UNIVERSITY OF CAPE COAST

PSYCHOLOGICAL DISTRESS AMONG PRE-SURGICAL CATARACT PATIENTS AT THE CAPE COAST TEACHING HOSPITAL

EMMANUEL EKOW AMPIAH

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BY

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Thesis submitted to the Department of Education and Psychology of the Faculty of Educational Foundations, College of Education Studies, University of Cape Coast, in partial fulfilment of the requirements for the award of Master of Philosophy degree in Clinical Health Psychology

MAY 2022

DECLARATION

Candidate's Declaration

I hereby declare that this thesis is the result of my own original research and that no part of it has been presented for another degree in this university or elsewhere.

Candidate's Signature.....Date.....

Name: .....

Supervisors' Declaration

I hereby declare that the preparation and presentation of the thesis were supervised in accordance with the guidelines on supervision laid down by the University of Cape Coast.

Supervisor's Signature.....Date.....

Name: .....

ABSTRACT

The purpose of this work was to measure overall psychological distress and specifically, levels of depression, anxiety and stress among pre-surgical cataract patients presenting at the Cape Coast Teaching Hospital. One hundred and fifty-eight patients who were preparing to have cataract surgery were quantitatively assessed using the shortened form of the Depression Anxiety Stress Scale (DASS-21). Convenience sampling was used to recruit these participants. The study found that the overall incidence of psychological distress among pre-surgical cataract patients in the study was 73.4% and that patients experienced anxiety the most. In light of the findings, it was concluded that pre-surgical cataract patients experience high psychological distress, and it was recommended that clinical health psychologists should work closely with eye care professionals in the preparation of cataract patients for surgery. This collaboration will go a long way to mitigate the high psychological distress that patients experience before cataract surgery.

KEYWORDS

Anxiety

Depression

Stress

Cataract

Pre-surgical cataract patients

Psychological distress

Cataract surgery/extraction

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DEDICATION

To my parents, Rev. Prof. Joseph Ghartey Ampiah & Lady Pastor Mrs. Regina Ampiah. And to my sisters, Edwina Ewurama Ampiah Esq. and Victoria Panyin.

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LIST OF ACRONYMS

PD	Psychological distress
MDD	Major Depressive Disorder
PDD	Persistent Depressive Disorder
GAD	Generalised Anxiety Disorder
IAD	Illness-Anxiety Disorder
OCD	Obsessive-Compulsive Disorder
CCTH	Cape Coast Teaching Hospital
BAMCEC	Bishop Ackon Memorial Christian Eye Centre
NHIS	National Health Insurance Scheme

CHAPTER ONE

Introduction

This chapter includes the background, statement of the problem, aim of the investigation, research questions, hypothesis, significance, delimitations and limitations of the study. The definition of terminology and the structure of the study are also detailed in this chapter.

Background to the study

Many authors have struggled to define Psychological Distress as a distinct concept and others have even confused or interchanged it with other terms such as strain, stress or distress (Ridner, 2004): In the context of stressful life situations, "Psychological Distress relates to the overall concept of maladaptive psychological functioning" (Abeloff et al., 2000). The peculiar unsettled emotional state that a person encounters in reaction to a particular stressor that causes harm, either temporary or permanent, to the person is how Ridner (2004) suggested to describe psychological distress.

Generally, people who are scheduled for surgery experience some form of fear and anxiety (Moosa et al., 2009). Anxiety and depression are viewed as key markers of mental health in the society and in general (Wang et al., 2021); pre-surgical cataract patients are not left out. Depression and anxiety are the two most typical symptoms (Zhang et al., 2018); an earlier study mentioned fear/stress and anxiety as the dominant psychological distress factors in cataract surgery (Marback et al., 2007; Mitsonis et al., 2006). About 51.8% of the participants in a cross-sectional study conducted in four districts of Ghana's Volta Region by Amu et al. (2021) reported having anxiety (25.2%), depression

(53.3%) or stress (9.7%). All three mental health disorders were present in 8.3% of patients as comorbid conditions.

The aim of this study is to measure the prevalence of psychological distress that exists among pre-surgical cataract patients as they await surgery. Demographic and clinical factors such as age, gender, mode of payment for surgery, previous eye surgery as and waiting time for surgery all play a role in the levels of psychological distress of the pre-surgical cataract patient. A combination of these factors can affect surgical outcomes and even extend to post-operative recovery in a negative manner. By employing these demographic and clinical factors, the study aims to determine relationships or associations that will help us better understand the magnitude of the problem and proffer some solutions.

Many patients who are scheduled for surgery worry about the procedure's results and among other things, worry about losing their vision and being unable to perform daily duties as they once did. Fraser et al (2013) suggest that for elderly patients, a reduction in the quality of their vison can affect their quality of life and day-to-day activities. It is imperative to comprehend and tackle the psychological discomfort that these people undergo to improve their general well-being and standard of living.

To sum up, this study is an important investigation into the psychological distress experienced by pre-surgical cataract patients at the Cape Coast Teaching Hospital. The goal is to improve the quality of psychological and overall health care given to these patients and improve their general well-being even before the surgery is done.

Statement of the Problem

Despite the adoption of methods intended to reduce it, Psychological Distress is still a problem for patients undergoing surgery. The psychological well-being of patients who need corrective surgery is crucial to a successful surgical result (Alizioti & Lyrakos, 2021). While studies have shown the positive impact of cataract surgery, the psychological trauma that these patients go through before the surgery has not been explored enough. Although some studies have shown that patients recover their visual function after cataract surgery, there are still some barriers to the uptake of the surgery and this includes psychological distress prior to the procedure (Temporini et al., 2002).

Cataract is an age-related condition. The population of Ghana continues to age and therefore, the prevalence of cataracts, cataract surgery and its attendant problems is also expected to increase. For example, a study in Ghana found that 9% of adults in the Volta Region who were 40 years of age or older had cataracts, which resulted in impaired eyesight or blindness (Guzek et al., 2005). Another study by Resnikoff et al. (2004) conducted in the Brong-Ahafo Region's Wenchi district revealed that 2% of people aged 30 and older have cataracts. Also, cataract surgery continues to rank among the most frequent surgeries performed worldwide (Song et al., 2018).

Globally, only a handful of studies have been done to ascertain the patient's point of view on their experiences with psychological distress (depression, anxiety and stress) together with the conditions and circumstances leading up to cataract surgery. In Brazil, one study explored the emotional factors preceding cataract surgery in those who are 40 years and older (Marback et al., 2007). Also, in Nigeria, a study by Coker and his colleagues (2016)

assessed psychiatric comorbidity among people who had been scheduled for cataract surgery in Lagos and found that only 5.2% of the pre-surgical cataract patients experienced preoperative anxiety while 9.1% experienced depression. Again, in South Africa, the major reason for the low uptake of cataract surgery is fear of surgery as well as its attendant complications (Rotchford et al., 2002).

However, in Ghana, no study has been done with respect to psychological distress and its impact on pre-surgical cataract patients. By examining the level of psychological distress as well as some important parameters, such as age, gender, mode of payment for surgery, previous eye surgery and waiting time among pre-surgical cataract patients at the Cape Coast Teaching Hospital, this study seeks to close these gaps. It is this inadequate information that this research seeks to address using the Ghanaian situation.

Purpose of the study

The study's goal was to measure the psychological distress that pre-surgical cataract patients were experiencing.

The study specifically intended to investigate:

1. The prevalence of overall psychological distress during the preoperative period among patients with cataracts presenting to the Cape Coast Teaching Hospital.

2. The prevalence of depression, anxiety and stress among pre-surgical cataract patients as well as their commonest symptoms.

3. The relationship between age and psychological distress.

4. The relationship between gender and psychological distress

5. The relationship between mode of payment for surgery and psychological distress.

6. The relationship between previous eye surgery and psychological distress

7. The relationship between waiting time and psychological distress.

Research Questions

The research work aimed to answer the following questions:

1. What is the overall prevalence of psychological distress among pre-surgical cataract patients presenting to the Cape Coast Teaching Hospital?

2. What is the prevalence of depression, anxiety and stress and what are the commonest symptoms for each?

Hypothesis

1. H_0: There is no statistical relationship between age and psychological distress.

   H_1: There is a statistical relationship between age and psychological distress.

2. H_0: There is no statistical relationship between gender and psychological distress.

   H_1: There is a statistical relationship between gender and psychological distress.

3. H_0: There is no statistical relationship between mode of payment for surgery and psychological distress.

   H_1: There is a statistical relationship between mode of payment for surgery and psychological distress.

4. H_0: There is no statistical relationship between previous eye surgery and psychological distress.

   H_1: There is a statistical relationship between previous eye surgery and psychological distress.

5. H_0: There is no statistical relationship between waiting time and psychological distress.

   H_1: There is a statistical relationship between waiting time and psychological distress.

Significance of the study

The findings from the study have several applications that are valuable in real-world settings and could increase the standard of care provided to patients undergoing cataract surgery. This could safeguard the psychological health and preparedness for cataract management among cataract patients undergoing surgery.

Health policymakers could implement psychological support and care for individuals getting ready for cataract surgery using the study's findings. The results would also inform cataract patients of the psychological risks of preparing for surgery. This study shall further inform patients and policymakers of the psychological risk factors associated with age, gender, mode of payment for surgery, history of previous eye operation and finally, wait time for patients diagnosed with cataracts. Consequently, we intend to enhance patient care prior to cataract surgery to deliver better service, encourage more people to have cataract surgery, and improve people's quality of life by lowering related depression, anxiety and stress. Furthermore, information on the intensity of depression, anxiety and stress before cataract surgery will highlight the important role of clinical health psychologists in eye care facilities. Finally, this study will contribute to our understanding of psychological suffering in cataract patients before surgery.

Delimitation

Depression, anxiety and stress among cataract patients presenting at the Cape Coast Teaching Hospital were the only variables included in the study. The study was delimited to pre-surgical cataract patients and did not include post-surgical patients. Lastly, the study only involved patients 18 years and above who did not have any known chronic medical condition including hypertension and diabetes and were being prepared to undergo cataract surgery.

Limitation

The study used a correlational research design which is a type of quantitative methodology. While the results indicated relationships between the variables under study, they did not establish a causal relationship between them, nor did they do so between the variables of the correlational research design. As a result, the study was unable to provide causal explanations for the established connections among the variables it examined. Finally, because the study was limited to one hospital within the Cape Coast Metropolis, it cannot be applied to hospitals in other parts of the country.

Definition of terms

The working definitions of various terminology used in the research work are provided below:

Psychological Distress: The term refers to the combined symptoms of depression, anxiety, and stress, which are characterised by a lack of interest in fun activities as well as other unpleasant bodily reactions such as heart palpitations that impair cognitive function. A person is said to be psychologically distressed if they have mild to extreme forms of depression, anxiety and stress or a combination.

Pre-surgical cataract patient: A person who has been diagnosed with mature cataract by an eye specialist and has been booked to undergo cataract surgery.

Cataract: A disorder in which the lens of an eye becomes hazy and affects vision.

Waiting Time: The period between booking for cataract surgery and the proposed surgery day/date.

Organisation of the Study

The remaining four chapters make up the study. The second chapter deals with psychological problems such as stress, anxiety, and depression. It also analyses the empirical research on the variables under consideration: cataract and psychological distress (depression, anxiety and stress) and discusses the theoretical underpinnings that characterise this work. The study's methodological research component is covered in Chapter Three. The fourth chapter presents and discusses the study's findings considering the research questions and hypotheses. The concluding chapter summarises the main conclusions and offers suggestions.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter's purpose is to review the literature on psychological distress (depression, anxiety and stress) among pre-surgical cataract patients. It also discusses the conceptual and theoretical frameworks that guided the study. Also, some empirical review on age, gender, mode of payment for surgery, previous eye surgery and waiting time and their relationship with psychological distress have been examined.

Theoretical Framework

The literature integrated theories and models to explain the constructs in this study and these are:

Depression: Beck's Cognitive Theory of Depression (Beck, 1983)

Anxiety: Uncertainty Theory of Anxiety (Izard, 1991, Lazarus, 1991; Mandler, 1984)

Stress: Stress As a Response Theory (Selye, 1956)

Beck's Cognitive Theory of Depression

Because it is so frequently diagnosed, Seligman (1973) described depression as the "common cold" of mental health. Early behaviourists did not take thoughts and feelings seriously when they propounded their theory on depression. Therefore, the cognitivists saw it as an opportunity to incorporate mental events into the earlier behavioural framework. This amalgamation has resulted in Cognitive-Behavioural Therapy (CBT), which is a popular psycho-therapeutic procedure for depression, anxiety and other related mental health conditions.

According to cognitive behavioural theorists, depression is caused by maladaptive, incorrect, or irrational cognitions manifesting as warped perceptions and judgments (Beck, 1970). Depressed people are very different from non-depressed people, and it is this difference that makes them depressed. For instance, sad people have pessimistic perspectives about their surroundings and the future which affects their thinking, and they also blame themselves for anything that happens to them. They see situations much worse than it is and this increases their risks of developing depressive symptoms when facing overwhelming situations.

Beck outlined three mechanisms which he felt led to depression. These are:

1.The cognitive triad

2. Negative self-schemas

3. Errors in logic

The cognitive triad consists of three types of pessimistic thinking typical of depressed individuals, including pessimistic ideas about oneself, the universe, and what is to come. Depressed people see themselves as worthless and negatively interpret world events. Therefore, they see the future as worthless and not worth living. Beck understood that people who are sad create a negative self-schema. They have a sense of judgement of themselves that are both negative and untrue. These negative schemas are normally developed from childhood because of a traumatic event including domestic abuse, the death of a loved one and so on. Eventually, those with negative self-schemas start to think illogically more frequently. They frequently choose the components of a scenario to concentrate on while purposefully ignoring other pertinent information.

According to Feldman (2008), unhappy people who have a bad opinion of themselves and their environment end up processing information negatively or thinking illogically. These erroneous thought processes are counterproductive and raise people's anxiety and despair levels (McLeod, 2015). Despite evidence to the contrary, depressed people continue to think these negative habitual ideas (Nemade et al., 2013).

Application of this concept helps us to understand negative cognitions in a better way. According to Beck, a pattern of negative automatic thoughts—irrational, about oneself, the world, and the future—defines depression. This framework therefore offers an opportunity to better comprehend the unpleasant emotions and thoughts pre-operative cataract patients may have. Patients may hold unfavourable opinions on, among other things, the outcome of the procedure, their capacity to adjust to changes in their lives after the procedure, or the effect on their independence after the surgery. Examining and measuring these unfavourable thoughts can help reveal psychological distress.

Also, this theory helps us to identify cognitive distortions. Beck's theory outlines certain cognitive distortions such as all-or-nothing thinking, overgeneralisation and personalising. These cognitive distortions may be relevant to understanding the pre-surgical cataract patients' thought patterns. Again, the "cognitive triad," which consists of unfavourable perceptions of oneself, the outside environment, and the future, helps us to look at how pre-operative cataract patients see the world (including hospitals and doctors' offices), how they see themselves in relation to their condition, and how they see the future (particularly their hopes and fears about the procedure and its outcome). Moreover, Cognitive-behavioural therapies that have been shown to

be successful in treating depression are based on Beck's theory. This theory will therefore be important to help investigate if comparable cognitive-behavioural techniques could be modified to assist pre-surgical cataract patients in better managing their psychological discomfort, even though this research focuses on understanding distress rather than treatment. This could be an element for further research. Lastly, Beck's theory asserts that individual differences play a major role in how we experience depression. This will help us understand how variables such as age, gender, mode of payment for surgery, previous history of surgery and waiting time can affect pre-surgical cataract patients.

