



Stress Management Strategies on Health Workers during Covid-19 Pandemic Lockdown in Rivers State

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ABSTRACT

The study examined stress management strategies on health workers during Covid-19 pandemic lockdown in Rivers State. To achieve the purpose of the study, three (3) objectives, three (3) research questions and three (3) hypotheses guided the study. The research design used for the study was analytical descriptive survey. The population of the study for health workers in Rivers State consists of 14,631 from the Rivers State Ministry of Health; State Strategic Health Development Plan II (2018). Stratified random sampling technique was used to select health workers. The sample size for the study was 500 drawn from Taro Yamen. The instrument used for data collection was self-structured questionnaire titled “Stress Management Strategies Questionnaire (SMSQ)”. The instrument was validated using two experts in the measurement and evaluation in the Department of Educational Psychology Guidance and Counseling and the reliability of the instrument was achieved using the split half method and distributed to five hundred respondents who were not part of the administration of the same instrument on same respondents who were not part of the main study. The data gathered were analyzed mean (X) and standard deviation (SD) was used to answer the research questions, while the Independent T-test and ANOVA were used to test the hypotheses at 0.05 level of significance. Based on the data analysed, the findings of the study revealed that meditation, deep breathing, relaxation technique, spending time in nature, exercise, artistic expression and listening to certain types of music are some of the strategies in managing stress. The Researcher recommends that: Government should provide stress inoculative training to address the stress ambiguity of male health workers.

Keywords: stress, management strategies, health workers, Covid-19 pandemic, lockdown,

INTRODUCTION

Corona virus 2 (Sars-Cov-2) was first identified in Wuhan China in December 2019 (Hul 2020). The health authorities in China reported to the World Health Organization about a cluster of viral pneumonia cases of unknown cause in Wuhan Hubei. However, there had been reports from South China Morning Post, suggesting a case traced back to 17th Nov. 2019, about a 55 year old person who may have been the first to be infected with the virus (Bryner, 2020). And by 20th, December, more than sixty (60) confirmed cases had occurred as authorities did not publicly concede there was human to human transmission until 21st of January 2020 (WHO, 2020).

Stress is any demand that affects an individual’s body’s mechanism (equilibrium and force him to take extra steps) in order to restore the (equilibrium homeostatics). It’s any type of demand that takes a person to function above the body’s equilibrium level. Stress is any feeling of emotional stress and pressure. Uzoeshi (2017) sees stress as the wear and tear of life on the body. It is the body’s reaction to any change that requires an adjustment or response. The body reacts to these changes with physical, mental, and emotional responses. Stress is a reaction to a situation – it is not about the actual situation, we usually feel stressed when we think that the demands of the situation are greater than our resources to deal with that

situation. Common sources of stress includes: major life events, long term worries, crises / catastrophes, daily hassles, ambient stressors etc.

Stress can be external and related to the environment(including jobs, our homes, or relationships and all the situations, challenges, difficulties and expectations confronting us on daily basis), stress may also be caused by internal perceptions that adjust an individual to experience anxiety or other negative emotions surrounding a situation such as, pressure, discomfort etc. stress can be long term or short-term, both can lead to variety of symptoms but chronic stress can take a serious toll on the body over time and have long lasting effort (Scott, 2020). Stress occurs when there is conflict between job demands on the employee and the amount of control an employee has over meeting these demands. This combination of high demands in a job and low amount of control over the situation can lead to stress. Generally, stress is all about reactions people have to the situations they face. These reactions are not the same from persons to person.

Uzoeshi (2017) opined that stress is not always harmful every worker needs a level of stress to perform effectively, often not regarded as positive. This kind of stress provide us with the energy and motivation to meet our daily challenges, whether at home and at the work place. This kind of stress response is what helps us “rise” to a challenge and meet our goals, but it is often not recognized as stress because having met the challenge we are satisfied and happy. Mental Health America (2013) stated that positive stress helps improve athletic performance, it also plays a factor in motivation, adaptation and react to the environment. It is the kind of stress that encyst an employee’s promotional preparation or wedding.

Distress: stems from the Latin root dis-stress (as in dissonance or disagreement). Medically; distress is a threat to quality of life, it occurs when a demand vastly exceeds a person’s capabilities. It grows above the optimal level, becomes dangerous and can motivate some negative consequences that can eventually make the individual or worker in-effective and unproductive. Hyper stress results from being overloaded, overworked and stressed out. Any little thing can trigger a strong emotional response. Hypo stress on the other hand is experienced by one who is constantly bored, performing of same task over and over again causing feelings of restlessness and lack of inspiration. Stress can trigger the body’s response to a perceived threat or danger known as the fight or flight response. During reaction, certain hormones like the adrenaline and cortisole are released.

Effects of Stress on Health

The human body is designed to experience stress and react to it. Stress can be positive, keeping us alert, motivated and ready to avoid danger. Selye (2014) proposed four different variations of stress, on one axis he allocates good stress(eu stress) and bad stress (distress). On the other hand, he allocates over stress (hyper stress) and under stress (hypo stress). Selye advocates that the ultimate goal would be to balance hyper stress and hypo stress and have as much eu-stress as possible. The term “**Eu-stress**” comes from the Greek root eu-which means “good” (as in euphoria). **Eu-stress** results when a person perceives a stressor as positive.

Stress becomes negative when a person faces continuous challenges without relief or relaxation between stressors, as a result, the person becomes overworked and stress – related tension builds. The body’s Autonomous Nervous System (ANS) has an inbuilt stress response that causes physiological changes to allow the body to combat stressful situations. This stress response is also known as the “fight or flight response and is activated in case of an emergency. However, this response can become chronically activated during prolonged period of stress. Prolonged activation of the stress response causes wear and tear on the body both physical and emotional (Cleveland, 2020). Stress that continues without relief can lead to a condition called distress – a negative stress reaction.

