hammer, E. Y. (2011). *Psychology applied to modern life: Adjustment in the 21st century*. Centage Learning Whiting, 2016;
- Whiting, D. L. (2016). A trial of acceptance and commitment therapy to facilitate psychological adjustment after a traumatic brain injury. Doctor of Philosophy Thesis, School of Psychology, University of Wollongong. https://ro.uow.edu.au/theses/4612.
- Xie, C., Li, L. and Li, Y. (2022). Learned helplessness in renal dialysis patients: concept analysis with an evolutionary approach. *Patient Preference and Adherence*, 16: 2301-2312.
- Yu, H., Li, M., Li, Z., Xiang, W., Yuan, Y., Liu, Y., and Xiong, Z. (2020). Coping style, social support and psychological distress in the general Chinese population in the early stages of the COVID-19 epidemic. *BMC Psychiatry*, 20: 1-11.
- Zeidner, M., Saklofske, D., (2015). Adaptive and maladaptive coping. In: Zeidner, M., Endler, N.S. (Eds.), Handbook of Coping: Theory, Research, Applications. Wiley, New York, 505–531.