In conclusion, Beck's Cognitive Theory of Depression is a useful theoretical foundation for appreciating the cognitive processes behind psychological distress in pre-surgical cataract patients. It enables us to investigate the cognitive biases and thought processes that fuel their depressive state and can help identify possible areas for support and action. Furthermore, this research gains substance and psychological understanding when a well-established psychological theory is applied to a medical setting such as cataract surgery.

Uncertainty Theory of Anxiety

The accounts of Izard, Lazarus and Mandler largely contribute to this theory and what they propounded will be briefly discussed.

Izard (1977;1991) has intimated that fear can be equated to anxiety. However, he also argues that anxiety can be likened to other emotions depending on the circumstance and the timing for example, sadness, guilt, etc. His Differential Emotions Theory clearly implies that, while anxiety must be recognised as a unique entity, similar phenomena should be carefully considered

whenever subjective experiences are at stake. More significantly, he believes that anxiety in the current situation is reliant on ambiguity (Izard, 1991).

Lazarus (1991) compares anxiety to fright. Despite his belief that anxiety is defined by an unknown and existential threat, he argues that anxiety comes when there is impending bodily harm (Lazarus, 1991). Lazarus thinks that several fundamental evaluations can cause worry. Therefore, any feeling, including anxiety, can follow provided there is goal relevance.

Finally, Mandler (1984) offers a complex explanation of the uncertainty theory of anxiety. Uncertainty is the basis of anxiety; anxiety means one is not sure of the future or being unsure of what course of action to take when facing a threatening situation. Mandler's theory hinges on the relationship between anxiety and interruption. The example he used was that of a newborn baby. A newborn baby undergoes some form of distress, and this distress is inhibited by sucking or rocking of the baby by the mother. When the inhibitors are withdrawn, the child becomes distressed again when faced with interruptions. Lastly, he discussed a cascade of events that summarises his theory. Powerlessness turns arousal into anxiety because of the absence of interventions that are appropriate to the situation at hand. This then further degenerates into hopelessness if it persists for a while. This may lead to low self-esteem and ultimately, depression.

Applying the Uncertainty Theory of Anxiety concept helps us to understand how uncertainty plays a role in developing anxiety among pre-surgical cataract patients. Thoughts about the outcome of the procedure and its attendant problems can trigger anxiety. This theory also helps us in the assessment of uncertainty, which is also reflected in the questionnaire.

Inadequate information from the surgeon or even myths surrounding surgeries can also increase anxiety. This theory will guide us to find out how lack of information contributes to anxiety and how this can be remedied. Prolonged uncertainty can result in increased anxiety, as postulated by the Uncertainty Theory of Anxiety. The relationship between waiting time and psychological distress can offer a plausible explanation and this theory will guide it.

In summary, using the Uncertainty Theory of Anxiety as a theoretical framework for the study provides valuable insights into the emotional experiences of preoperative cataract patients within the context of uncertainty. This framework was selected because it allows us to focus on the specific role of uncertainty in anxiety, highlighting a distinct aspect of psychological distress, anxiety, that is highly relevant to the experiences of these patients. Additionally, it guides the development of targeted interventions to help patients better manage anxiety during the pre-operative period.

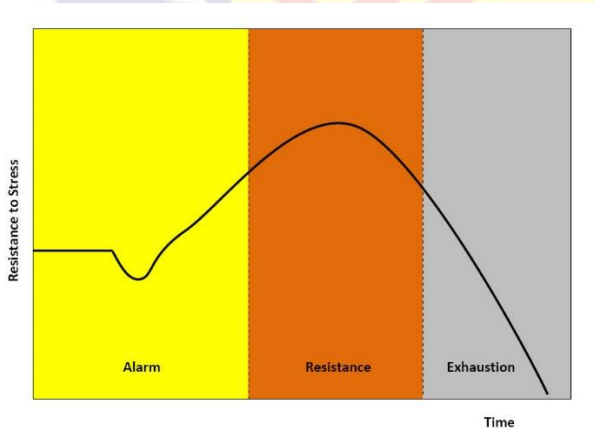
Stress As a Response

Selye (1956) instituted the first stress as response model, which defined stress as a response pattern that was physiologic in nature and was fused into his General Adaptation Syndrome (GAS) model. This model, GAS, is said to be the reason why stress contributes a lot to health challenges. (Figure 1). Three principles underpin this model, which explains stress as a dependent element:

1. Stress serves as a defence mechanism.
2. Alarm, resistance and exhaustion are the three phases of stress.
3. If the stress is protracted, it may cause disorders of adaptation or even mortality.

According to the stereotyped response pattern, the alarm reaction comprises a shock stage in the beginning and a countershock stage after that. The shock stage is characterised by autonomic hyperactivity, increased adrenaline output, and gastrointestinal ulcerations. Increased adrenocortical activity characterises the countershock phase, which marks the beginning of defence operations (Krohne, 2002). If unpleasant stimuli persist, the organism enters the stage of resistance. At this point, the symptoms of the alarm reaction disappear, demonstrating that the organism has adapted to the stressor. While simultaneously declining resistance to other forms of stress, resistance to noxious stimuli rises (Krohne, 2002). Resistance eventually gives way to fatigue if the aversive stimuli is maintained. The signs of stage (a) reemerge when an organism's capacity to adapt to a stressor is exhausted, but resistance is no longer conceivable. If the stimulation is kept up, there will be permanent tissue damage and the organism dies (Krohne, 2002).

Figure 1: General Adaptation Syndrome



The concept of stress as a response is important in discovering physiological and psychological reactions to stress. Stressors do not only have psychological implications but can also lead to some physiological reactions

such as an increase in heart rate, sweaty hands, etc. An aspect of the questionnaire attempts to elicit such responses. The framework also allows us to explain coping as a concept. When the sympathetic nervous system is activated in response to a negative input, it opposes or avoids the stressor. (i.e., increased heart rate, temperature, adrenaline, and glucose levels). The fight-or-flight reaction, which restores homeostasis, reduces harm, or more generally tolerates the stressor, is then triggered by the resistance response. This might cause adaptive disorders like insomnia, mental disease, high blood pressure etc. Consequently, the concept of stress being viewed as a physiological response and early studies on coping were both developed. Finally, applying stress as a response theory as a framework to guide the research is very important. This is because it offers a good basis to analyse the stressors and the response to these stressors during the pre-operative period. Also, a basis to develop interventions and strategies can be propounded to help manage stress and stressors during the pre-operative period.

Conceptual Review

In this section, the concept of cataract, cataract surgery and psychological distress are briefly explained.

Cataract

'Cataract' is derived from the Latin word "cataracta" which translates to waterfall; a cataractous lens may mimic the shades of grey found in huge waterfalls (Nibourg, 2016). Cataract is defined as the clouding of the otherwise crystal-clear lens of the eye which makes vision blurry (WHO, 2020). According to the World Health Organization report on vision, the global prevalence of visual impairment is estimated at 2.2 billion individuals. Of this population, at

least half are affected by visual impairment that could have been preventable or remains unaddressed (WHO, 2019). Additionally, cataract contributes to about half of global blindness cases (WHO, 2010). Reports in Ghana indicate that out of the 46,000 people who become blind every year, just about 16,000 out of this number are given some form of clinical intervention while the remaining 32,000 people become blind therefore rendering them unproductive (Debrah, 2010). Loss of lens transparency is what causes cataract, with symptoms like impaired vision, discomfort glare, myopic shift and distorted vision in either eye. Cataract causes the eye lens to become opaque because of biochemical changes in the lens cells and the extracellular matrix that surrounds the cells in late middle age to elderly age (Richardson et al., 2020). Cataracts is one of the leading causes of clinically significant blindness in Ghanaian communities (Guzek et al., 2005).

Causes of cataract

Cataracts can be caused by different conditions, including trauma, persistent ocular inflammation, metabolic irregularities, nutritional diseases, and natural aging. Cataract caused by aging is due to some changes in the proteins as well as the ionic components of the lens, therefore leading to loss of transparency of the once crystalline lens (Belfort & Singh, 2009). Over time, lens proteins denature and deteriorate, and systemic conditions like diabetes mellitus and hypertension worsen this process (Liu et al., 2017). The development of cataract is mainly associated with aging (Wang & Zhang, 2014). Ghana's aging population is plagued by cataracts, with one in twenty adults aged 50 or older claiming to have been diagnosed with the condition in the past (Yawson et al., 2014). Secondary cataracts can develop because of a complication of some other ocular diseases such as retinopathy of prematurity (ROP), inflammation of the

middle layer of the eye, detachment of the retina, or retinitis pigmentosa or because of a surgical complication for another eye condition (Liu et al., 2017; Seddon et al., 1995). With respect to nutrition, studies have found a connection between cataract development and antioxidant levels (Weikel et al., 2014). Certain drugs like corticosteroids, long-term smoking and alcohol abuse contribute to cataract formation.

Symptoms of Cataract

Early signs of cataracts include blurry vision, faded colours and frequent changes in spectacle prescriptions and this reduces the quality of life of such people (Allen & Vasavada, 2006). Consequently, people who are having challenges meeting their everyday needs due to cataracts may have difficulty performing basic life activities such as reading, performing housework and driving vehicles.

Coleman and his colleagues (2004) discovered that cataract increases the likelihood of falling in older women especially. Cataract patients are advised to undergo cataract surgery as the only treatment option (Griffin et al., 2016)

According to research done by Yawson and his colleagues (2014), 5.4% of older persons in Ghana had cataracts. In Ghana, where access to healthcare is a significant issue, there are more than 90% of visually impaired and clinically blind persons (Harris et al., 2011). Interestingly, over 90% of the projected global cataract prevalence is experienced in countries with low middle income, of which Ghana is part (Prokofyeva et al., 2013).

Despite improvements in surgical results, cataract continues to be the most common cause of vision impairment and accounts for 50% of blindness globally (Nangia et al., 2019). A combination of an aging population and an

improvement in life expectancy is predicted to cause this number to climb. People who are 50 years of age and above account for more than 80% of all cases of blindness (Vashist et al., 2011). A study by Adamptey et al., (2018) suggested that cataract (19.51%) was one of the prominent causes of reduced vision among case subjects under investigation at a low vision centre in the Eastern Region of Ghana. As a percentage of all blindness, cataract (47.8%), glaucoma (12.3%), and age-related macular degeneration (8.7%) are the leading causes of blindness. Other factors include trachoma (3.6%), onchocerciasis (0.8%), corneal opacity (5.1%), diabetic retinopathy (4.8%), and juvenile blindness (3.9%) (WHO, 2004).

Risk factors for Cataract formation

There are several risk factors that lead to the formation of cataracts. Aging is the commonest risk factor and cataracts linked with aging account for over 40 % of blindness in the world (Riaz et al., 2006). Cataract is a very prevalent eye disease in late midlife to older age (Knoll et al., 2004). Several reports have mentioned smoking (Age-Related Eye Disease Study Research Group, 2001), diabetes (McCarty et al., 2000) and UV-B (Neale et al., 2003; Sasaki et al., 2003) as important risk factors as well. According to Lou et al (2018), women are more likely than males to develop a cataract, therefore cataract may have a gender predilection.

Cataract Surgery

Studies have demonstrated that surgery to remove cataracts is effective in improving vision outcomes (Baranano et al., 2008) and lifestyle quality (Elliott et al., 2000; Harwood et al., 2005). Using a slit lamp biomicroscope during an eye examination allows for the diagnosis of cataracts. The surgical removal of a

clouded lens continues to rank among the most frequent surgeries performed worldwide (Song et al., 2018). Phacoemulsification, which is a modern procedure for cataract operation, has proven to be a safe and dependable therapeutic procedure, and a growing number of people with mild vision problems or even good vision are undergoing the procedure to enhance their vision and life satisfaction (Javed et al., 2015). Cataract surgery techniques have evolved and these days, local anaesthesia is preferred (Smerdon et al., 2001). Patients undergoing cataract surgery under local anaesthesia suffer less pain, recover more quickly and forgo having to wear an eye patch, which has its own attendant issues (Crandall, 2001). For cataract surgery, the gold standard surgical approach is phacoemulsification under general or local anaesthesia. Surgeons prefer to make smaller incisions and that is why this procedure has become popular (Linebarger et al., 1999). Most patients who have surgery receive local anaesthesia, which is usually administered with eye drops and an injection close to the eye or putting an anaesthetic gel on the eye directly. The cornea of the client is only modestly cut. The cloudy lens is removed by breaking it up into small pieces and aspirating them out of the eye with the help of ultrasound energy. The artificial lens is then implanted. The procedure is very brief, lasting only about 15-20 minutes on average. In-patients are typically discharged within 48 hours of surgery (Kohanim et al., 2016).

Despite reports of many successful cataract operations, there have been instances where such a procedure could lead to permanent loss of sight in the brief but technical procedure for varied reasons and complications (Lindstrom et al., 2017). As with other surgeries, there are some minor risks involved. Although complications from cataract surgery are uncommon, they can be quite

serious and have a potentially life-altering impact, hence, the ophthalmologist is obliged to discuss these with the patient prior to the procedure for consent. This could destabilise the emotional stage of the patient and subsequently affect his or her mental health (Hull University Teaching Hospital, 2018). Visual impairment caused by cataract surgery has been linked to depression and an increased risk for suicide (Carrière et al., 2013; Cosh et al., 2019). Cataract surgery is an extremely efficient procedure that almost immediately restores vision. There is adequate data to conclude that cataract surgery considerably enhances the quality of life as well as improves visual acuity (Shang et. al., 2021).

Psychological Distress

Psychological distress in terms of depression, anxiety and stress will be discussed as concepts. The types and examples under each psychological distress subtype will also be explained.

Depression

Depression goes beyond just a feeling of sadness. It has an impact on an individual's thoughts, feelings, and actions. The World Health Organization (WHO) mentions depression as one of the most common disorders, affecting about 4.4% of the world's population. Additionally, depression is the primary cause of impairment worldwide, accounting for 7.5% of years spent living with disability in 2015 (WHO, 2017).

In the general population, depression is a prevalent psychiatric condition with an estimated lifetime prevalence of 10% (Kessing, 2007; Kessler & Bromet, 2013). Its prevalence may approach 20% in clinical settings (Kessing, 2007). Zunt et al. (2018) mentioned a slightly lower prevalence of depression (18%) in

clinical settings. The 9.3% rate of symptomatic depression revealed by the SAGE symptomatic algorithm for Ghana, according to Lloyd-Sherlock et al. (2019), substantially corroborates the results of certain earlier research conducted in sub-Saharan Africa. Their findings substantially agree with that of Thapa et al. (2014) who based on the same 2007 SAGE survey data, reported a prevalence of 6.7% for moderate depression in Ghana. Regarding both chronicity and remission, the course of depression varies. Around 80% of patients who recover experience at least one more episode in their lifetime, making the likelihood of recurrence quite high. A less favourable fate is predicted by psychiatric comorbidity, a history of childhood trauma, and a depressive episode (Otte et al., 2016). Depression comes in many forms, and some of them are triggered by stressful life events like getting ready for cataract surgery. To diagnose depression, the DSM-5 recommends this criterion:

A minimum of five symptoms must be present for at least two weeks, and at least one of those symptoms must be either (1) a sad mood or (2) a lack of interest or pleasure.

1. A feeling of depression majority of the time, almost every day. Feeling down or sad is what depression is all about.
2. For the most part of the day, virtually every day, there is a noticeably diminished interest in or enjoyment of all activities. Anhedonia is another name for this.
3. Considerable weight loss or gain despite not being on a diet, as well as a daily increase or decrease in hunger.