Distress can disturb the body’s internal balance or equilibrium leading to physical symptoms such as headaches, an upset stomach, elevated blood pressure, chest pain, sexual dysfunction and problem sleeping. Emotional problems can also result from distress, these problems include depression, panic attacks, or other forms of anxiety and worry.

Managing and Coping with Stress

Stress management techniques is a way of coping with stress and its symptoms to provide and maintain the general well being of an individual (Lumen, 2019). It aims to control or diminish a person’s level of

stress through both conventional and alternative methods or through self help therapies, whether chronic and recurring or acute and unique.

Conventional method: Conventional methods of stress management are most popular in the western world. These methods are called conventional because most people are familiar with them and their effects on stress. Some conventional methods of reducing stress include Psychiatric therapy and anxiety-reducing medications. As with traditional medicine, conventional methods of stress management tend to focus on evidence based approaches to both the stressor and the experience of counseling and therapy in stress management, they often rely on medication to reduce stress. Sometimes, the social support factor of therapy alone can be enough to lift a person out of a debilitating state of stress. Conventional methods tend to face the stressor head-on and adopt a person's life to either avoid or allocate a particular type of stress (Lumen, 2019).

Alternative method: Alternative methods of stress management have traditionally been popular in regions of the world outside of the United States, but they continue to gain influence in the Western World. As with alternative medicine, alternative stress therapies are not rooted in the scientific methods, but rather have non-evidence-based healing effects. These methods tend to focus on the person experiencing stress, by providing methods for mental reframing or management. Alternative methods such as Yoga, Meditation, and Visualization embraces the transactional model of stress by empowering the stressed person to either view the situation differently or believe in their capability to cope (Lumen, 2019). The transactional model of stress is a framework that emphasizes one's ability to evaluate harm, threats and challenges that result in an enhanced ability to cope with stressful events. Individuals are advised to focus on their thought and to develop heightened security and positive thinking when it comes to stressful situations.

Alternative methods are gaining prevalence as personal anecdotes and research continue to reinforce their effectiveness. Other alternative methods to stress management includes;

- Meditation
- deep breathing
- relaxation technique
- Spending time in nature
- Exercise, etc
- Artistic expression
- Listening to certain types of music (new age music, classical music, psychedelic music)
- Social activities

Self help therapies

Exercise: To start with, physical activity can help improve your sleep and better sleep means better stress management, people who exercise more tend to get better sleep "show wave", sleep that helps renew the brain and body. Just take care not to exercise too close to bedtime, which disrupts sleep for some people. Exercise also seems to help mood, part of the reason may be that it stimulates your body to release a number of hormones like endorphins and endocannabinoids that help block pain, improves sleep, and sedate you. Some of them (endocannabinoids) maybe responsible for the euphonic feeling, or "runners' high" that some people report after long runs. People who exercise also tend to feel less anxious and more positive about themselves. When your body feels good, your mind often follows.

Humour: Humour is used as a positive coping strategy which may have useful benefits in relation to mental health and well being. By having a humorous outbreak on life, stressful experiences can be and are often minimized. This coping method corresponds with positive emotional states and is known to be an indicator of mental health (Martin, 2011).

Physiological processes are also influenced within the exercise of humor, for example; laughing may reduce muscle tension, increase the flow of oxygen to the blood, exercise the cardiovascular region and produce endorphins in the body. Using humor in coping while processing through feelings can vary depending on life circumstances and individual humor styles. The Association for applied and therapeutic humor defines therapeutic humor as: 'any intervention that promotes health and wellness by stimulating a

playful discovery, expression or appreciation of the absurdity of or incongruity of life situations. This intervention may enhance health or be used as a complementary treatment of illness to facilitate healing or coping whether physical, emotional, cognitive or spiritual.

Exercised humor can be a sign of positive adjustment as well as drawing support and interaction from others around the loss. Humour is used as a positive coping strategy which may have useful benefits in relation to mental health and well being. By having a humorous outbreak on life, stressful experiences can be and are often minimized. This coping method corresponds with positive emotional states and is known to be an indicator of mental health (Martin, 2011).

Social Support and Stress Management

Social support is the provision of assistance or comfort to others, typically to help them cope with biological, psychological and social stressors. The social support theory was propounded by Drennon-Gala and Cullen in 1994. Social support plays a major role in successful stress management. Social support reduces psychological distress and promotes adjustments that counteract high stress levels. People with low amounts of social support report high instances of depression, anxiety and mental disorders. For these people, stressful situations create higher amounts of panic, phobia, and disorder than for those with high social support. Social support also bolsters physical health effects of stress. The two dominant models of social support are direct effects of hypothesis and the buffering hypothesis.

The relational regulation theory focuses on the relational aspect of perceived social support (not necessarily the same as actually provided social support). The relational aspect is that an individual's perception of social support is based on additional factors such as their own emotional feelings about the other person, and interpretation of their conversations.

Management of Stress through Music

Turning toward support or coping mechanisms, to handle fear and anxiety of the unknown, during times of trauma, crisis, or difficulty, music is a way of survival. Elise (2017) opined that music as a coping strategy involves the use of music (through listening or playing music) in order to reduce stress as well as many of the psychological and physical manifestation associated with it. Listening to music with its intricate structure and intrinsic patterns can be entertaining, and source of pleasure and contentment bringing about a sense of meaning, making it a part of a healing process. Listening to music in the context of a stressful situation increases coping abilities and reduces levels of perceived psychological stress. The psychological effects of music can be powerful and wide-ranging in an intervention, sometimes used to promote emotional health, help patients cope with stress and boost psychological well being.

The effect of music with relaxing properties was found to have an effect on the alpha wave and in the deep sleep state the theta waves are affected, which proved, that brain waves (EEG) can be altered with music relaxation. Music resonates memory and emotions with the brain, increases attention spans, and/or focus, helps to sustain moods, relieves tension that builds from within and facilitates self expression. Rather than focusing on the stressor itself, music therapy is typically geared towards reducing or eliminating the emotions that arise in response to stress. In essence, advocates of this therapy claim that the use of music helps to lower more biologically measurable quantities such as the levels of epine-phrine and cortisol. Ramesh (2020), stated that; training the mind to be positive with the use of music and to be able to do the same with others who are going through the same state of mind is a way of coping with stress during period of crises such as the current pandemic which has the globe caught in the clutches of fear of the unknown future.

Coping With Stress

Coping means to invest one's own conscious effort, to solve personal and inter-personal problems, in order to master, minimize or tolerate stress and conflict. The term coping generally refers to adaptive, constructive strategies which reduces stress. Coping is the process of spending conscious effort and energy to solve personal and interpersonal problems. It is also the specific efforts, both behavioral and psychological that people employ to master, tolerate, reduce or minimize stress events. Cramer (2018) postulated that stress management differs between coping strategies and defence mechanisms. Uzoeshi (2017) opined that Stress management can be categorized into Innoculative and therapeutic management. The Canadian Medical Association (2018) stated that, Stress Management Means the Following;

1. Identify sources of stress.
2. Look at how you cope with the situation.
3. Avoid unnecessary stress.
4. Alter the situation.
5. Adapt to the stressor.
6. Accept the things you cannot change.
7. Adopt a healthy lifestyle
8. Make time for fun and relaxation.

Robinson (2021) stated that: to Identify sources of stress in your life, start a stress journal to look at how you currently cope with stress, in your habits, attitudes etc. Do you explain stress as temporary or an integral part of your work or home life, outside events, or an entirely normal and unexceptional? Until you accept responsibility for the role you play in creating or maintaining it through journaling your stress will remain outside your control. Stress journal is keeping a diary or a journal that explores thought and feelings surrounding the events of your life. Journaling can help you focus on gratitude and process difficult emotions whether you consistently or occasionally write in detail about stressful events or happy situations, writing will help you clarify your thoughts and feelings giving you valuable self awareness.

Dealing with Stressful Situations

The Five A's

Change the Situation

1. Avoid the stressor
2. Alter the stressor

Change your Reaction

3. Adapt to the stressor
4. Accept the stressor
5. Adjust your attitude

Avoid the Stressor

Not all stress can be avoided and its not healthy to avoid a situation that needs to be addressed. You may be surprised however, by the number of stressors in your life that you can eliminate (Canadian Medical Association, 2018).

- **Learn how to say "No"?:** Know your limits and stick to them. Whether in your personal or professional life, refuse to accept added responsibilities when you are close to dealing with them. Taking on more than you can handle is sometimes a recipe for stress.
- **Avoid people who stress you out:** If someone is consistently stressing you and you can turn the relationship around, limit the amount of time you spend with that person or end the relationship entirely.
- **Take control of your environment:** If the evening news makes you anxious, turn the TV off, If traffic gets you tense, take a longer but less-traveled route. If going to the market is an unpleasant chore do your grocery/shopping online.
- **Avoid hot-button topics:** If you get upset over religion or politics, cross them off your conversation list. If you repeatedly argue about the same subject with the same people, stop bringing up such topics or excuse yourself when it's the topic of discussion.
- **Pare down your to do list:** Analyze your schedule, responsibilities and daily tasks. If you've got too much on your list, distinguish between the "should" and the "musts". Drop tasks that are not truly necessary to the bottom of the list or eliminate them entirely.

Alter the Situation

If you avoid the stressful situation, try to alter it. Figure out what you can do to change things so the problem does not present itself in the future. Often, this involves changing the way you communicate and operate in your daily life.

Express your feelings instead of bulking them up: if something or someone is bothering you, communicate your concerns in an open and respectful way. If you do not voice your feelings, resentment will build and the situation will likely remain the same.

Be willing to compromise: When you ask someone to change their behaviour be willing to do the same, if you both are willing to bend at least a little, you all have a good chance of finding a happy middle ground.

Be more assertive: Do not take a back seat in your life. Deal with the problem head on, doing your best to anticipate and prevent them. If you have got an exam to study for and your chatty roommate just got home, stay up front that you only have five minutes to talk.

Manage your time better: Poor time management can cause a lot of stress, when you are not conscious of your time and realizing you are running behind time, it's hard to stay calm and focused. But if you plan ahead and make sure you don't overextend yourself, you can alter the amount of stress you have.

Adapt to the Stress: If you cannot change the stressor avoid yourself, you can adapt to stressful situations and regain your sense of control by changing your expectations. Try to view stressful situations from a more positive perspective. Rather than frowning about a traffic jam, look at it as an opportunity to pause and relax, listen to your favorite radio stations, or enjoy some time alone.

Look at the big picture: Take perspectives of the stressful situation, ask yourself how important it will be in the long run will it matter in a month? a year?, Is it really worth getting upset? If the answer is no, focus your time and energy essentially.

Adjust standards: Perfectionism is a major source of avoidable stress. Stop setting yourself up for failure by demanding perfection. Set reasonable standards for yourself and others and learn to be okay with "goal enough".

Focus on the positive: when stress is getting you down take a moment to reflect on all the things you appreciate in your life including your own positive qualities and gifts. This simple strategy can help you keep things in perspective.

Adjusting your Attitude: The Canadian Medical Association (2018), stated that; how you think can have a profound effect on your emotional and physical well-being. Each time you think a negative thought about yourself, your body reacts as if it were in the throes of a tension-filled situation. If you see good things about yourself you are more likely to feel good, the reverse is also true when you feel and think bad about yourself, eliminate words such as; "always" "never" "should" and "must" these are talks that mark of on self-defeating thoughts.

Accept the things you cannot change: Some sources of stress are unavoidable, you cannot prevent or change stressors such as the death of a loved one, a serious illness, or a natural occurrence. In such cases, the best way to cope with stress is to accept as they are. Acceptance may be difficult, but in the long run, it's easier than railing against a situation you can't change.

Do not try to control the uncontrollable: Many things in life are beyond our control particularly the behavior of other people. Rather than stressing out over them, focus on the things you can control such as the way you choose to react to problems.