4. A reduction in movement and a slowing of thought which is observable by others and not just subjective feelings of restlessness. Also called psychomotor retardation.
5. Almost daily tiredness or energy loss. Low energy, limited endurance, and a lethargic feeling may also be present.
6. Consistently feeling excessive or inappropriate remorse or feelings of worthlessness.
7. Consistent inability to make decisions or a decreased capacity for thought or concentration. Daily chores like driving, cooking, or washing may be affected by this.
8. Death-related thoughts that come up frequently, suicidal ideas without a clear strategy, suicide attempts, or a planned suicide plot.

Forms of Depression

There are various forms/types of depression according to DSM-V but only three of them will be mentioned here and these are Major Depressive Disorder, Persistent Depressive Disorder and Bipolar Disorder.

Major Depressive Disorder (MDD)

In 2008, Major Depressive Disorder (MDD) was ranked as the third most significant cause of illness burden globally. The World Health Organization (WHO) has estimated that by 2030, MDD, will overtake all other diseases (Malhi & Mann, 2018). MDD is believed to be influenced by several biochemical, genetic, environmental and psychosocial factors (Bains & Abdijadid, 2021). Both life experiences and personality traits have been demonstrated to be important factors. The learned helplessness idea states that having to deal with uncontrollable events is a prerequisite for depression.

Cognitive theory asserts that depressive disorders cause cognitive distortions in depressed people who are predisposed to developing them. MDD is a very common psychological disorder. People with no intimate relationships, those who are no longer married, or have lost their partner through death are more likely to suffer from MDD. Elderly people who additionally have other related medical issues are more likely to experience depression (Lyness et al., 2006).

Persistent Depressive Disorder (PDD)

Chronic depressive disorder or dysthymia were the previous names for PDD. PDD is a persistent form of depression that lasts for longer than two years.

Only two of the six symptoms needed for its diagnosis, in addition to a persistent low mood, must be present (sleep disturbance, appetite disturbance, loss of energy, decreased self-esteem, hopelessness, or poor concentration). According to data currently available, depression can have a chronic course with symptoms that last at least two years in up to 30% of cases (Murphy & Byrne, 2012; Rubio et al., 2011; Satyanarayana et al., 2009). Nübel et al. (2020) posit that persistent depression presents challenges for both patients and clinicians.

Bipolar Disorder (BD)

Unpredictable acute episodes of high, sad, and mixed mood states are the hallmarks of BD, a persistent and severe mental illness (American Psychiatric Association, 2013). This condition causes changes in mood, energy, thinking, behaviour and even sleep. The manic aspect is the exact opposite of depressive symptoms, and these include unrealistically high self-esteem, grandiose ideas, pursuit of pleasure including sex and this is usually followed by depression. The manic stage does not last for long. Due to its early start, intensity and chronicity, Bipolar Disorder is a disabling mental condition, according to a meta-analysis

by Ferrari et al. (2016) even though it is very uncommon. They also concluded that aging and the constantly expanding population are the main reasons that will cause the burden of BD to rise over time. Sometimes, patients with BD may be wrongly diagnosed in the initial stages and rather be treated for Major Depressive Disorder (Smith et al., 2011). This is because depression is mostly the presenting mood.

Anxiety

Anxiety is characterised by emotions of nervousness, dread, uneasiness, fear, and increased autonomic activity that change in strength and degree throughout time. An unpleasant feeling of fear and worry, anxiety is also the tension and arousal that a person experiences when they believe they are in danger (Bormusov et al., 2013). When the sympathetic nervous system triggers anxiety, catecholamine levels rise. Anxiety is a challenging emotional state that could make people postpone scheduled surgical interventions (Kindler et al., 2000).

Anxiety is a common preoperative emotion that exists irrespective of the operation's perceived intrusiveness. Without a doubt, if the patient must undergo any form of surgery, anxiety or the fear of death dominates patient's worries (Burkle et al., 2014). In fact, literature suggests that anxiety is the commonest psychological distress factor when it comes to surgery (Granot & Ferber, 2005; Munafò & Stevenson, 2001). Anxiety before surgery has been associated with a variety of factors, including age, gender, marital status, education, health literacy, concern about impending surgery, family separation, losing money, pain after surgery and fear of death (Cevik, 2018; Gangadharan et al., 2014; Mulugeta et al., 2018). Anaesthesia, hospitalization, surgery, or the possibility of death can cause anxiety before surgery, which is a numb, subjective sensation

of worry or panic. The most common causes of anxiety related to surgery, according to Akinsulore et al. (2015), were the outcome of the procedure and potential complications of the surgery. Hospitalization can result in psychological changes like fear, concern and anxiety in patients who are getting ready for surgery (El-Jawahri et al., 2015).

Aside from the hospital environment being strange, frightening, scary, and confusing for the patients, they also experience acute anxiety due to factors like meeting new people, using unfamiliar technologies, being hospitalised, and making decisions regarding surgical interventions (Honeyman & Davison., 2016). Anxiety before surgery has also been connected to postoperative discomfort, vomiting, and nausea, as well as a longer recovery time and an increased risk of infection (Ene et al., 2006; Foggitt, 2001; Pittman & Kridli, 2011).

Types of Anxiety Disorders

In accordance with the DSM-V, the term "anxiety disorder" refers to a collection of disorders, including panic disorder, social anxiety disorder, obsessive-compulsive disorder (OCD), generalised anxiety disorder (GAD), post-traumatic stress disorder (PTSD), specific phobia, and illness anxiety disorder. Only three of these will be briefly discussed.

Generalised Anxiety Disorder (GAD)

The DSM-V is clear on the definition and classification of GAD. Excessive worry and anxiety (apprehensive expectancy) about various activities or events that occur more days than not for at least six months is one of the diagnostic criteria for GAD. Controlling worry becomes a challenge. People with GAD have a continual state of worry that is often unfounded. They worry about

everyday events or problems concerning appointments, health, finances and so on. When anxiety is severe, some people may find it tough to carry out basic daily tasks. The symptoms of GAD and depression overlap making diagnosis of either of them difficult (ADAA, 2014). Muscle tension, stomach discomfort, irritability, tiredness, and restlessness are a few of the physical signs of GAD. Misdiagnosing GAD is uncommon therefore, patients do not get the right treatment (Bandelow et al., 2013). This is because patients usually report with somatic symptoms as their chief complaints. Cognitive Behavioural Therapy (CBT) is a form of psychotherapy that is frequently very effective in treating this condition. This strategy functions by instilling various ways of thinking, acting and responding to specific circumstances.

Illness Anxiety Disorder (IAD)

This is an obsessional and illogical fear of getting a serious medical ailment. A person's imagination of physical symptoms of sickness is a common feature of this ailment. In addition, IAD is characterised by hypervigilance to normal body sensations, reassurance-seeking and checking as "safety behaviours" and is defined as an extreme preoccupation with health and the potential for having a major illness now or in the future (Olatunji et al., 2009). It is a comparatively new diagnostic category in DSM-5 (APA, 2013).

Obsessive-compulsive disorder (OCD)

The last to be discussed under anxiety is the obsessive-compulsive disorder (OCD), which is a neuropsychiatric condition typified by recurring distressing feelings and ritualistic repetitive activities. Most OCD sufferers experience both obsessions and compulsions. Despite being aware of the absurdity of their routines, OCD sufferers find it extremely difficult to refrain from them. The

precise causes of OCD have not been found despite much research. According to neuroimaging research, OCD sufferers' brains operate differently, supporting the idea that the condition has a neurological basis. OCD is assumed to be caused by an anomaly or a neurotransmitter imbalance. An increased likelihood of the onset of obsessive-compulsive disorders has also been linked to traumatic brain injury in teenagers and young children. In general, research show that individuals with OCD usually describe stressful and traumatic life events prior to the onset of the condition (Fontenelle et al., 2011). Obsessions and/or compulsions are OCD symptoms according to the DSM-5. People who do not report engaging in rituals or compulsions are frequently referred to as "Pure O's" or "Pure Obsessionals." These ones have compulsions (rituals) and/or obsessions that cause emotional stress. Obsessionals can have themes like cleanliness, violent behaviour, etc. as examples. Cleaning, counting, and organizing are a few examples of compulsive behaviours. Feelings of secrecy and humiliation are frequently present along with symptoms. If OCD is not treated, it typically results in episodes where symptoms appear to improve before becoming a chronic illness. Nevertheless, about 40% of those who experience OCD in childhood or adolescence remit by the time they are in their early 20s. According to research, cognitive behavioural treatment considerably improves the lives of 75% of OCD sufferers. Exposure and response prevention are among the treatment methods (Hezel & Simpson, 2019).

Stress

Selye defined stress as the body's general reaction to a demand (Tan & Yip, 2018). Our bodies' response to any change, threat, or pressure is known as the physiological stress reaction. It is under attack, either from the outside or from

within. Our bodies then attempt to return to normal state and defend itself against possible danger (Selye, 1956, as cited by Lazarus, 1991). Selye was the first scientist to recognise "stress" as the dominant reason behind the symptoms and signs of non-specific illnesses (Tan & Yip, 2018). Stress could have a devastating effect on the body and the diseases that occur as a result are endless. The largest are cardiovascular and circulatory system disorders (Deluga et al., 2013). Stress factors may unintentionally worsen the patient's condition. It has been established that the patient experiences difficulty and stress even before their illness manifests (Rosiek et al., 2016). The psychological threat of danger, fear and anxiety during the period before surgery can drastically lower patients' ability to tolerate pain and tension (Tewes, 1999). It is widely accepted that a person's capacity to tolerate a certain stimulus determines whether the stress response is produced or not. Psychological stress consequently develops when a person's capacity to "cope" with a circumstance is exceeded.

Forms of stress

Broadly, four forms of stress can be identified. These are acute, chronic, episodic acute and eustress.

Eustress: Usually, stress is associated with negativity but there is also positive stress which is termed eustress; pleasant stress. Preparing for a big event such as a wedding, awaiting good news, childbirth and so on are all pleasant but comes along with stress.

Acute stress: This is a brief period of stress that will soon end. It helps someone navigate potentially hazardous circumstances. When someone does something innovative or intriguing, it might also happen. At some point in their lives,

everyone deals with significant stress. An example includes getting stuck in traffic.

Chronic stress: The duration of this kind of stress lasts longer. It is the most harmful form of stress. Having money problems, an unhappy marriage or problems with a superior colleague are all forms of chronic stress. Any sort of stress that lasts for several weeks or months is referred to as chronic stress. It can become so habitual that the individual does not see it as a problem and that is where it becomes a big problem. Our bodies are designed to handle short term stress, but repeated, long-term stress can be harmful if it is not well managed.

Episodic acute stress: Frequent episodes of acute stress is referred to as episodic acute stress. The symptoms are like that of acute stress but this time, it occurs often. This may happen if an individual is frequently anxious and concerned about events that may occur. Certain jobs including military deployment can cause this.

Causes of stress

Some of the causes of stress include having a job you hate, surviving a traumatic experience, having an unhappy relationship or marriage. According to Belfakir (2020), stress factors fall under 4 categories and these are:

Physical stress: trauma from surgery, dehydration and illness are examples.

Psychological stress: anxiety, depression and stress are examples.

Psychosocial stress: bankruptcy, economic hardships, loss of a loved one are examples.

Psycho-spiritual stress: Examples include a crisis of values, meaning, and purpose; joyless striving (instead of fruitful, satisfying, meaningful, and rewarding employment); and a break with one's fundamental spiritual

convictions. Surgery is a stressor that causes neuroendocrine responses in the body as well as psychological responses.

Empirical Review

This section examines literature pertaining to research. That is, similar work done by other researchers. This will be discussed under the following sub-headings: Prevalence of overall psychological distress, depression among pre-surgical cataract patients, anxiety among pre-surgical cataract patients and stress among pre-surgical cataract patients. The other sub-headings look at the relationship between the independent variables: age, gender, mode of payment for surgery, previous eye surgery and waiting time and then the dependent variable, psychological distress.

Prevalence of Overall Psychological Distress

A study by Marback et al. (2007) in Brazil showed a prevalence of 89.1% for psychological distress among 110 pre-surgical cataract patients at a university hospital. An instrument based on an earlier investigation was used. In this cross-sectional study, psychological distress was conceptualised in terms of uncertainty on the surgery's outcome (32.7%), distress (26.4%) and sadness (25.5%).

The study done in Brazil was replicated by Manhas et al. (2018) in India. In that cross-sectional study, a total of 72 participants in different eye camps were hospitalised for cataract extraction at the improved Government Medical College, Jammu. From October 2017 to July 2018, these research subjects were sampled. In this study, a pre-designed and pilot-tested questionnaire was used. The prevalence of psychological distress was calculated to be 69.4%;

uncertainty about the outcome (22.2%), distress/anxiety (15.3%), depression (25%) and resentment for needing surgery (6.9%).

A more recent study done in India by Kumar et al. (2022) suggested a psychological distress prevalence of 56.6% (95% CI 52.9%– 60.2%). In that study, which is the largest study of such nature in India, 813 patients including 456 males (56.1%) and 357 females (43.9%) awaiting cataract surgery in four hospitals were assessed using Centre for Epidemiologic Studies–Depression Scale (CES-D) to estimate depression and the Generalised Anxiety Disorder (GAD-7) to check for anxiety. A random-proportion technique was employed to select the participants.

Furthermore, a study done in Nigeria by Okudo et al. (2021) sought to psychological distress among cataract patients preparing for surgery. The severity of depression and anxiety were assessed using the Hospital Anxiety and Depression Scale (HADS). They discovered that 25.4% of the 197 cataract patients had psychological distress, including both depression and anxiety.

Another study which was conducted in Nigeria estimated that 42.5% of the participants had psychological distress (Coker et al., 2010). In that study, 40 patients (24 males and 16 females) who were due for free cataract surgery at the Lagos State University Teaching Hospital, Ikeja, Nigeria, were assessed for psychological distress using the General Health Questionnaire (12^{th} version). This instrument assesses the symptoms of social dysfunction, anxiety and depression.

Lastly, a study in Vietnam by Berle et al. (2017) suggested that out of 462 participants in a longitudinal study, 56.6% reported psychological distress before cataract surgery.

Depression among Pre-surgical Cataract Patients

In general, surgical patients are more likely to experience depression symptoms (Vingerhoets, 1998). For depression among eye disease patients, the lowest that has been reported is 5.4% according to research (van der Aa et al., 2015) while the highest is 57% (Üstün et al., 2004).

Deilami et al. (2021) conducted a study of 113 Iranian adults hospitalised at Iran's Buali-Sina Hospital. These participants, 60 years and above, were awaiting cataract surgery. Demographic as well as clinical data was collected and by means of the Hospital Anxiety and Depression Scale (HADS), depression was measured in all the participants. They discovered that people with cataracts who are getting ready for surgery tend to experience depression more frequently than people without the condition. In their case-control study, they also found out that cataract makes depression worse in the elderly.

According to Phaswana-Mafuya et al. (2017), in South Africa, those with conditions such as depression (17.5%), diabetes (13.3%), hypertension (9.1%), and stroke (8.4%) were more likely to have cataracts. Age-related cataract, which impairs vision, has been demonstrated to strongly correlate with depressed symptoms (Freeman et al., 2009; Palagyi et al., 2016).

A study in Iran recruited 94 participants to determine the amount of depression among those preparing for cataract operation. The average age of the respondents was 70.25±7.34 years and the Geriatric Depression Scale was used. It was revealed that among the cataract patients, 51 (54.3%) did not have

depression, 22 (23.4%) had mild depression, 13 (13.8%) had moderate depression and 8 (8.5%) had severe depression. The study determined the prevalence of depression to be 45.7% (Samarai & Aidenlou, 2016).