Look for the upside: As the saying goes, "what does not kill us make us stronger". When facing major challenges, try to look at them as opportunities for personal growth. If your own poor choice contributes to a stressful situation, reflect on them and learn from your mistakes.

Share your feelings: Talk to a trusted friend or make an appointment with a therapist. Expressing what you are going through can be very cathartic. Even if there's nothing you can do to alter the stressful situation.

Learn to forgive: accept the fact that we live in an imperfect world and that people make mistakes. Let go of anger and resentment, free yourself from negative energies by forgiving and moving on.

Be self compassionate: sharing self-compassion is not being self-centered or self-indulgent. Self-compassion is self-kindness. It's the ability to treat oneself with acceptance, empathy, understanding and love. Many people find it easy to show compassion to others, but find it difficult to extend the same compassion to themselves for fear of being seen as egoistical and self-centered. Self-compassion can help reduce many health issues such as anxiety, stress or insecurity, it is important to care for ourselves during

difficult times like this. We should remember that we are flawed and imperfect like all humans, and acknowledge and accept difficult feelings with kindness to help us progress, and then let them go. Beyond a take charge approach and a positive attitude, you can reduce stress in your life by nurturing your self if you regularly make time for fun and relaxation, you'll be in a better place to handle life stresses when they inevitably come. Finally make time for fun and relaxation.

Coping and Defensive Mechanisms

Coping is a conscious act, has a problem function, its situational, unrelated to personality and age. Coping strategies can be either positive or negative. Positive or adaptive statement decreases the amount of perceived experience, while negative or an adaptive strategy diminishes the symptoms of stress without addressing the real problems (Lumen, 2019). While **Defence mechanisms** are; unconscious non problem solving, stable and associated with personality and age. These mechanisms are developed by an individual to protect his/her self mentally against the events that cause anxiety and worry. Human kind has to show both biological and psychological development and adaptation to survive. Because stress is perceived, the following mechanism does not necessarily deal with the actual situation that is causing an individual stress. However, they may be considered **coping mechanisms** if they allow the individual to cope better with the negative feelings and anxiety that they are experiencing due to the perceived stressful situation as opposed to actually fixing the concrete obstacle causing the stress. Cramer (2018) mentioned that coping mechanisms are unconscious processes that influence human decision making. Defence mechanisms are also one of those unconscious processes or useful variables, to explain behaviours and ability to evaluate an individuals own defensive processes and suitable for analyses.

Types of Coping Strategies

Researchers have tried to group coping responses rationally and empirically by factor analysis or through a blend of both techniques (Folkman, 2014). Folkman and Lazarus, splited the coping strategies into four groups, namely;

- 1) Problem – Focused
- 2) Emotion – focused
- 3) Support – seeking
- 4) Meaning – making coping.

Welten also identified for types of coping strategies;

- a) Appraisal focused (adaptive cognitive).
- b) Problem – focused (adaptive behaviours).
- c) Emotional – focused.
- d) Occupational – focused coping.

Taylor, (2016), pointed out that; people use a mixture of several coping strategies, which may change over time. All these strategies can prove useful, but some claim that those using problem focused coping strategies will adjust better to life.

Problem – focused coping mechanisms may allow an individual greater perceived control over their problem where as **emotion – focused coping** may sometime lead to a reduction in perceived control (Maladaptive coping).

Appraisal – focused (adaptive cognitive) strategies occurs when the person modifies the way they think, for example; employing denial or distancing ones' self from the problem. People may altar the way they think about a problem by altering their goals and values, such as by seeing the humor in a situation; some have suggested that humor may play a greater role as a stress moderator among women than men.

Lockdown

Adedayo (2020) opined that 'lockdown' is a situation in which people are not allowed to enter or leave a building or an area freely because of an emergency. Gakpo (2020) reiterated lockdown in three distinct ways, viz; a) the confinement of prisoners to their cell for all or most of the day as a temporary security measure, b) an emergency condition in which people are temporarily prevented from entering or leaving a restricted area during a threat of danger and c) a temporary condition imposed by governmental

authorities as during the outbreak of an epidemic disease in which people are required to stay at their homes and refrain from or limit activities outside the home involving public contact.

Lockdown is among the non-pharmacological interventions adopted by most of the countries in various scales to contain the virus from spreading to other parts of the country. In South Africa, tens of thousands of troops have been brought to enforce one of the world's strictest lockdowns, while countries like South Korea and Taiwan have managed to contain their outbreaks without merely closing anything. Lockdown is done to flatten the curve and get prepared to face the continuing epidemic. Merely locking down the population without other interventions such as infection control and preventive measures, social distancing, robust testing, isolating and treating the infected, contact tracing and quarantining, will take nowhere because lots of problems are associated with the lockdown. It is an expensive intervention leading to closure of businesses and leading to steep rise in unemployment rates.

Statement of the Problem

Stress is the wear and tear of life on the body which arises from an individual's inability to manage pressures that threatens his or her psychological, mental, emotional and physical stability. These external pressures have been known to arise from different factors within the environment and are known as stressors. When it is generated from the work environment it is called occupational stress. The concept of stress has lately become a challenge and a concern to the public health research field, stress is a subjective phenomenon; it means different things to different people and is experienced by everybody at different levels. For some individuals, **positive** stress is seen as a factor of motivation which pushes them to achieve certain set goals but as stress becomes severe or chronic (**negative**) it can be more dangerous and damaging arising from the harmful psychological and behavioral effect, it may have on the victims.

In addition to fears around covid-19 exposure, Health care workers are faced with anxieties related to shortages of essential equipment with challenges of family support and child care while they work, as well as frustration due to lack of knowledge, environmental changes and fear of infection both by themselves and by their family members. They are at risk of emotional strain, loneliness, sleep disorders and physical exhaustion as a result of the work load and related stress from the provision of care to growing numbers of patients who may then rapidly deteriorate; they may be exposed to critical illness or death of their co-workers, they also face moral dilemmas in decision making with limited resources. When it comes to challenges faced by the healthcare workers in Rivers State during covid-19 pandemic lockdown, concerns raised from bad management cannot be overemphasized. They were mostly untrained and unequipped in combating the pandemic. This resulted into an alarming rate of infection among the medical work force in Rivers State. Hence, there were problems like; Lack of safety and personal protective equipment (PPE), lack of medical equipments, lack of trained personnel, increased psychological symptoms, lack of intensive care unit, elevated anxiety of getting infected, depression, increased working hours, non payment of salaries and allowances, lack of health insurance, lack of welfare packages and threats of containing the virus from uncooperative patients. Previous study has shown that meditation, relaxation as well as music therapy helps to mitigate the daily stress during the severe acute respiratory syndrome (SARS) outbreak in 2005, health care professionals took some initiatives to cope with the stress associated with the pandemic. The coping mechanisms included avoidance of news, about the SARS pandemic, small gatherings after work where problems can be shared as well as participating in other recreational activities. Proper training, personal protective equipment (PPE) and medical assistance are important to support health care providers, but these are not available in Rivers State. The researcher therefore wished to breach the gap, to get indepth knowledge of the individual experiences and feelings of health care workers' during covid-19 pandemic lockdown in order to proffer solutions that can be used for effective and efficient delivery of service in Rivers State.

Aim and Objectives of the Study

The aim of study is to investigate the stress management strategies on health workers during Covid-19 pandemic lockdown in Rivers State. Specifically, the study sought:

1. To determine sources of stress to health workers during the Covid-19 pandemic lockdown in Rivers State.

2. To determine the extent coping strategies differed among health workers based on the sources of stress of health workers during Covid-19 pandemic lockdown in Rivers State.
3. To find out the extent coping strategies differed among health workers during Covid-19 pandemic lockdown in Rivers State based on department.

Research Questions

The following research questions guided the study.

1. What were the sources of stress faced by health workers in Rivers State during Covid-19 pandemic lockdown?
2. To what extent of difference is the mean ratings of health workers on the sources of stress based on department during the covid-19 pandemic lockdown?
3. To what extent of difference is the mean ratings of health workers on the coping strategies based on department during the covid-19 pandemic lockdown?

Hypotheses

The following hypotheses guided the study.

1. Mean ratings on the sources of stress to health workers did not differ significantly based on gender during Covid-19 pandemic lockdown.

METHODOLOGY

Analytical descriptive survey was used for this study. It provides the opinion of the respondents (current conditions, attitudes in describing and explaining situations that exist) on stress and management strategies used by health workers during Covid-19 pandemic lockdown in Rivers State. The population of the study for health workers in Rivers State consists of 14,631 from the Rivers State Ministry of Health; State Strategic Health Development Plan II (2018). Stratified random sampling technique were used to select health workers according to gender, age, location, department, educational qualification. The sample size was put into strata as follows; gender, age, location, department, then simple random sampling was applied in each of the strata to determine the sample size. The sample size for the study was 500 drawn from Taro Yamene and stratification to the three senatorial districts of Rivers State. The research instrument for this study is a self structured instrument titled "Stress Management Strategies Questionnaire (SMSQ)". To ensure the validity of the research instrument, two experts in the measurement and evaluation in the Department of Educational Psychology Guidance and Counseling vetted the items and their comments, suggestions and modifications of the instrument were built into the final draft of the instrument, hence, the instruments were valid for the study. The reliability of the instrument was administered using the split half method and distributed to five hundred respondents who were not part of the administration of the same instrument on same respondents who were not part of the main study. Thereafter, two weeks later, the same instrument was administered on same respondents. The test results were collated using the Pearson Product Moment correlation to obtain a reliability coefficient of 0.85 for stress scale and 0.80 for management scale respectively. The mean (\bar{X}) and standard deviation (SD) was used to answer the research questions, while the Independent T-test and ANOVA were used to test the hypotheses at 0.05 level of significance.

RESULTS

Research Question One: *What are the sources of stress faced by health workers in Rivers State during the Covid-19 pandemic lockdown?*

Table 1: Mean ratings of Sources of Stress to Health Workers during Covid-19 Pandemic lockdown.

S/N	Items	Mean	Std. Dev	Decision
1	Seeing new cases of Covid -19 patients brought to my hospital makes me tensed.	2.66	0.98	Agree
2	Worried knowing that one could be infected in the line of duty during the pandemic lockdown.	3.06	0.94	Strongly Agree
3	I get physically exhausted, too many patients to attend to daily.	2.77	1.09	Agree
4	Tested on daily basis to check our Covid-19 status stresses me.	2.58	1.01	Agree
5	Covid-19 daily reports makes me panic.	2.84	1.12	Agree
6	Carrying of stretchers during covid-19 frightens me.	2.22	1.13	Disagree
7	Experiences anxiety and fear with daily with the occuyrence of the pandemic..	2.79	1.18	Agree
8	Seeing covid-19 patients die of the infection daily bothers me.	2.51	1.09	Agree
9	Administering treatment to Covid-19 infected person (s) scares me.	2.79	1.05	Agree
10	Fear being infected while administering treatment to infected person(s) during the pandemic lockdown.	3.00	1.04	Strongly Agree
11	Seeing other medical personnel tensed up makes me panic.	2.96	0.88	Agree
12	Influx of covid-19 patients into the hospital frightens me.	2.52	0.99	Agree
13	Working in hematological department or lab scares me.	2.21	1.13	Disagree
14	Working very long hours makes me exhausted	2.95	1.05	Agree
15	Not having some of the Covid-19 protective equipment for health workers makes me panic and stressed.	2.82	0.98	Agree
16	Poor medical facilities stresses me	2.72	0.94	Agree
17	Not being able to see my friends because of the lockdown bothers me.	3.14	1.09	Strongly Agree
18	Staying away from family members makes me lonely and fearful.	2.90	1.08	Agree
19	Followed strict personal protective measures (e.g., mask, gown, hand washing etc.) stress me .	3.17	1.03	Strongly Agree
20	Going out in public places terrifies me	2.34	1.16	Disagree
Grand Mean		2.75	1.05	