In Australia, a study on the prevalence of depression was carried out on 329 elderly patients who were waiting for cataract surgery (Palagyi et al., 2016). These patients, who were 65 or older, needed cataract surgery. Participants were enrolled in this long-term cohort study between October 2013 and August 2015. With the aid of the Geriatric Depression scale, levels of depression were measured and subsequently, the prevalence of depression was obtained to be 28.6%.

Another study in Canada by Freeman et al. (2009) found that 26% of their participants who were 45 years and older with cataracts awaiting surgery were depressed. Two weeks before surgery, depression was assessed in this cohort research. The Geriatric Depression Scale was used to gauge the severity of depression in the 672 patients being prepared for cataract operation at the Maisonneuve-Rosemont Hospital in Montreal, Quebec. This scale has 30 items.

A random meta-analysis has found that among 1502 eye patients, cataract patients who were yet to undergo surgery had a prevalence rate of 23% in terms of depression (Zheng et al., 2017). In this systematic review, 28 studies out of 3,162 references were selected.

Lastly, a more recent study in India suggested that 87.4% of pre-surgical cataract patients were depressed (Kumar et al., 2022). These patients, 813 in number, presented to 4 eye hospitals and the Centre for Epidemiologic Studies–Depression Scale (CES-D) was used to quantitatively determine the prevalence of depression.

Anxiety among Pre-surgical Cataract Patients

Patients are more anxious about the procedure and the results of surgery, before surgery, according to a study on surgical anxiety in cataract patients (Ramirez et al., 2017). Studies show that anxiety is always higher before cataract surgery than after (Foggit, 2001), although the same researcher also concluded that the typical patient did not experience excessive anxiety before having cataract operation. A different study by Nijkamp et al. (2004) done among 128 cataract patients showed that the regular patient exhibited mild anxiety with respect to the cataract surgery.

Hapsari et al. (2019) in their research discovered a link between senile cataract patients' anxiety and cataract surgery. In their observational analytic study, 63 patients who were 50 years and above were given the Hamilton Anxiety Rate Scale (HAM-A) to complete. It was observed that 49 of the patients which represented 77.8% experienced moderate anxiety which was the mode (highest). Spearman's rank correlation test produced the results: $p = 0.002$, sig (2-tailed) value of 0.05, correlation coefficient $r = 0, 383$. This established a link between anxiety and cataract surgery.

Anuja et al. (2014) in their study of 54 pre-surgical patients concluded that 88.9% in their experimental group as well as 92.6% of the control group reported significant levels of anxiety. A total of 54 individuals who were scheduled for cataract surgery at Kasturba Hospital in Manipal, India, participated in the study. Using a purposeful sample of 54 patients, the study used a quasi-experimental pre-test post-test control group method to gather results. The participants' degree of anxiety on the day of surgery was measured

using an early pre-operative anxiety assessment scale. The high levels of anxiety could be because anxiety levels were measured on the day of surgery.

Another research by Ramadhan et al. (2021) involved a total of 82 respondents awaiting cataract surgery at the National Eye Centre Hospital in Bandung, Indonesia was sampled using the non-probability with the accidental sampling method. The researchers used a cataract perioperative knowledge level questionnaire and a Zung Self-Rating Scale (ZSAS) questionnaire. A prevalence of 53.7% for anxiety was determined.

Ługowska et al. (2020) studied 200 patients between January and March 2020. These patients were slated to have either their first or second eye cataract extraction at the Medical University of Bialystok. Inability to hear, dementia due to old age, and documented mental and psychological disorders were among the exclusion criteria. Likewise, patients who were receiving numerous operations during a single operation and those with complicated cataract surgeries were excluded. Participants had to respond to a lengthy questionnaire that touched on three different topics: (a) general health the day before surgery; (b) patient evaluation of the hospital admission and surgical preparation procedures and (c) patient emotions just prior to surgery. Overall, anxiety was present in 89.9% of participants.

In Turkey, Oymaagaclıo (2019) found that 72.0% of patients booked for cataract surgery reported nervousness over the procedure. The study had 211 participants who attended an eye care facility between October 2016 and March 2017.The STAI, or State and Trait Anxiety Inventory, was the tool employed in the study. According to this study, it was also discovered that patients who were retired, healthy patients, and those who had anxiety connected to surgery had

higher state anxiety scale scores. Patients who were female, older than 60, had problems for longer than five years, and reported feeling anxious about the procedure scored higher on the continuity anxiety scale.

According to a study by Konjevoda et al. (2021), 18.4% of the participants experienced anxiety before cataract surgery. Their cross-sectional study included 152 patients. The participants' average age was 74.41 years. Twenty (13.2%) of the participants were under the age of 65, while 86.8% were over the age of 65 while 88 patients (57.9%) were female, 64 (42.1%) were male. Also, 68 patients (44.7%) had previous cataract surgery on the other eye, while 84 patients (55.3%) had their first cataract surgery. Self-made questionnaires were used to examine sensations such as fear, worry, nervousness and insecurity before cataract surgery. The levels of fear varied between patients who had had cataract surgery before and those who were having it done for the first time. Older people with age-related cataract met the inclusion criteria. The exclusion criteria included ocular co-morbidity, psychological illnesses, an inability to read, hearing loss, and operations performed under general anaesthesia. Questionnaires were completed and analysed using Pearson's chi-squared test.

A recent study in India by Kumar et al., (2022) showed an overall anxiety level amongst 813 patients to be 57.1%. In that study, the Generalised Anxiety Disorder-7 (GAD-7) scale was used to quantify the level of anxiety among pre-surgical cataract patients presenting to four eye clinics.

Stress among Pre-Surgical Cataract Patients

A major stressor like surgery can have negative physiological effects like hypertension, muscle tension, and sweating. These reactions may increase the risk of surgical complications (Obuchowska & Konopinska, 2021). Stress can

even cause eye pressures to increase before surgery (Miyazaki et al., 2000). Upon search through literature, only three studies related to stress among pre-surgical cataract patients was found.

Marback et al. (2007) in their study of 110 pre-surgical cataract patients in Brazil found out that 26.4% of them were distressed. Questionnaires were used to conduct this cross-sectional survey.

An earlier study by Fagerström (1993) concluded that 33% of the population that was studied experienced some form of stress before their first cataract surgery. In that research, a total of 100 participants including 25 men and 75 women between the ages of 71-76 years were studied.

Another research work by Marback et al. (2012) which sought to analyse some emotional reactions before cataract surgery recruited 206 patients in Brazil. All the patients did not have any previous history of cataract surgery. However, these patients had useful vision in just one eye. The prevalence of stress among this population was 40.6% . A questionnaire from a previous study was used to assess the level of stress.

Since only three studies were found, it gives credence to the fact that stress, which is one of the components of psychological distress has not been given enough attention and this study will help bridge that knowledge gap.

Age and Psychological Distress

Approximately 9% of Ghanaian senior citizens are depressed (Amegbor et al., 2020). Several variables influence how much anxiety each patient displays about upcoming events. Age, gender, the intended surgery and scope, prior surgical experience and one's vulnerability to stressful conditions are all considerations to keep in mind (Guo et al., 2012). Yilmaz et al. (2012) conducted

a study in Turkey and found that there was no link between age and anxiety. This study was done in a general surgical population and not among eye patients. When it comes to preoperative anxiety, young patients are more concerned than older patients (Bakr et al., 2014). Young people have less life experience and are more prone to worry and panic.

According to Fathi et al. (2014), anxiety levels heightened with age and were higher in older patients than in younger patients. This result was consistent with research by Basak et al. (2015), which discovered that patients over the age of 35 expressed more anxiety than younger patients, and Nigussie et al. (2014), which also discovered that patients over the age of 35 expressed more anxiety than younger patients. According to Thomas and Seedat (2018), depressive disorders are more common in persons aged 20 to 30 and continue to rise into middle life. Depression appears to be more common in the elderly, most likely because of their diminished capacity to handle a surgical insult (McGwin et al., 2003). All these findings pertain to the general surgical population.

Blindness could result from the surgical procedure going wrong and failing, according to Tielsch et al. (1995), and this causes depressive symptomatology in a vulnerable category of people, such as the elderly. According to research, there is a link between poor vision and depression among the elderly (Hayman et al., 2007 & Tsai et al., 2003). According to a meta-analysis by Parravano and his colleagues (2021), one in four patients who sought eye care services because of a visual impairment, including a cataract, were depressed. In this review, most of the patients were 65 years of age and above.

In his study of 211 patients in Turkey who were scheduled for cataract surgery, Oymaagaclıo (2019) discovered that anxiety was higher in retired

people and that there was a statistically significant relationship between age and state anxiety. In his study, he used the "Strait and Trait Anxiety scale" to measure the level of anxiety among the participants.

A longitudinal investigation on cataracts and the elevated risk of depression was carried out in Taiwan by Chen et al. (2020). After propensity score matching, 233,258 patients were involved in their study: 116,629 individuals from both the cataract and non-cataract groups. Cataract was found to be substantially related with an elevated risk of developing depression over a 7.8-year period (adjusted hazard ratio [aHR] = 1.78, 95 percent confidence interval [CI] 1.70–1.87, p 0.001). The cataract group was further divided into those who underwent an operation and those who did not. Patients who underwent cataract surgery had a reduced risk of depression compared to non-surgical patients (aHR = 0.75, 95 percent CI 0.71-0.79, p 0.001). The cataract cohort exhibited an increased risk of depression than the non-cataract cohort in both the young (those under 65 years old) and old (those 65 years and older) age groups.

Another study in Iran by Samarai & Aidenlou (2016) found out that the level of depression has a significant relationship with age. The degree of depression among cataract patients was measured. In all, 94 participants (52 males and 42 females) were chosen using a simple random sampling procedure. The participants' mean age was 70.25 7.34 years, and they were all older than 45. These participants have no previous history of eye surgery. Among the 94 patients, 51 (54.3%) did not have depression. Also, there were 8 (8.5%) cases of severe depression, 22 (23.4%) of mild depression, and 13 (13.8%) of moderate

depression. Depression in cataract patients was assessed using the Geriatric Depression Questionnaire (GDS).

According to Salgado-Canseco et al. (2016), patients over the age of 70 were more likely than younger patients to have anxiety and depression (27.7% and 20.4%, respectively). Age was strongly linked with the presence of anxiety or depression (OR=1.03, 95%IC 1.00-1.05, p=0.009). Some 391 patients with clinically significant cataracts over the age of 50 who participated in that cross-sectional study between November 2014 and July 2015 had their levels of anxiety and depression evaluated. The 14-item, 2-subscale Hospital Anxiety and Depression Scale (HADS) was used to evaluate these conditions.

The anxiety and depression symptoms (independently) were categorised as follows: without (scores 0-7 and 0-8), borderline (scores 8-10 and 7-10, respectively), and presence of each condition (scores 8-10 and 7-10). The range of scores for each subscale is 0 to 21. (Score for both, 11-21).

Gender and Psychological Distress

Generally, it is widely known that women have a high affinity for psychological distress. According to Marco and his colleagues (1999), the prevalence of psychological disorder was higher (29.8%) for women undergoing surgical procedure. In their research, Bartels et al. (2013) found that the causes of depression in men and women appear to differ, with women more frequently exhibiting internalizing symptoms and men exhibiting externalizing symptoms. Fathi et al. (2014) analysed the factors influencing anxiety before surgery and concluded that gender is one of them. According to some studies, depression is twice as common in women as in men. This is linked to changes in ovarian

hormones (Albert, 2015). This study was done in patients preparing for heart surgery.

Based on a study conducted in Iran by Deilami et al (2021), there is a statistically significant connection between the gender of the patient, depression, and cataract surgery. In this case-control study at the Buali-Sina Hospital in Sari, Mazandaran, Iran, 113 individuals with and without cataracts were evaluated. The study included 45 older persons without cataracts and 68 cataract sufferers. Out of this number, 29 (42.6%) of the participants were males with cataract while 39 (57.4%) of the females also had cataract. For those without cataract, 26 (57.8%) of them were males and 19 (42.2%) of them were females. All patients underwent ophthalmological exams at the beginning and again four months later, and all patients' demographic and clinical information was collected. All patients underwent a Hospital Anxiety and Depression Scale evaluation for depression throughout the period.

However, another study posits otherwise. Samarai & Aidenlou (2016) in their research intimated that there is no association between depression and gender. According to research, women are more anxious before surgery than men (Jafar & Khan, 2009; Perks et al., 2009). Most individuals anticipating surgery reported having severe levels of preoperative anxiety in research on patients having surgery in Turkey. Males and females were shown to have different levels of anxiety (Yilmaz et al., 2012). Just about 27.1% of the male participants and 40.9% of the female participants in a study done in Nigeria reported having significant anxiety. The gender difference, however, did not reach statistical significance (Ebirim & Tobin, 2010).

Women have greater levels of fear and anxiety (Mitsonis et al., 2006; Nijkamp et al., 2004) and another study also revealed that before surgery, women report more anxiety than males (Ezkin E, 2017). A study done in The Netherlands by Pijnenborg (2009) proved that before cataract surgery, men are less likely than women to experience anxiety. In this study, 140 patients between the ages of 55 and 95 who were due for their first cataract surgery were selected to participate. State and trait anxiety were both measured using the State-Trait Anxiety Inventory (STAI) questionnaire's condensed Dutch translation. Again, state anxiety was assessed using the Visual Analog Scale (VAS). These were administered one to six weeks before surgery. The Consumer Quality Index Cataract Questionnaire (CQI Cataract) was also administered after surgery to measure the experience of the patient after undergoing the cataract surgery. This was administered between 1 and 2 weeks after surgery. An analysis of independent-samples t-test was done. Men's state anxiety scores (M = 9.66, SD = 2.86) and women's state anxiety scores (M = 11.40, SD = 3.37) were found to differ significantly; t (100) = -2.778, p =.007. A moderate effect size was suggested by the eta squared statistic (.07). Women have higher degrees of state anxiety than men, according to these findings. Previous research by Kindler et al (2000) has also confirmed this.

Mitsonis et al. (2006) conducted their research in Greece. In total, 278 Greek patients aged 65 and older underwent examinations to ascertain their levels of anxiety and depression as they prepared for cataract surgery and to assess how these emotions related to their optical acuity both before and after surgery. The participants were separated into two categories: first eye and second eye. The first group consisted of those who were having cataract

removed for the first time while second-eye surgery group were those who have already had cataract removed in the other eye. The Hamilton's Rating Scales for Anxiety and Depression were used to assess anxiety and depression, respectively. A week prior to the procedure in the pre-assessment clinic (Stage I), on the day of the procedure (Stage 2), and 21 days after the procedure on the first return to the clinic after the procedure, HAM-Anxiety was administered to both groups of patients (Stage 3). Both sets of patients received HAM-Depression-17 in Stages 1 and 3. Also administered were HAM-Anxiety and HAM Depression-17 to a group of healthy controls. A total of 278 patients were found to be eligible for participation. Consequently, 13 patients declined to participate, and 14 dropped out before the trial was completed. In the end, 251 patients were divided into two categories (first eye = 42 men, 79 women, and second eye = 46 men, 84 women). Thirty-five (13.9%) of patients had no significant improvement in the operated eye (E-test < 0. 4). There were 40 males and 75 women in the 115-person healthy control group. Controls scored 7.2 (SD=2.6) on the HAM-Anxiety scale and 8.0 (SD=3.7) on the HAM-Depression-17 scale. Those having surgery for the first time had considerably higher anxiety than those who have previously had surgery before ($F_{1,251}$ =75.39, p.001). Individuals planned for first-eye cataract surgery experienced very high anxiety on the day of operation, but those who were booked for second-eye cataract surgery experienced no changes in reported anxiety ($F_{1,251}$ =49.60, p.001) (Mitsonis et al., 2006). Ratings of depression were higher in women than men both before and after the procedure ($F_{1,251}$=45.14, p.00l)

Mode of payment for Cataract Surgery

The challenges faced by the visually impaired include access to quality healthcare, the cost of treatment, the availability of qualified healthcare professionals, acceptance of the infirmity brought on by the impairments, the problems on close family and friends, and a high risk of psychological distress, which may be more conspicuous if surgery is necessary (Babalola et al., 2020). Most patients in Ghana cannot afford cataract extraction procedure, which appears to be expensive. Nigussie et al. (2014) have shown that higher preoperative anxiety was associated with higher income.