Criterion mean = 2.50

Table 1 Shows the mean score for the sources of stress to health workers during the Covid-19 pandemic lockdown, when compared to the criterion mean of 2.5, the result shows that item 17 had the highest value of 3.14 meaning the health workers considered not being able to see their friends and extend family because of the lockdown to be the greatest source of stress while item 13 had the lowest value of 2.21 meaning that working in the haematology lab was considered not to be a source of stress. Items 1-5, 7-12, 14-19 were all accepted as sources of stress to health workers while items 6, 13 and 20 were all rejected as sources of stress to health workers in Rivers State during the Covid-19 pandemic lockdown

Research Question Two: *To what extent is the mean ratings of health workers on the sources of stress based on department during the covid-19 pandemic lockdown?*

Table 2: Mean Ratings of Sources of Stress to Health Workers during Covid-19 Pandemic based on Hospital Departments

S/N	Items	Critical Care			Administration			Emergency			Fam. Medicine			Haematology			Dermatology		
		M	SD	D	M	SD	D	M	SD	D	M	SD	D	M	SD	D	M	SD	D
1	Seeing new cases of Covid -19 patients brought to my hospital makes me tensed.	2.76	0.96	A	2.57	0.96	A	2.79	1.04	A	2.59	0.93	A	2.56	0.97	A	2.50	1.24	A
2	Worried knowing that one could be infected in the line of duty during the pandemic lockdown.	3.05	0.83	S/A	3.01	0.98	S/A	3.01	1.03	S/A	3.14	0.90	S/A	2.89	1.12	A	3.25	0.97	S/A
3	I get physically exhausted, too many patients to attend to daily.	2.50	1.13	A	2.65	1.20	A	2.99	1.02	A	2.87	1.03	A	2.67	1.18	A	2.92	1.00	A
4	Tested on daily basis to check our Covid-19 status stresses me.	2.83	0.82	A	2.56	1.07	A	2.50	1.03	A	2.54	1.07	A	2.37	0.93	D	2.17	1.19	D
5	Covid-19 daily reports makes me panic.	2.80	1.04	A	2.83	1.26	A	3.04	1.15	S/A	2.79	1.11	A	2.56	1.05	A	2.83	1.27	A
6	Carrying of stretchers during covid-19 frightens me.	2.21	1.00	D	2.33	1.19	D	2.25	1.18	D	2.12	1.15	D	2.19	1.18	D	2.83	1.19	A
7	Experiences anxiety and fear with daily with the occurrence of the pandemic..	2.51	1.21	A	2.96	1.13	A	3.08	1.04	A	2.72	1.25	A	2.78	1.09	A	2.50	0.90	A
8	Seeing covid-19 patients die of the infection daily bothers me.	2.62	1.04	A	2.50	1.13	A	2.77	0.97	A	2.39	1.14	D	2.11	1.09	D	2.17	1.11	D
9	Administering treatment to Covid-19 infected person (s) scares me.	3.10	0.80	S/A	2.59	1.14	A	2.91	1.09	A	2.67	1.08	A	2.50	1.16	A	2.75	1.06	A
10	Fear being infected while administering treatment to infected person(s) during the pandemic lockdown.	3.04	0.83	S/A	3.24	0.97	S/A	3.16	1.02	S/A	2.87	1.12	A	2.52	1.16	A	2.67	1.30	A
11	Seeing other medical personnel tensed up makes me panic.	3.10	0.81	S/A	2.72	0.94	A	2.97	1.00	A	2.98	0.84	A	3.04	0.81	S/A	2.58	0.67	A
12	Influx of covid-19 patients into the hospital frightens me.	2.64	0.97	A	2.23	0.98	D	2.70	0.97	A	2.50	0.99	A	2.33	1.07	D	2.92	1.00	A
13	Working in hematological department or lab scares me.	2.50	1.08	A	2.16	1.23	D	1.96	1.06	D	2.08	1.10	D	2.70	1.14	A	2.50	1.24	A
14	Working very long hours makes me exhausted	3.04	0.91	S/A	3.12	1.09	S/A	3.06	1.07	S/A	2.79	1.10	A	2.96	1.09	A	2.50	1.00	A
15	Not having some of the Covid-19 protective equipment for health workers makes me panic stressed.	2.77	0.92	A	2.89	1.03	A	2.88	0.95	A	2.82	0.95	A	2.52	1.22	A	3.17	1.03	A
16	Poor medical facilities stresses me	2.74	0.90	A	2.79	0.99	A	2.61	0.85	A	2.82	0.97	A	2.41	1.15	D	2.50	0.80	A
17	Not being able to see my friends because of the lockdown bothers me.	3.44	0.88	S/A	3.04	1.14	S/A	3.14	1.03	S/A	2.95	1.23	A	3.19	0.92	S/A	3.25	1.06	S/A
18	Staying away from family members makes me lonely and fearful.	3.34	0.87	S/A	2.79	1.17	A	2.76	1.06	A	2.78	1.07	A	2.74	1.13	A	2.58	1.16	A
19	Followed strict personal protective measures (e.g., mask, gown, hand washing etc.)stress me .	3.21	0.89	S/A	3.28	0.91	S/A	3.22	1.10	S/A	3.09	1.12	S/A	2.93	1.17	A	3.42	0.79	S/A
20	Going out in public places terrifies me	2.66	1.10	A	2.32	1.18	D	1.97	1.14	D	2.32	1.18	D	2.44	0.97	D	2.42	1.00	D