Muhammad and his colleagues (2017) highlighted cost of operation (38.3%) as the most common obstacle that prevents people from undergoing cataract surgery. The challenge, "denial of treatment," represented by 22.2% of cases, was either a provider-related denial at an eye care institution or a reluctance by family members to act as an escort (family-related)

Other studies in underdeveloped nations, especially Africa, have revealed that the financial commitment towards cataract surgery acts as a stumbling block to its uptake (Chandrashekhar et al., 2007; Malhotra et al., 2005). Nevertheless, one study suggests that one of the healthcare procedures that is most cost-effective is cataract surgery (Khairallah et al., 2015).

Gyasi et al. (2007) did a study in Ghana, specifically in the Upper East Region which showed that the main hurdle towards the cataract surgery was the cost of the procedure with 91% of the respondents attesting to it. In that qualitative study, 66 cataract patients were recruited by two different sampling methods; 24 of the participants were patients of the Bawku Hospital receiving treatments and these were recruited by purposive sampling method. Also, 42

cataract-blind patients who resided in nearby villages were also sampled by the snowballing method. Focus-Group Discussion (FGD) and interviews were employed to get data. The average age of the participants was 67.6 years, with males and females in equal proportions (0.9:1). This may be explained as, the Upper East Region, where the research was conducted, is one of the most deprived regions in Ghana and so cost of surgery is a likely barrier. This fear of cost may lead to high psychological distress.

Dhaliwal & Gupta (2007) in their study showed that attitudinal barriers, rather than cost of surgery, was the main barrier to the uptake of cataract surgery. A total of 100 cataract patients presenting to an eye clinic in India were given interviewer-assisted questionnaires for the study. The questionnaire was in Hindi and consecutive patients 45 years and older were involved in the study. In total, 17 questions bordering on patient's attitude, delivery of service, cost of cataract surgery and affordability were explored. An immature cataract (68%), the ability to see clearly with the unaffected eye (64%), being too busy (57%), being a woman (37%), fear of surgery (34%), fear that cataract extraction will result in blindness (33%) or death (13%), old age (33%), it is the will of God (29%), and concern about the cost of surgery (27%) were some of the attitudes that were barriers. The average amount of money the participants were willing to pay was 17.5USD (95% CI: 10.5, 35.00) in a study in Ethiopia. It was significantly correlated with continuing to work (= 26.66, 95% CI: 13.03, 40.29), having a high level of education (= 29.16, 95% CI: 2.35, 55.97) and not having any ocular morbidity (= 28.48, 95% CI: 1.08, 55.97). This study involved 827 cataract patients (= -1.69, 95 percent CI: (-0.55, -0.04) (Seid et al., 2021). In

conclusion, the amount that the cataract patients were willing to pay was way less than the actual surgery fees that were charged.

A study by Snellingen and his colleagues (1998) has shown that economic concerns (48%) were the main deterrent to having cataract surgery, followed by logistical issues (44.8%), nervousness towards the procedure (33.3%), and inability to make time for the surgery (18.8%).

Previous Eye Surgery

Cataract surgery is widely regarded as stressful, which is reinforced by the fact that, contrary to popular belief, psychological distress for patients undergoing their first eye surgery reduces regardless of the operation's aftermath. In their study, Mitsonis et al. (2006) discovered that first-eye patients had considerably more anxiety than those who have previously had surgery before (F1,251 = 75.39, p.001). To et al (2014) reported that 16.2% out of 247 cataract patients aged 50 years or older in Vietnam had low measure of depression and/or anxiety a week prior to their first cataract operation. Carr et al. (2006) found that previous surgery is related with a lower probability of anxiety before surgery, as shown by a negative causal relation. Although it has been proven that those who have had prior experience with surgery are less worried than those who are having surgery for the first time, Jawaid et al. (2007) found no significant differences; four other investigations found no difference in depression symptoms after cataract extraction procedure on the first eye, second eye, or both (Ishii, Kabata & Oshika, 2008; McGwin et al., 2003; Owsley et al., 2007; Pesudovs et al., 2003).

Waiting time

Whether the patient must wait for a few minutes or hours for lab test results or for protracted periods extending over weeks or months for elective (planned) surgical procedures such as cataract surgery, the experience of waiting, for such health care services can evoke feelings of impatience and frustration (Charmaz, 1991). Several factors influence the duration of the wait period, including the type of surgery, logistics and surgeon availability, and the patient's socioeconomic status. Obviously, when the demand for surgery is high but the number of surgeons is inadequate, the wait list will continue to grow. There are growing worries and critiques about surgery wait times, especially in government hospitals (Carr et al., 2009). According to Obuchowska & Konopinska (2021), the longer patients wait, the more distressed they get. As per research, it can be difficult to wait for surgery or invasive procedures, and worrying about it makes it worse and influences both bodily and psychological health. (Roomruangwong et al., 2012). This anxiety could be a normal response to the potentially hazardous conditions that exist before surgery, particularly in individuals who have had no prior surgical experience. Refreshingly, some interventions have been put in place to manage the wait list problem (Alliance, 2005).

Anxiety is a common reaction among people getting ready for elective surgery and is generally considered normal. The results of a study by Nigussie et al. (2014) showed that preoperative anxiety was extremely high for most of the individuals expecting elective surgery. This contradicts the findings of the Pakistani study, by Jawaid et al. (2007). Because Pakistan is a more developed

nation than Ethiopia, patients in Pakistan have access to details about their procedure and can engage medical professionals about it (Jafar & Khan, 2009). Ebirim & Tobin (2010) found that fear of surgery being delayed was the most frequent source of anxiety and then fear that mistakes made during the procedure would harm the patient (64%), fear that caregivers would not pay enough attention to the patient (63.2%), and fear that the patient might "not wake up" after surgery (58.4%).

Reduced cataract surgery wait times, particularly for those with poor vision, may lower the incidence of depression or shorten its duration (Freeman et al., 2009). Patients with poorer visual acuity who were awaiting cataract surgery were more likely to be depressed than those with better visual acuity, according to several additional research (Freeman et al., 2009; Kheirkhah et al., 2018; Palagyi et al, 2016). Two other studies found that the time spent waiting for surgery was one of the major variables contributing to women's higher pre-operative anxiety than men (Masood et al., 2009; Moses et al., 2003).

Hou et al. (2021) in Taiwan used data from National Health Insurance (NHI) claims made by the entire population for their cohort study. A total of 585,422 patients who underwent bilateral cataract surgery were recorded. They investigated the inpatient and outpatient psychiatric consultations for these patients, with varying time intervals (less than three, three to six, six to twelve, and more than twelve months) between surgeries. Binominal regression was performed to assess how the initial eye operation and the time interval interacted. They found that there was a negative dosage response effect, with a larger time gap resulting in a drop in the amount of mental health consultations, and that individuals with a time interval of less than three months had the lowest number

of mental health visits (1.783-1.743, P.001). The predicted number of consultations for mental health services for individuals with a time gap of more than 12 months increased from 1.674 to 1.796. (P.001). They concluded that scheduling both surgeries at the same time may be useful in making use of the advantages of cataract extraction in reducing the frequency of mental health visits if a patient is planning to have both eyes operated on within a year.

Conceptual Framework

The study's conceptual framework is presented below:

Figure 2:

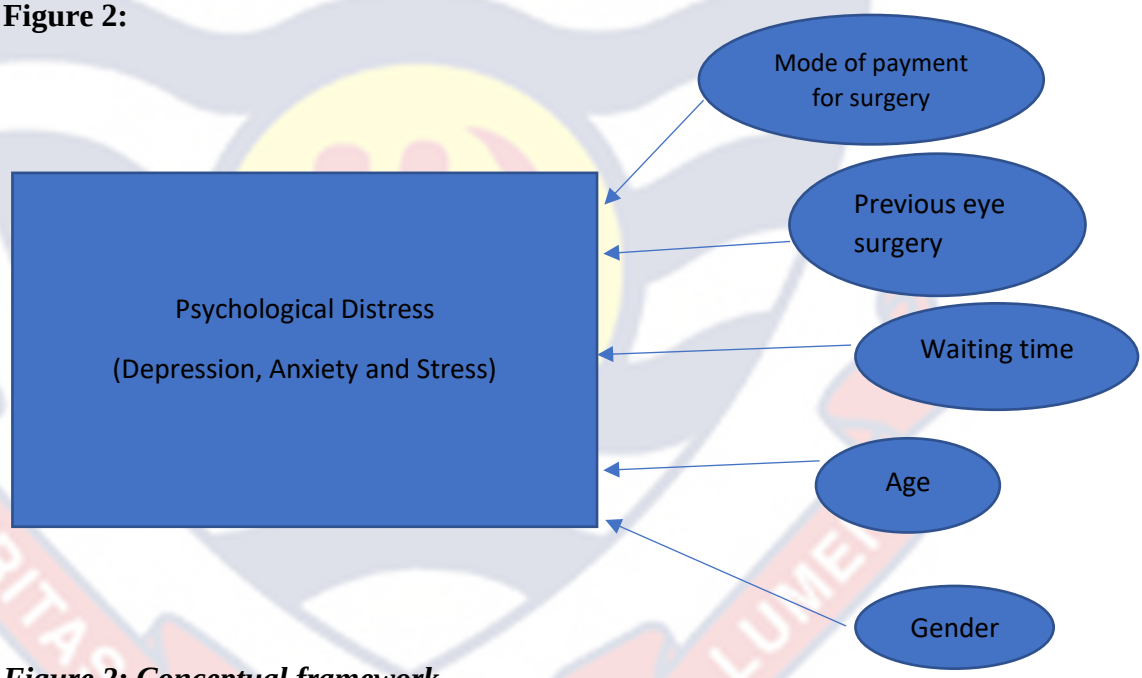


Figure 2: Conceptual framework

The conceptual framework above demonstrates how independent variables: age, gender, mode of payment for surgery, previous eye surgery and waiting time influence an individual's psychological distress (dependent variable) prior to cataract surgery. Different age groups and gender will have varying levels of

psychological distress. Financial stress can contribute to significant psychological distress, or it may not. Patients who have a history of previous eye surgery and first-time surgery patients will each have different levels of psychological distress. Finally, longer waiting time may increase, decrease or not even affect the level of psychological distress.

Chapter Summary

The reviewed literature has systematically examined various determinants influencing the psychological distress experienced by pre-surgical cataract patients, including demographic factors, surgical payment modalities, previous eye surgery experience and waiting times. In a synthesis of the findings, it is evident that a discernible level of psychological distress is prevalent among individuals preparing for cataract surgery, with four of the six scrutinised studies indicating notably elevated overall prevalence rates (Berle et al., 2017; Kumar et al., 2022; Manhas et al., 2018; Marback et al., 2007).

With respect to depression prevalence, the literature underlines a considerable variation, ranging from 23.0% to 87.4%. This validates the existence of depression within the pre-surgical cataract patient population. Additionally, the prevalence of anxiety among this population exhibits a noteworthy spectrum, spanning from 18.4% to 92.6%, highlighting the multifaceted nature of anxiety. This wide-ranging prevalence underscores the importance of understanding and mitigating anxiety in individuals anticipating cataract surgery.

A salient observation emerging from the reviewed studies is the association between age and psychological distress in pre-surgical cataract patients. The findings consistently suggest that advanced age correlates with an

increased likelihood of psychological distress preceding cataract surgery. Moreover, the literature also points towards a gender-based disparity, indicating a higher prevalence of psychological distress among women compared to men in the context of cataract surgery preparation and so in this case, women should be given more attention than men when preparing for cataract surgery. Cost considerations emerge as a prominent stressor among cataract patients seeking surgery, with financial constraints posing a substantial barrier to the uptake of cataract surgery. Beyond the economic impediments, a residual psychological distress component is discerned, further underscoring the intricate interplay between financial considerations and psychological well-being. Contrary to prevailing assumptions, individuals with a history of previous eye surgery exhibit lower levels of psychological distress in comparison to those undergoing their initial cataract surgery. This counterintuitive finding suggests that prior surgical experience may confer a protective effect against psychological distress in the context of cataract surgery. Lastly, an extended waiting period is identified as a contributor to heightened psychological distress, particularly among female patients. This observed trend aligns with theoretical expectations and is substantiated by existing literature.

In summary, these insights underscore the nuanced interrelationships among demographic variables, clinical factors, surgical experiences and psychosocial factors influencing the psychological well-being of pre-surgical cataract patients.

CHAPTER THREE

RESEARCH METHODS

Introduction

This chapter discusses the methodological approach used for the investigation. The research approach, research design, study area, study population, and the inclusion and exclusion criteria for the study are all specifically covered in this chapter. It has also included participant selection, study instrument, data collection methods, and data analysis procedures.

Research Design

The overall strategy for carrying out a research strategy can be characterised as research design. Because the variables under investigation were of a quantitative nature, the correlational, cross-sectional design was used. The dependent and independent variables are clearly outlined. Also, a cross-sectional design was ideal since it enabled the collection of data from a group of individuals with a variety of traits and demographics. In this study, psychological distress among pre-surgical cataract patients presenting at CCTH was studied at a single point in time.

Clinic-based investigations use cross-sectional studies to estimate the prevalence (Setia, 2016). The power of the association between two or more variables is measured in correlational research. The disadvantage is that data may be either compatible or inconsistent with a theory that is currently accepted. Like naturalistic research, a correlation cannot prove a theory, but can disprove it. This research approach is fraught with biases. The responses of some participants may not reflect the true nature of their feelings with respect to psychological distress.

Study Setting

The study was a facility-based study, conducted at CCTH, a major referral facility that provides tertiary health care to patients. In August 1998, CCTH was established and it is the biggest hospital in the Central Region. The facility has various departments such as surgery, internal medicine, imaging, renal dialysis and so on (CCTH, 2016).

Due to its status as the region's top referral hospital, CCTH was chosen as the primary study location. The Ophthalmology Unit (eye unit) of CCTH has 2 permanent ophthalmologists including the Regional Ophthalmologist, 6 optometrists and 6 ophthalmic nurses as well as other general and health assistants who help in the day-to-day running of the unit. Because they have all cadres of competent eye care professionals available at this facility, a lot of cataract cases are referred there. These two hospitals were chosen for the pilot test (BAMCEC) as well as the main study (CCTH) because they serve as major referral centres for cataract surgery in Cape Coast and Central Region at large.

Participants

The participants in this research comprised cataract patients who have been booked for surgery and at the time of the study, about 200 cataract patients had been booked for surgery. The number was relatively high because at the time, the Himalayan Cataract Programme, which offers free cataract surgery for patients was in progress. Out of this number, 170 questionnaires were administered. These were people who agreed to partake in the study and met the inclusion criteria. Out of the 170 questionnaires distributed, 158 of them fully completed the questionnaires.

Selection of Participants

In all, 158 participants were involved in the study including 66 males (41.8%) and 98 females (58.2%). The study participants were obtained through a convenient sampling. Participants who were readily available were selected. The accessible population, therefore, might not be directly proportional to the target population. Patients who had presented at the CCTH for cataract surgery and agreed to participate were used. Out of those who agreed to participate, the inclusion and exclusion criteria which has already been described was used to further qualify or disqualify some of the participants. This method of sampling was used because the participants came in batches to be booked for surgery and left for their various destinations right after the booking. Some of them were in a hurry to leave the hospital and so not everyone was able to participate. Also, they had different due dates for surgery and so it was difficult to get all of them at the same time.

Inclusion Criteria

Those with cataracts who were 18 years and above were involved in the study. This is because those who are 18 years and above are adults and can make decisions on their own. Also, cataracts are usually age- related and affects adults. Cataract patients who had no underlying medical conditions were also added to the study as well as those who agreed to be part of the study.

Exclusion Criteria

The study excluded patients with underlying medical issues, underage cataract sufferers, and patients who declined to voluntarily enrol or give consent to be part of the study. Also, patients with cataract but had additional co-morbid conditions that decrease vision such as retinopathies, glaucoma and so on were

excluded. Patients with long-term diseases including diabetes and hypertension were also excluded. According to published research, anxiety levels are raised by chronic medical disorder (Bahar & Tasdemir, 2008).

Instrument for data collection

The responses of the participants were solicited using a two-sectioned self-report questionnaire. Part One described the age, gender, marital status, place of residence, and educational attainment of the cataract patient. The same Part One also included questions that elicited socio- economic factors including mode of payment of surgery, employment status and income range. The other questions involved previous eye surgery and waiting time for surgery.

Part Two of the instrument described a short version of the Depression, Anxiety and Stress Scale (DASS-42) which was adapted. The DASS-42 is a 42-item scale which measures the negative emotional levels of depression, anxiety and stress (Lovibond & Lovibond, 1995). It is a self-report that measures a client's level of depression, anxiety and stress. The DASS-21, a condensed version of the DASS-42, was modified for the research to collect data on depression, anxiety and stress in patients who were scheduled for cataract surgery. To measure these constructs, there were three subscales. In total, there were 7 elements per subscale. Although the DASS-21 questionnaire may be distributed and evaluated by people who do not have psychological training, it is advised that when interpreting the results and making judgments, it should be done by a qualified or certified clinician. The statements on this instrument are on a Likert scale, ranging from 0 (almost never) to 3 (almost always). The respondents were asked to rate how they felt about each statement with respect

to the degrees of depression, anxiety and stress the week before. The scoring is as follows:

Depression:

No depression (0-4); Low to mild depression (5-6); Moderate to high depression (7-10); Severe depression (11-13); Extremely severe depression (14+)

Anxiety: No anxiety (0-3); low to mild anxiety (4-5); Moderate to high anxiety (6-7); Severe anxiety (8-9); Extremely severe anxiety (10+)

Stress: No stress (0-7); low to mild stress (8-9); Moderate to high stress (10-12); Severe stress (13-16); Extremely severe stress (17+)

Cronbach's alpha coefficient was employed to calculate the internal consistency of the questionnaire for the study. Cronbach's alpha was 0.855 in the current study for the entire scale and 0.775, 0.740, and 0.823 for the depression, anxiety, and stress subscales, respectively. The Cronbach alpha values obtained are ideal. This shows that the internal consistency of each subscale was good. Cook and Beckman (2006) have opined that a Cronbach alpha of ≥ 0.7 is adequate. If the subscale has less than 10 items, which was the case in this study, then >0.5 is acceptable. Since the figures were higher than 0.7, the reliability of the instrument is said to lie within the normal. DASS-21 has good validity and consistency (Cavanagh et al., 2016; Lovibond & Lovibond, 1995). The Cronbach's alpha obtained in this current study is consistent with some reported values from the literature. Alpha coefficient estimates range between 0.83 and 0.94, between 0.70 and 0.87 and between 0.82 and 0.91 for depression, anxiety and stress scales respectively for clinical samples (Bottesi et al., 2015; Clara et al., 2001). Vasconcelos-Raposo et al.

(2013) confirm that total internal consistency for DASS-21 ranges between 0.92 and 0.96. While the total internal consistency for the current study as well as that of depression was slightly lower than what is known in literature, it is still acceptable. The slight disparity might be due to cultural as well as population differences.

Pilot testing

Thirty pre-operative cataract patients served as pilot test subjects for the instrument to determine its internal consistency. The respondents from the Bishop Ackon Memorial Christian Eye Centre were chosen because they had traits in common with the population under study. Thirty people were chosen for the pilot testing because on the day(s) of data collection, those were the accessible people from the target population. They were conveniently selected. Also at the time, the facility was not conducting a lot of surgeries. Out of the 30 participants, majority were female (N=18, 60%) and their ages ranged from 22 years to 84 years. Most of them utilised the NHIS to pay for their surgery (N=21,70%). More than half of the participants dwelled in the rural areas (N=18, 60%) and exactly half had no formal education (N=15, 50%).

Pilot test results demonstrated that the questionnaire was appropriate. Some items that exhibited inconsistencies were modified; this included the rewording of some of the items in the subscales. On average, it took participants about 12 minutes to answer each questionnaire. An obstacle identified during the pilot study was the use of English language. Therefore, for the main study, field assistants and nurses were trained to help translate from English to the local language for various participants.

Data collection procedure

I took an introduction letter from the Department of Education and Psychology to the research department of the chosen healthcare facilities for review and processing prior to the actual data collection. After that, I requested ethical clearance from the Institutional Review Boards of the University of Cape Coast's Department of Education and Psychology (see Appendix C) and CCTH (see Appendix D). The goal of the study, the prerequisite for individual participation, anonymity, and confidentiality of respondent's comments were all spelled out in the ethical clearance from my department. After that the necessary contact with CCTH Ethical Review Committee was made, ethical clearance was finally given on the 16th of August 2021 with reference CCTHERC/EC/2021/06. Each respondent consent form was given to participants to sign as their agreement to take part in the study after they had been informed of the study's purpose (see Appendix B). The goals of the study were well explained to the participants as well as the procedure, possible risks and discomforts.

Along with two field assistants and three nurses, I physically delivered the questionnaire, which allowed me to build rapport with respondents and reiterate the goals of the study. A few members of the unit staff and field helpers helped with the distribution of the instrument. The data collection process started on Wednesday, 1st September 2021 and ended on Thursday, 28th October 2021, thus spanning roughly two months. The survey instrument had a return rate of 98.67%.

Data Processing and Analysis

Statistical Package for the Social Sciences (SPSS) version 20 for Windows was used to code each of the questionnaire's individual question items after the data had been collected (IBM Corporation, 2011). This is because it provides a wide variety of descriptive and inferential statistical methods, robust editing and labelling tools, and the capacity to provide results in both table and summary style. Additionally, it easily handles missing data. Then, the scales were coded, scored, and revised. Editing was done to ensure that all items had been answered and that respondents had correctly followed the instructions.

Items on the Part One aspect of the questionnaire that measured the demographic, socio-economic and the other related variables were entered. Frequency and percentage tables were used to analyse these responses.

Items on the Part Two aspect consisted of the DASS-21 scale which measured psychological distress under three sub-scales, depression, anxiety and stress. Research question 1 was analysed using frequencies and percentages. Research question 2 was analysed using means and standard deviations.

The study hypotheses were all tested using Chi-Square. Although psychological distress was measured on an interval scale, it was recoded into a categorical data of “yes” and “no”. Those with mild to extreme forms of depression, anxiety and/or stress or a combination were termed to have psychological distress and was coded as “yes”. The others without psychological distress were coded as “no”. Although the decision to recode from a higher statistical power to a lower statistical power has its inherent problems including decreased power to detect relationships and effects, risks of

biased results, overgeneralisation and so on, the decision to recode was to make the data easier to interpret and also better align with the research hypothesis.

For hypothesis 1, age was in categories and psychological distress was recoded to "yes" and "no", therefore, chi-square test was appropriate to determine the relationship. For hypothesis 2, gender was categorical (male or female) and psychological distress was recoded to "yes" and "no", therefore, chi-square was appropriate to test the hypothesis. For hypothesis 3, mode of payment of surgery for surgery was recoded into "yes" and "no" to represent those who paid for the surgery and those who did not. A "yes" response was recorded for those who were not subscribing to the free surgeries that is those who used NHIS, private insurance and paid cash. Participants who use insurance still must top up and so ended up paying cash. A "no" response was recorded for those who subscribed to the free surgeries offered by the Himalayan Cataract Programme. Consequently, a chi- square test was utilised for this hypothesis. For hypothesis 4, previous eye surgery was coded as "yes" or "no" and psychological distress was recoded as "yes" and "no" and so chi-square was used to examine the relationship between the two variables. Lastly for hypothesis 5, waiting time for surgery was recoded to "soon" and "later" where soon meant they were due for surgery within the next 2 weeks. Any other due date for surgery which was more than 2 weeks was recoded as "later". Psychological distress was recoded as "yes" and "no", therefore, chi -square test was appropriate for this hypothesis.

Chapter Summary

This investigation was designed to ascertain the presence of psychological distress among patients awaiting cataract surgery at CCTH. From

a pool of 170 distributed questionnaires, 158 were successfully completed. Employing a correlational research design, participants were conveniently sampled and the DASS-21 scale served as the instrument to measure negative emotions, specifically depression, anxiety, and stress, constituting the psychological distress construct. Prior to data collection, a pilot testing phase was meticulously executed, leading to refinements and rewording of certain scale items to enhance clarity and comprehension.

Stringent adherence to established ethical procedures and practices characterized the conduct of this study, ensuring the ethical treatment of participants and the integrity of the research process. Data garnered from the survey instrument underwent analysis utilising SPSS. Research questions were analysed using frequencies, percentages, means and standard deviations, while hypotheses were rigorously tested through chi-square analysis.

It is noteworthy that variables within the dataset underwent a recoding process, transitioning from a higher to a lower statistical power. This procedural adjustment inherently introduces a reduction in statistical power. Correlational research design is adept at identifying relationships but falls short of establishing causal connections among variables. Consequently, the study refrains from providing causal explanations for the identified associations.

CHAPTER FOUR

RESULTS AND DISCUSSION

Introduction

The purpose of this chapter is to convey the research's findings and to interpret them through discussion. The study's intent was to measure depression, anxiety and stress among pre-surgical cataract patients. The research specifically aimed to investigate:

1. The prevalence of overall psychological distress during the pre-operative period among cataract patients presenting to the Cape Coast Teaching Hospital.
2. The prevalence of depression, anxiety and stress among pre-surgical cataract patients presenting to the Cape Coast Teaching Hospital as well as the commonest symptoms for each.
3. The association between age and psychological distress.
4. The correlation between gender and psychological distress.
5. The link between the mode of payment for surgery and psychological distress.
6. The relationship between previous eye surgery and psychological distress.
7. The interaction between waiting time and psychological distress.

This chapter seeks to present the results generated from data collection. Information was gathered by means of questionnaires (DASS-21) as well as statistical tools including frequencies, means and chi-square tests. The tests were carried out to see if there were any significant differences at a significance level of 0.05.

Demographic Data

Out of 170 questionnaires administered, 158 of them were fully completed and submitted giving a return rate of 92.94%. Socio-demographic factors including gender, age, educational level, residence, employment status, marital status, how patient was paying for the surgery (whether it is free or not) and when they are due for surgery (whether it is soon or later) are presented below:

Table 1: ***Gender of participants***

	Number of participants	Percentage (%)
Male	66	41.8
Female	92	58.2
Total	158	100.0

Source: Field Survey, 2021

Table 1 shows that out of the 158 participants, greater part of them (92) were females (58.2%) while the rest (66) were males (41.8%).

Table 2: ***Age group of participants***

Age group	Frequency	Percentage (%)
21-30	3	1.9
31-40	7	4.4
41-50	33	20.9
51-60	32	20.3
61-69	43	27.2
70+	40	25.3
Total	158	100.0

Source: Field Survey, 2021

The youngest participant in this study was 24 years and the eldest was 89 years old. The average age was 60.28. According to Table 2, the age group that needed cataract surgery most was those in the 61-69 age group (N=43, 27.2%) followed closely by 70 years and above (25.3%). The lowest count (N=3; 1.9%) was for those in the 21-30 age grouping. This is because cataract is mostly an age-related condition and mostly affects older people rather than those who are young.

Table 3: ***Educational level of participants***

	Frequency	Percentage (%)
Primary	33	20.9
Secondary	27	17.1
Tertiary	24	15.2
No formal education	74	46.8
Total	158	100.0

Source: Field Survey, 2021

Table 3 expressed the educational level of participants. Almost half of the participants had no formal education (N=74, 46.8%). This is because many of the participants were from the Himalayan Cataract Programme which organises free surgeries and targets people in the hinterlands. These people in the village mostly have no educational background. This is followed by those who have at least some primary education (N=33, 20.9%). Those who have some form of tertiary education had the lowest count (N=24, 15.2%)

Table 4: ***Residence of participants***

	Frequency	Percentage (%)
Urban	61	39.9
Rural	97	60.1
Total	158	100.0

Source: Field Survey, 2021

Table 4 shows that majority of the participants were from the rural areas (N=97, 60.1%). Again, this is because most of the participants were from the Himalayan Cataract Programme which organises free surgeries for people mostly in rural areas who cannot afford surgery.

Table 5: ***Employment status of participants***

State of employment	Frequency	Percentage (%)
Employed	63	39.9
Unemployed	39	24.7
Student	3	1.9
Retired	53	33.5
Total	158	100.0

Source: Field Survey, 2021

Table 5 indicates the employment status of participants. The employed population (N=63, 39.9%) formed the highest frequency followed by retired participants (N=53, 33.5%). Students (N=3, 1.9%) formed the lowest counts.

Table 6: ***Marital status of participants***

	Frequency	Percentage (%)
Single	10	6.3
Married	70	43.3
Widow/widower	57	36.1
Separated/divorced	21	13.3
Total	158	100.0

Source: Field Survey, 2021

Table 6 describes the marital status of participants. Married people (43.0%) had the highest count followed by widows/widowers (34.8%). The majority of participants were either widows or widowers because they were all over the age of 60. In Ghana, the life expectancy is below 60 years (Mba, 2010).

Table 7: ***Mode of payment for surgery***

Mode of payment	Frequency	Percentage (%)
National Health Insurance Scheme (NHIS)	71	44.9
Private insurance	5	3.2
Cash	13	8.2
Free	69	43.7
Total	158	100.0

Source: Field Survey, 2021

Table 7 shows how participants paid for their surgery. The highest count (N=71, 44.9%) was payment for surgery was via the National Health Insurance Scheme (NHIS) where the scheme pays a certain percentage of the cost of surgery and the participant also pays a part of the cost. These participants were not interested

in the free surgeries because either the timing did not favour them or they just had no interest in the programme. However, a close 43.7.% subscribed to the free surgery offered by the Himalayan Cataract Programme. This is because data for the study was gathered just as the programme that provided more than 500 free cataract surgery was about to begin. A few of the participants (8.2%) paid cash up front and the rest utilised private insurance.

Table 8: ***Previous eye surgery***

Previous eye surgery	Frequency	Percentage (%)
Yes	63	39.9
No	95	60.1
Total	158	100.0

Source: Field Survey, 2021

From Table 8, majority of the participants, (N=95, 60.1%) have never undergone any form of eye surgery in the past. This was their first time experiencing ophthalmic surgery. However, 39.9% of them had undergone some form of eye surgery in the past (whether cataract, pterygium excision or another procedure) and were familiar with the process. This is almost identical to research done by Nijkamp et al (2004) where 41% of participants reported previous eye (cataract) surgery.