M=Mean, SD= Standard Deviation, D= Decision, A=Accept, R= Reject

Table 2 shows the mean score for the sources of stress to health workers during the Covid-19 pandemic lockdown based on hospital department, the result shows that respondents in the critical care unit below the age of 35 years item 18 had the highest value of 3.44 while item 6 had the lowest value of 2.21. Items 1-5, 7-20 were all accepted as sources of stress to health workers while items 6, was rejected as sources of stress to health workers. For respondents in administrative department item 19 had the highest value of 3.28 while item 13 had the lowest value of 2.16. Items 1-5, 7-11, 14-20 were all accepted as sources of stress to health workers while items 6,12,13 and 20 were all rejected as sources of stress to health workers, For respondents in the emergency department item 19 had the highest value of 3.22 while item 13 had the lowest value of 1.96. Items 1-5, 7-12, 14-19 were all accepted as sources of stress to health workers while items 6,13 and 20 were all rejected as sources of stress to health workers. For respondents in family medicine item 2 had the highest value of 3.14 while item 13 had the lowest value of 2.08. Items 1-5, 7, 9-12, 14-19 were all accepted as sources of stress to health workers while items 6, 8,13 and 20 were all rejected as sources of stress to health workers. For respondents in the haematology department item 17 had the highest value of 3.19 while item 8 had the lowest value of 2.11. Items 1-3, 5, 9-11, 13-15, 17-19 were all accepted as sources of stress to health workers while items 4, 6, 8, 12,16 and 20 were all rejected as sources of stress to health workers. For respondents in the dermatology department item 19 had the highest value of 3.42 while item 4 and 8 had the lowest value of 2.17. Items 1-3, 5-7, 9-19 were all accepted as sources of stress to health workers while items 6, 8 and 20 were all rejected as sources of stress to health workers in Rivers State during the Covid-19 pandemic lockdown.

Research Question Three: *To what extent is the mean ratings of health workers on the coping strategies based on department during the covid-19 pandemic lockdown?*

Table 3: Mean Ratings of sources of Coping Strategies to Health Workers during Covid-19 Pandemic lockdown based on Hospital Departments

S/N	Items	Critical Care			Administration			Emergency			Fam. Medicine			Haematology			Dermatology		
		M	SD	D	M	SD	D	M	SD	D	M	SD	D	M	SD	D	M	SD	D
1	Working together with colleagues builds team spirit and motivation	3.09	1.05	S/A	2.79	1.18	A	3.06	1.04	S/A	3.11	0.97	S/A	3.15	0.99	S/A	3.42	1.16	S/A
2	Talking with family and friends on the phone gives me hope and joy	3.09	1.01	S/A	3.04	0.96	S/A	2.76	1.00	A	2.94	1.15	A	2.81	0.92	A	2.50	1.17	A
3	Listening to music i love eases stress	2.81	0.94	A	2.88	1.08	A	2.89	0.97	A	3.30	3.31	S/A	3.04	1.16	S/A	2.92	1.08	A
4	Making sure i observed covid-19 protocols	2.65	1.22	A	3.04	1.06	S/A	3.04	1.14	S/A	3.08	1.05	S/A	3.07	1.14	S/A	3.33	1.07	S/A
5	Having fun with colleagues	2.68	1.01	A	2.71	1.15	A	2.80	1.07	A	2.84	1.09	A	2.85	1.23	A	3.17	0.58	S/A
6	Eating healthy meals kept me happy	3.05	1.18	S/A	3.11	1.06	S/A	3.26	1.06	S/A	3.01	1.13	S/A	3.26	1.02	S/A	3.67	0.65	S/A
7	Resting and relaxing improves my mood and reasoning	3.19	1.03	S/A	2.85	1.16	A	3.05	1.04	A	3.05	1.06	S/A	3.11	0.93	S/A	3.33	0.98	S/A
8	Sleeping when necessary strengthens and makes me feel better	3.10	1.07	S/A	3.09	1.13	S/A	3.12	0.86	S/A	3.01	1.09	S/A	2.81	1.30	A	3.00	0.95	S/A
9	Physical exercise and activities make me alert and active	2.97	0.96	A	2.61	1.13	A	2.86	1.07	A	3.09	0.99	S/A	2.96	0.94	A	2.92	1.16	A
10	Breathing exercise to relief stress makes calm and feel better	2.84	0.99	A	3.03	1.01	S/A	2.92	1.09	A	2.96	0.98	A	3.07	0.96	S/A	3.08	0.90	S/A
11	Believing in God to heal situations brings peace of mind	3.26	1.01	S/A	2.77	1.20	A	3.08	1.07	S/A	3.15	0.99	S/A	2.89	1.01	A	3.42	1.00	S/A
12	Praying and meditation brings assurance to cope with stress	3.03	1.15	S/A	2.89	1.05	A	2.86	1.04	A	2.98	1.02	A	2.74	1.02	A	2.83	0.94	A
13	Fun and laughter reduces depression	3.03	0.95	S/A	2.97	1.03	A	2.86	1.03	A	2.99	1.09	A	2.96	1.13	A	3.33	0.98	S/A
14	Connecting virtually with loved ones	2.81	0.98	A	2.65	1.27	A	2.95	1.04	A	2.94	1.01	A	2.67	1.00	A	2.92	1.08	A
15	Letting go of the news about your colleagues being infected relieves you of your trauma	3.03	1.05	S/A	2.57	1.10	A	2.67	1.03	A	2.57	1.03	A	3.04	0.98	S/A	2.75	1.06	A
16	Allowances and promotions bring better motivation	3.19	1.06	S/A	3.00	1.10	S/A	2.91	1.06	A	2.92	1.07	A	3.15	1.03	S/A	3.08	1.24	S/A
17	Connecting with faith based organization	2.65	1.08	A	2.55	1.07	A	2.52	1.15	A	2.78	1.08	A	2.63	1.11	A	2.58	1.16	A
18	Taking a break to walk around helped me relax	3.03	0.98	S/A	2.76	1.13	A	3.11	1.06	S/A	2.99	0.99	A	3.15	0.99	S/A	2.83	1.27	A
19	Jokes and laughing when necessary relieves me of pains	2.97	1.08	A	2.81	1.05	A	2.92	1.09	A	2.98	1.05	A	3.07	1.00	S/A	3.08	0.90	S/A
20	Maintaining peace of mind helps me to concentrate while working	3.50	0.61	S/A	3.72	0.48	S/A	3.64	0.52	S/A	3.64	0.49	S/A	3.63	0.49	S/A	3.50	0.67	S/A