Table 9: ***Waiting time for surgery***

Waiting time for surgery	Frequency	Percentage (%)
The next day	11	7.0
In a weeks' time	46	29.1
In 2 weeks' time	17	10.8
In 3 weeks' time	10	6.3
In a months' time	24	15.2
In 2 months' time	28	17.7
In 3 months' time	22	13.9
TOTAL	158	100.0

Source: Field Survey, 2021

Participants who were due for surgery within a weeks' time (N=46, 29.1%) formed the majority in terms of waiting time. This is because that was when the Himalayan Cataract Programme was starting. This was followed by those who were due in 2 months' time (N=28, 17.7%).

Main Results

Research Question 1: *What is the overall prevalence of psychological distress among pre-surgical cataract patients?*

Table 10: ***Prevalence of psychological distress (total)***

State of distress (Yes/No)	Frequency	Percent (%)
Yes	116	73.4
No	42	26.6
Total	158	100.0

Source: Field Survey, 2021

Psychological distress referred to any participant who had mild to extreme symptoms of depression, anxiety and/or stress. The number of participants who had at least mild to extreme symptoms of depression, anxiety and/or stress was 116 which translates to 73.4%.

Research Question 2: *What is the prevalence of anxiety, depression and stress and what are the commonest symptoms for each?*

Table 11: ***Prevalence of depression, anxiety and stress among pre-surgical cataract patients***

Severity	Depression (%)	Anxiety (%)	Stress (%)
Normal	100 (63.3)	57 (36.1)	120 (75.9)
Mild	21 (13.3)	11 (7.0)	23 (14.6)
Moderate	29 (18.4)	41 (25.9)	11 (7.0)
Severe	7 (4.4)	27 (17.1)	4 (2.5)
Extreme	1 (0.6)	22 (13.9)	-
Total	158 (100.0)	158 (100.0)	158 (100.0)

Source: Field Survey, 2021

Participants who had mild to extreme symptoms of specific psychological distress factors (depression, anxiety and/or stress) were considered to have that condition.

The prevalence of depression, anxiety and stress among pre-surgical cataract patients was determined. Among the three psychological distress constructs, anxiety (63.9%) was the highest followed by depression (36.7%) and finally stress (24.1%).

Table 12: ***Means, standard deviations and ranks of depression statements***

Depression statement	Means	Standard Deviation	Mean Rank
"I was unable to become enthusiastic about anything"	1.63	.824	1st
"I felt sad and depressed"	1.61	.828	2nd
"I couldn't seem to get any enjoyment out of the things I did"	1.58	.808	3rd
"I felt that I had lost interest in just about everything"	1.56	.794	4th
"I felt that I had nothing to look forward to"	1.56	.786	5th
"I couldn't seem to experience any positive feeling at all"	1.52	.711	6th
"I could see nothing in the future to be hopeful about"	1.50	.755	7th

Source: Field Survey, 2021

From Table 12, the commonest depression symptom was "I was unable to become enthusiastic about everything" (M=1.63, SD=.824) followed by "I felt sad and depressed" (M=1.61, SD=.828). The least complaint was "I could see nothing in the future to be hopeful about" (M=1.50, SD=.755)

Table 13: ***Means, standard deviations and ranks of anxiety statements***

Anxiety statement	Means	Standard deviation	Mean Rank
"I felt scared without any good reason"	2.34	1.086	1st
"I was aware of the action of my heart in the absence of physical exertion"	1.89	.856	2nd
"I felt terrified"	1.81	.875	3rd
"I was worried about situations in which I might panic and disgrace myself"	1.73	.863	4th
"I experienced trembling"	1.70	.835	5th
"I perspired noticeably"	1.63	.770	6th
"I experienced breathing difficulty"	1.61	.763	7th

Source: Field Survey, 2021

For anxiety, the commonest symptom was "I felt scared without any good reason" (M=2.34, SD=1.086) followed by "I was aware of the action of my heart in the absence of physical exertion" (M=1.86, SD=.833). The least complaint was "I experienced breathing difficulty" (M=1.56, SD=.706). This result can be found in table 13 above.

Table 14: ***Means, standard deviations and ranks of stress statements***

Stress statement	Means	Standard Deviation	Mean Rank
"I found it difficult to relax"	1.83	.992	1st
"I found myself getting upset rather easily"	1.61	.813	2nd
"I tended to overreact to situations"	1.56	.786	3rd
"I found that I was short-tempered"	1.54	.893	4th
"I found it difficult to calm down after getting angry"	1.53	.827	5th
"I found myself getting upset by quite trivial things"	1.51	.755	6th
"I found myself getting impatient when I was delayed in any way"	1.38	.664	7th

Source: Field Survey, 2021

Table 14 shows that the most prevalent stress statement was "I found it difficult to relax" (M=1.83, SD=.992) followed by "I found myself getting upset rather easily" (M=1.61, SD=.813). The least prevalent stress statement was "I found myself getting impatient when I was delayed in any way" (M=1.38, SD=.664).

Table 15: ***Crosstabs for age groupings and psychological distress***

			Psychological distress		
			yes	no	Total
age groupings	21-30	Count	2	1	3
		Expected Count	2.2	.8	3.0
	31-40	Count	3	4	7
		Expected Count	5.1	1.9	7.0
	41-50	Count	17	16	33
		Expected Count	24.2	8.8	33.0
	51-60	Count	19	13	32
		Expected Count	23.5	8.5	32.0
	61-69	Count	39	4	43
		Expected Count	31.6	11.4	43.0
	70+	Count	36	4	40
		Expected Count	29.4	10.6	40.0
Total		Count	116	42	158
		Expected Count	116.0	42.0	158.0

Table 15 shows the crosstabulation results between age and psychological distress. However, the assumptions to run a chi-square test was violated because 3 cells have an expected count less than 5. The minimum expected count is .08. Therefore, a Fishers Exact Test was conducted.

Table 16: Chi-square tests of independence

	Value	Df	Asymp. Sig. (2-sided)	Effect size
Age				.413
Fisher's Exact Test	27.611	5	.000	
N of valid cases	158			
Gender				
Pearson Chi-square	.028	1	.868	-
N of valid cases	158			
Mode of payment for surgery				
Pearson Chi-square	2.861	1	0.091	-
N of valid cases	158			
Previous eye surgery				-1.83
Pearson Chi-square	5.289	1	.021	
N of valid cases	158			
Waiting time				-2.81
Pearson Chi-square	12.470	1	.000	
N of valid cases	158			

Source: Field Survey, 2021

Table 16 details the results of the chi-square tests of independence conducted between the independent variables (age, gender, mode of payment, previous eye surgery and waiting time) and the dependent variable (psychological distress).

Hypothesis 1

H_0: There is no statistical relationship between age and psychological distress.

H_1: There is a statistical relationship between age and psychological distress.

From Table 16, the chi- square tests showed a Pearson chi -square of 27.611 at 5 degrees of freedom with a p-value of .000. That is: X^2 (5df) = 27.611 (p<.005). The alpha value was less than .05 therefore we reject the null hypothesis and accept the alternate hypothesis. In conclusion, there is a statistical relationship between age and psychological distress. Because there was a statistical relationship between age and psychological distress, the effect size was also determined using Cramer's V. The value obtained was .413 which shows a strong, positive relationship between age and psychological distress. Here, it means that the older you are, the more you will experience psychological distress.

Hypothesis 2

H_0: There is no statistically significant difference between gender and psychological distress.

H_1: There is a statistical difference between gender and psychological distress.

To investigate the link between gender and psychological distress. a chi-square test of independence was run. From Table 16, chi- square of .028 at 1 degree of freedom with a p-value of .868 was obtained. That is: X^2 (1df) = .028 (p=.868). This p- value is higher than the alpha value of .05 therefore we retain the null hypothesis and reject the alternate hypothesis.

Hence, there is no relationship between gender and psychological distress. This also means that psychological distress is not gender specific for this client group.

Hypothesis 3

H_0: There is no statistically significant relationship between mode of payment for surgery and psychological distress.

H_1: There is a statistically significant relationship between mode of payment for surgery and psychological distress.

The association between surgical expense and psychological suffering was investigated using a chi-square test of independence. From Table 16, Chi-Square tests showed a Pearson chi -square of 2.681 at 1 degree of freedom with a p-value of .091. That is: X^2 (1df) = 2.681 (p=.091). This p- value is higher than the alpha value of .05 therefore we retain the null hypothesis and reject the alternate hypothesis.

This simply means that there is no relationship between mode of payment for surgery and psychological distress; whether the surgery is free or not, does not contribute to psychological distress.

Hypothesis 4

H_0: There is no statistically significant relationship between previous eye surgery and psychological distress.

H_1: There is a statistically significant relationship between previous eye surgery and psychological distress.

A chi-square test of independence was performed to examine the relationship between previous eye surgery and psychological distress. From Table 16 above, Chi -Square tests showed a Pearson chi -square value of 5.289

at 1 degree of freedom with a p-value = .021 . That is: *X2* (1df) = 5.289 (P =.021). This means that we reject the null hypothesis and accept the alternative hypothesis.

The phi value was -.183 and the significance level of p = .021 means that there is a negligible relationship between previous eye surgery and psychological distress in terms of effect size according to Cohen (1988). It simply means that having had previous eye surgery decreases your risk of having psychological distress and not having a previous eye surgery experience increases your chances of being psychologically distressed.

Hypothesis 5

H_0: There is no statistically significant relationship between waiting time and psychological distress.

H_1: There is a statistically significant relationship between waiting time and psychological distress.

A chi-square test of independence was performed to examine the relationship between waiting time and psychological distress. Furthermore, the effect size was also determined using the Phi value. From Table 16, Chi-Square tests showed a Pearson chi-square value of 12.470 at 1 degree of freedom with a p-value <.05. That is: X2 (1df) = 12.470 (P <. 05). This means that there is a statistical significance between waiting time and psychological distress. This value is lower than the alpha value of .05 therefore we reject the null hypothesis and accept the alternate hypothesis.

The phi value was -.281 and the significance level <.05 and this means that there is a weak, negative association between the variables with respect to effect size and this is significant because p<.05. Based on the result of the study,

waiting time is inversely proportional to psychological distress. The more patients wait, the less psychological distress they experience (Φ=-.281, p<.05).

Discussion

Overall Psychological Distress

Psychological distress is expressed in so many ways including depression, anxiety, stress, fear of surgery, inadequate knowledge about the procedure, fear of the outcome of surgery, death and many other factors. All these factors combined can result in either a low, moderate or high psychological distress. From literature earlier reviewed, the range of overall psychological distress was between 25.4% and 89.1%. The prevalence of psychological distress among pre-surgical cataract patients in this current study was 73.4% which is relatively high but falls within what has been observed from literature. This shows that generally, psychological distress exists among pre-surgical cataract patients, and this is evident from the current study. Three constructs of psychological distress namely depression, anxiety and stress combined were employed in this study and this could be one of the reasons why a high prevalence was obtained. Most of the other studies only utilized either one or two constructs but rarely three or more.

The prevalence obtained in this current study seems to agree with the study done in India by Manhas et al (2018) where the calculated prevalence of overall psychological distress was 69.4% and another one by Berle et al. (2017) where the observed prevalence was 56.6%. However, the study by Marback et al. (2007) in Brazil showed a much higher prevalence of 89.1% for psychological distress among pre-surgical cataract patients but two studies done

in Nigeria by Okudo et al. (2021) and Coker et al. (2010) had a rather low incidence of psychological distress of 25.4% and 42.5% respectively.

The difference in psychological distress prevalence across Brazil, Vietnam, India and Nigeria can be attributed to cultural differences (Asia, Africa and South America), sample size and constructs of psychological distress peculiar to each study.

Prevalence of Depression Among Pre-surgical cataract patients

This current study observed the prevalence of depression among pre-surgical cataract patients to be 37.3%. Literature reviewed has showed that the prevalence of depression in this population ranges from 23% to 87.4%. The prevalence obtained in the current study lies within this range, albeit, in the mid-range. This prevalence obtained is similar to a study in Iran (Samarai and Aidenlou, 2016) which showed a slightly higher prevalence of 45.7% although three other studies have shown a slightly lower prevalence of depression; Zheng et al. (2017) et al. (2009) and Palagyi et al. (2016) had 23%, 26% and 28.6% in their respective studies. Interestingly, a recent study in India by Kumar et al. (2022) showed a high prevalence of 87.4%.

Using the Cognitive Theory of Depression as a framework, the reason behind the low to moderate finding in this current study could thus be explained; Prior to surgery, individuals may have had unfavourable automatic thoughts regarding the possible results of the procedure. They may have been concerned about complications, eyesight loss, or the procedure going wrong. Patients may concentrate on the negative features of the procedure (such as the danger and discomfort) and believe that the cataracts have significantly compromised their vision and quality of life. Individuals with pre-existing negative schemas about

medical procedures or health issues may be more prone to experiencing depression before cataract surgery. Some patients may feel a lack of control over the surgery's outcome and feel helpless about the situation, leading to heightened depression.

Prevalence of Anxiety among Pre-surgical cataract patients

This study observed the prevalence of anxiety to be 64.9% among pre-surgical cataract patients. From literature, the range of prevalence of anxiety among this population is between 18.4% and 89.9%. This shows a very wide range of anxiety exhibited among different groups of pre-surgical cataract patients awaiting surgery all over the world. The prevalence obtained in this current study falls within a moderately high region with respect to what is known from literature. The high prevalence is comparable to a study by Oymaagaclıo (2019), which found that 72.0% of patients scheduled for cataract surgery have psychological distress. However, Kumar et al (2022) and Ramadhan et al (2021) had slightly lower prevalence rates of 57.1% and 53.7% respectively. These rates are still close enough to what was observed in the current study. Haspari et al (2019) observed a much higher prevalence (77.8%) compared to the current study. And this could be because their study involved pre-surgical cataract patients who were 50 years and older and literature suggests that the older people are, the more anxious they become (Salgado-Canseco et al., 2016).

However, Anuja, Devi, Sequira, Rao & Pai (2014) in their study of pre-surgical patients concluded that 88.9% in their experimental group as well as 92.6% in the control group had appreciable levels of anxiety as they awaited surgery. This abnormally high prevalence of anxiety could be due to the fact that anxiety levels were measured on the day of surgery. According to Guo et al.

(2012), the operation day is considered the most threatening moment of the life of the patient. Therefore, anxiety levels are extremely heightened. Comparatively, the prevalence of anxiety in the present study was relatively lower because anxiety was measured for participants who had varied waiting times for surgery (ranging between one day and three months).

Conversely, Konjevoda (2021) found that 18.4% of patients who presented at a hospital in India were anxious. This low prevalence could be due to the self-designed questionnaires used as well as the sampling technique employed.

Prevalence of Stress among pre-surgical cataract patients

The prevalence obtained in this current study was 24.1% which is lower than what the previous three studies observed but identical to Marback et al. (2007) who found the stress level to be 26.4%. The other two studies Fagerstrom (1993) and Marback et al. (2012) found theirs to be 33% and 40.6% respectively. The difference could be attributed to different sample sizes, sample characteristics and geographical variability. People in different places react to stress in different ways. Also, this shows that stress level among pre-surgical cataract patients is generally low and may also be one of the reasons why a lot of studies have not been done with respect to stress and its influence on pre-surgical cataract patients.

Age and Psychological Distress

The current study showed a significant relationship between age and psychological distress and this agrees with what pertains in literature. Oymaagaclıo (2019), Chen et al. (2020) and Salgado-Canseco et al. (2016) all seem to agree that there is a significant, positive relationship between age and

psychological distress among pre-surgical cataract patients. Higher levels of psychological distress are more common in older people for varied reasons. First of all, comorbidities and frailty weaken older people's physiological reserves to withstand surgery, which could account for this link (Basak et al., 2015; Lim et al., 2020). They have reduced or limited coping mechanisms and social support as they grow older and this acts as a major concern and source of worry. Also, older patients may have previous history of surgeries and negative experiences from previous surgeries may impact their psychological health.