M=Mean, SD= Standard Deviation, D= Decision, A=Accept, R= Reject

Table 3 Shows the mean score of the coping strategies of health workers during the Covid-19 pandemic lockdown based on hospital department the result shows that for respondents in all hospital departments item 20 had the highest value of 3.80, 3.72, 3.64, 3.64, 3.63 and 3.50 for critical care unit, administration, emergency, family medicine, haematology and dermatology respectively suggesting that maintaining peace of mind helped health workers concentrate while working was the most effecting coping strategy. Items 1-20 all items were accepted as coping strategies of health workers in Rivers State during the Covid-19 pandemic lockdown.

Test of Hypotheses

Hypothesis One: There is no significant difference in the mean ratings of health workers on the sources of stress experienced by them during the Covid-19 pandemic lockdown based on Gender

Table 4: Independent T-Test Result Mean Response to Sources of Stress of Health Workers based on Gender

Gender	N	Mean	SD	df	t-value	Sig (2-tailed)
Male	183	56.39	8.62			
Female	317	54.12	8.86	498	2.78	0.01**
Total	500	54.95	8.83			

The mean difference is significant at 0.05* Table 4 shows the mean and standard deviation of the mean response of sources of stress to health workers of Rivers State during the Covid-19 pandemic lockdown based on gender. The table shows the mean for male health workers was 56.39 with SD of 8.62 while the mean for female health workers was 54.12 with SD of 8.86 leading to a mean difference of 2.27. The independent t-test was used to determine if the difference in means was significant, the hypothesis was tested at a 0.05 level of significance. The result of table 4.3.1 was $t(498) = 2.78, p < 0.05$. This result is significant as the p-value of 0.01 is less than the 0.05 level of significance. This suggests that there is a significant difference in the sources of stress to health workers during the Covid-19 pandemic lockdown based on gender. Hence we **reject** the null hypothesis

DISCUSSION

Mean ratings of Sources of Stress to Health Workers during Covid-19 Pandemic lockdown

The result of research question 1 showed that the lockdown have adverse effect on health care workers during the Covid-19 pandemic lockdown in Rivers State as health care workers were not allowed to see their loved ones and family members, item 17 had the highest value with 3-14 and a lowest value of 2.21 with items 1-5,7-12,14-19 were all accepted showing a high and positive significant relationship to lockdown of Covid-19 pandemic in Rivers State. While items 6,13,and 20 were all rejected and not considered as stressors to health workers during the Covid-19 pandemic lockdown in Rivers State. The present result shows the high level of stress faced by health workers during the lock down of Covid-19 pandemic in Rivers State. This may consistently put an unprecedented strain on the well being of health care workers. The result is in-line with an empirical study carried out by Martin (2011), that health workers are stressed out thinking about the welfare of their family members and getting emotionally exhausted. It was concluded that the stress experienced by health care workers during Covid -19 were very severe and might have a post traumatic effect on them if not properly managed. The male healthcare workers are faced with role ambiguity, they often comes in contact with the infected patients.

Mean Ratings of Sources of Coping Strategies to Health Workers during Covid-19 Pandemic lockdown

The findings of the research question two indicated that maintaining peace of mind helps me to concentrate, while working with a mean score of 3.61 with item 20 as the most effective coping strategy, while items 1-20 were all accepted as coping strategies of health workers in Rivers State during Covid-19 pandemic lockdown. The results of hypothesis of the mean response of coping strategies of health workers during Covid-19 pandemic lockdown differed significantly based on age. This implies that age of health workers had an effect on the coping strategies of health

workers during the Covid-19 pandemic lockdown. The findings of the results supports the empirical study of Selye (2014) in Singapore which shows that doing relaxation, motivation from family, reading, avoiding media related news, motivation from superiors helped them to cope with their occupation during covid-19 pandemic. The aged healthcare workers are more experienced as such are more composed with peace of mind in any working environment.

Mean Ratings of sources of Coping Strategies to Health Workers during Covid-19 Pandemic lockdown based on Hospital Departments

The findings in research question three revealed that using coping strategies of health workers during the Covid-19 pandemic lockdown were identified based on hospital department with items 20, had the highest value of 3.80, 3.72, 3.64, 3.63 and 3.50 for critical care unit, administration, emergency, family medicine, hematology and dermatology respectively. Items 1-20 all items were accepted as coping strategies of health workers in Rivers State during Covid-19 pandemic lockdown. The findings of the result is in line with the empirical result of Taylor (2016) that Critical care unit relied on corporation among fellow colleagues, social support from other departments and praises from family members helps them to cope with the menace. The emergency medicine depended on social support, peace of mind, corporation and exercise helps them to cope with stress. The family medicine relied on positive emotions of their patients, provision of conventional drugs, good communication between staff and management helps them to cope with stress.

CONCLUSION

Based on the results of this study the researcher concluded that gender, age, location, and department has significant relationship to stress of health care workers during covid-19 pandemic lockdown in Rivers State. That working together with colleagues, listening to music, talking to family members and friends, having fun, rest, sleep, exercise, praying, believing in God, letting go of the news about colleagues being infected and maintaining peace of mind were strategies used by health care workers for stress and management during the covid-19 pandemic lockdown in Rivers State.

RECOMMENDATIONS

Based on the findings of the study, the researcher recommends as follows:

- 1) Government should provide stress inoculative training to address the stress ambiguity of male health workers.
- 2) It is mandatory that policy makers on health sector should put forward mandatory counseling on coping strategies daily in every department and introduce free periods for rest.
- 3) The dermatological department, family medicine, Hematological and critical care unit be given proper attention with coping strategies as curative approach for stress management and prompt service delivery.

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