Gender and Psychological Distress

Several studies suggest that in general, females are more likely to experience preoperative anxiety and depression as opposed to men (Ezkin et al., 2017; Fathi et al., 2014, Jafar & Khan, 2009; Mavridou et al., 2013; Perks, Chakravarti & Manninen, 2009; Schoevers et al., 2003; Yilmaz et al., 2012). This is with respect to the general surgical population.

This current study showed that there was no relationship between gender and psychological distress among pre-surgical cataract patients which is in total agreement with what Samari & Aidenlou (2016) found. On the contrary, several studies from literature suggests that females are more likely to experience psychological distress prior to cataract surgery (Mitsonins et al., 2006; Pijnenborg, 2009). More recent studies by Deilami et al. (2021) and Oymaagaclıo (2019) as well as Obuchowska & Konopinska (2021) also emphasise that in comparison to men, women are more likely to experience psychological distress before cataract surgery. Socio-cultural role of women in Ghana compared to those of the rest of the world could be a reason for this

difference in observation. The variation in instruments used in measuring psychological distress could also be a factor.

Mode of payment for surgery and Psychological Distress

One may argue that patients are heavily burdened by their lack of financial security (Xiang et al., 2019) but this is not the case according to the results of the current study. In the current study, we found that there is no relationship between the mode of payment for surgery and psychological distress which means that whether the client is paying for the surgery, or it is free, it does not affect their mental health. This finding seems to align with Dhaliwal and Gupta (2007) in their study where participants ranked cost as the least in terms of their major source of worry regarding their impending cataract surgery. Kessy & Lewallen (2007) also in their study, agree that cost was not a major barrier to the uptake of cataract surgery.

Other studies seem to contradict our findings though. Muhammad and his colleagues (2017), Snellingen et al. (1998) and Gyasi et al (2007) strongly believe that the cost of surgery is a barrier to the uptake of cataract surgery and this invariably leads to high psychological distress among patients awaiting cataract surgery.

There is evidence that posits that making surgery free of charge does not significantly increase the number of people willing to undergo cataract operation in Africa (Geneau, Massae, Courtright & Lewallen (2008) and by extension, Ghana, therefore this can best explain our finding.

Previous Eye Surgery and Psychological Distress

The result from this current study shows that there is a relationship between previous cataract surgery and psychological distress but the difference is almost

negligible according to effect size. This finding correlates with several studies including Adatia et al., 2015; Akoglu, Celik & Inci, 2021; Ługowska et al., 2020; Mitsonis et al., 2006; Nijkamp et al., 2004, Yu et al., 2016 and they have all shown that there is a significantly higher psychological distress among those operating their eyes for the first time as compared to those having an operation for their second eye. According to Shi, Yuan, and Zee (2019) their comprehensive review and meta-analysis proved that second eye surgery significantly reduced psychological distress values. This means that those who have had previous eye surgery did not experience high psychological distress.

Although it seems that psychological distress before surgery is unavoidable, knowledge gathered from prior treatments may assist to lessen it. This observation from the current study may be explained by variables including having successfully completed a similar surgical treatment in the past, being more accustomed to the surgical process and expectations, and possibly developing confidence in surgeons and the outcome. It is therefore conceivable that having had previous eye surgery could allay worries or uncertainties regarding an impending one. The anxiety before the procedure on the second eye is greatly lessened when the previous experience of eye surgery is favourable (Nijkamp et al., 2002).

Waiting time and Psychological Distress

The findings from the current study indicate that the longer patients wait for surgery, the less psychological distress they encounter. This is not in agreement with what the literature suggests. Literature suggests that the longer patients wait for surgery, the more psychologically distressed they become

(Ebirim & Tobin, 2010; Freeman et al, 2009; Hodge et al., 2017; Obuchowska & Konopinska, 2021).

The results from this current study are in stark contrast to those from the studies mentioned above. A plausible rationale for the disparity could be that extended waiting periods offer patients additional opportunity to adjust and develop coping mechanisms/support and therefore potentially mitigating psychological distress as the surgical procedure draws near. Also, some of the patients waiting for their turn for surgery may have contacted others who had earlier undergone their own cataract surgery and may have obtained positive feedback, therefore reducing psychological distress.

Chapter Summary

The study found that out of 158 participants, 73.4% of them experienced various levels of psychological distress. Among the three sub-scales of psychological distress, anxiety was the most prevalent (64.9%). Hypothesis was tested using chi-square. There was a significant relationship between age, previous eye surgery and psychological distress. However, it was also observed that psychological distress is not gender specific, contrary to findings from reviewed literature. Also, there was no statistically significant relationship between mode of payment for surgery and psychological distress.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Overview

A tertiary hospital's pre-surgical cataract patients were the subject of this study to measure their psychological discomfort. The study explicitly aimed to gauge these participants' depression, anxiety, and stress levels as indicators of psychological discomfort. Also, the relationship between age, gender, mode of payment for surgery, previous eye surgery and waiting time and psychological distress was explored.

The study was conducted at CCTH and it engaged 158 participants. The DASS-21 was used to quantitatively assess pre-surgical patients and statistical tools from SPSS was also employed for data analysis. The study was descriptive as well as correlational.

Summary of Key Findings

These are the main conclusions derived from the study's findings:

1. There was a moderately high prevalence of psychological distress among pre-surgical cataract patients (73.4%).
2. The prevalence of anxiety (64.9%) was the highest. This was followed by that of depression (36.7%) and finally stress (24.1%).

The commonest depression symptom was "I was unable to become enthusiastic about anything" (M=1.64, SD=.824) and the commonest anxiety symptom was "I felt scared without any good reason" (M=2.34, SD=1.086). Finally, the commonest stress symptom was "I found it difficult to relax". (M=1.83, SD=.992).

3. There was a significant relationship between age and psychological distress and this relationship is strong according to the effect size.
4. There was no statistical relationship between gender and psychological distress. This also means that psychological distress is not gender specific.
5. There was no statistical relationship between mode of payment for surgery and psychological distress.
6. There was a statistically significant relationship between previous eye surgery and psychological distress but this relationship is negligible according to the effect size.
7. There was a statistically significant relationship between waiting time and psychological distress but this relationship is weak and negative according to the effect size.

Conclusions

In conclusion this study found out that overall, pre-surgical cataract patients experience high levels of psychological distress. More specifically, they experience anxiety the most, followed by depression and then stress. The most common anxiety complaint of "I felt scared without good reason" clearly shows that participants fear cataract surgery and that, measures should be put in place to assuage this situation. Additionally, the most common depression complaint of "I was unable to become enthusiastic about anything" which was closely followed by "I felt sad and depressed" also suggests that the feeling of depression is inevitable when preparing for cataract surgery. Finally, the commonest stress symptom was "I found it difficult to relax" which suggests that relaxation exercises can be taught by clinical psychologists and practiced by

pre-surgical cataract patients to help them relax. Thus, this study emphasizes the significance of clinical health psychologists. and the vital role they need to play when preparing patients for cataract surgery, which is one of the commonest surgeries done worldwide and particularly, in Ghana.

According to the results of the study, the older one gets, the higher the level of psychological distress that will be experienced but then gender had nothing to do with psychological distress. Surprisingly, it was realised from the study that finances had no bearing on psychological distress. A more obvious finding was that patients who have had previous eye surgery tended to have less psychological distress for their second eye surgery. Yet, another surprise finding was that pre-surgical cataract patients became less distressed psychologically the longer they waited for surgery and this could be due to the fact that other patients/participants who had undergone their own surgeries earlier gave positive feedback or that, they developed better coping mechanisms while waiting for surgery. However, this relationship is weak.

Finally, there is paucity of information with respect to stress among pre-surgical cataract patients in Ghana and this study helps fill that gap. This study can therefore serve as a guide for eye care practitioners (particularly eye surgeons) and clinical psychologists when co-managing pre-surgical cataract patients.

Recommendations

Based on the study conducted, a few recommendations have been made to support pre-surgical cataract patients while they prepare for surgery.

1. Clinical Health Psychologists should be involved in pre-operative education to psyco-educate patients on cataract surgery, especially

patients who are having surgery for the first time and this can help reduce psychological distress. Most surgeries do not involve interventions from clinical health psychologists. As per research, active psychological assistance plays a significant influence, particularly in elderly patients undergoing ophthalmic (eye) surgery. (Mendes, Martins & Fernandes, 2019). A study by Parveen (2016) shows a significant, positive relationship between education before surgery and anxiety decreasing in cataract surgery patients.

2. A lot of patients showed up for the free cataract surgeries (N=69, 43.7%) and out of this number, 68.12% of them were from the rural areas. Therefore, if possible, the government should make cataract surgeries free to increase the uptake of these surgeries, especially for those in the rural areas.
3. Ophthalmologists-in-charge should ensure that all pre-surgical cataract patients receive psychological counselling regularly from counselling/clinical psychology units. This will help reduce the prevalence/burden of psychological distress.
4. Finally, Clinical Health Psychologists should organise group therapy for pre-surgical cataract patients, and this will help further reduce their levels of psychological distress, especially anxiety.

Suggestions for further studies

Based on the findings of the research, the following suggestions for further study have been made:

1. It is recommended that levels of psychological distress be assessed pre- and post-operatively. This will help determine the effectiveness of a psychological consult before cataract surgery.
2. Further studies should be conducted on the possible/specific factors such as fear of death, blindness and other complications of surgery that lead to increased psychological distress among pre-surgical cataract patients. This will help clinical health psychologists to address specific problems or know the focus of a group therapy for such patients. Group therapy means treating a number of patients at the same time, together.
3. Also, a comparative study of psychological distress among cataract patients who are not ready for cataract surgery and those preparing for cataract surgery is recommended; an experimental and control group. This will help us know the true state of psychological distress among cataract patients in general.
4. A study that correlates psychological distress with the different types of cataracts is also highly recommended. For example, patients with traumatic cataract (cataract as a result of trauma to the eye) may have different psychological distress levels from those with senile cataract (cataract as a result of aging).
5. Furthermore, it is recommended that an objective measure of participants visual acuity (level of vision) be done to investigate if there is a correlation between vision (good or bad) and psychological distress.
6. Lastly, this study should be replicated in the other Teaching Hospitals in Ghana for national representation.

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APPENDICES

APPENDIX A

INSTRUMENT FOR DATA COLLECTION

DEPRESSION, ANXIETY & STRESS QUESTIONNAIRE (DASS)

This questionnaire is in two parts (**PART ONE** AND **PART TWO**). Part one will require you to provide some personal information by ticking the appropriate box. You may decide not to answer any question you are not comfortable with.

PART ONE: DEMOGRAPHICS

1. **Gender:** Male ☐ Female ☐
2. **Age:** 18-30 ☐ 31- 40 ☐ 41-50 ☐ 51-60 ☐ 61-69 ☐ 70+ ☐
3. **Educational level:** Primary ☐ Secondary ☐ Tertiary ☐ Illiterate ☐
4. **Residence:** Urban ☐ Rural ☐
5. **Employment status:** Employed ☐ Unemployed ☐ Student ☐ Retired ☐
6. **Which of the following best describes your income range monthly?**

   0-999 GHS ☐ 1000-3999 GHS ☐ 4000-5999 GHS ☐ 6000-9999 GHS ☐ 10,000 GHS or more ☐ Prefer not to say ☐
7. **Marital status:** Single ☐ Married ☐ Widow/Widower ☐ Separated/Divorced ☐
8. **How are you paying for the surgery?** Insurance (NHIS) ☐ Private Insurance ☐ Cash ☐
9. **Have you previously had an eye surgery before? Kindly circle one.** Yes ☐ No ☐
10. **When are you due for the surgery?**

    In a weeks' time ☐ In two weeks' time ☐ In three weeks' time ☐ In a months' time ☐ Next two months ☐ Next three months ☐

    Other (please indicate) .....

PART TWO:

The DASS Scale is a self-report instrument designed to measure the three related negative emotional states of depression, anxiety and tension/stress. This questionnaire

Please read each statement and choose a category that indicates how much the statement applied to you **over the past week**. There are no right or wrong answers. Do not spend too much time on any statement. The rating scale is as follows:

ALMOST NEVER: Did not apply to me at all

OFTEN: Applied to me to some degree, or some of the time

VERY OFTEN: Applied to me to a considerable degree, or a good part of time

ALMOST ALWAYS: Applied to me very much, or most of the time

1

	Statement	ALMOST NEVER	OFTEN	VERY OFTEN	ALMOST ALWAYS
1	I couldn't seem to have any positive feeling at all				
2	I felt that I had nothing to look forward to				
3	I felt sad and depressed				
4	I felt that I had lost interest in just about everything				
5	I couldn't seem to get any enjoyment out of the things I did				
6	I was unable to become enthusiastic about anything				
7	I could see nothing in the future to be hopeful about				
8	I experienced breathing difficulty (eg, excessively rapid breathing, breathlessness in the absence of physical exertion)				
9	I was worried about situations in which I might panic and disgrace myself				
10	I perspired noticeably (e.g, hands sweaty) in the absence of high temperatures or physical exertion				
11	I felt scared without any good reason				
12	I was aware of the action of my heart in the absence of physical exertion (e.g, sense of heart rate increase, heart missing a beat)				
13	I felt terrified				
14	I experienced trembling (eg, in the hands)				
15	I found myself getting upset by quite trivial things				
16	I tended to over-react to situations				
17	I found it difficult to relax				
18	I found myself getting upset rather easily				
19	I found myself getting impatient when I was delayed in any way (e.g, in a queue, traffic lights, being kept waiting)				
20	I found it difficult to calm down after getting angry				
21	I found that I was short-tempered				

2

APPENDIX B

INFORMED CONSENT FORM

INFORMED CONSENT FORM

TITLE: Psychological Distress Among Pre-Surgical Cataract Patients in the Cape Coast Metropolis

Principal Investigator: EMMANUEL EKOW AMPIAH

Address: Department of Education and Psychology, Faculty of Educational Foundations University of Cape Coast.

General Information about Research

There is always some level of psychological distress before cataract surgery. This study will primarily focus on depression, anxiety and stress. The study hopes to improve patient management before cataract surgery in order to provide better service, motivate higher compliance rates, and create an improved quality of life, including reductions in associated anxiety, stress and depression. You will be required to kindly fill out this consent form and answer a few questions found on a separate questionnaire which will be supplied to you.

Procedures

To find answers to some of these questions, we invite you to take part in this research project. If you accept, you will be required to:

Fill out a questionnaire which will be provided and collected by Emmanuel Ekow Ampiah

You are being invited to take part in this research because you belong to the category of a pre-surgical cataract patient

In the follow up questionnaire, you will be asked questions that will measure your level of depression, stress and anxiety prior to the surgical procedure.

If you do not wish to answer any of the questions included in the questionnaire, you are permitted to skip them and move on to the next question. After filling the questionnaire form, it will be taken and processed.

The information recorded is considered confidential, and no one else except Emmanuel Ekow Ampiah will have access to your information. Your personal participation in the research will be 8-10 minutes in total to fill the questionnaire.

Possible Risks and Discomforts

The data collection will be done quickly to avoid any delays.

Your rights as a Participant

This research has been reviewed and approved by the Institutional Review Board of University of Cape Coast (UCCIRB). If you have any questions about your rights as a research participant, you can contact the Administrator at the IRB Office between the hours of 8:00 am and 4:30 p.m. through the phones lines 0332133172 and 0244207814 or email address: irb@ucc.edu.gh.

VOLUNTEER AGREEMENT

The above document describing the benefits, risks and procedures for the research titled PSYCHOLOGICAL DISTRESS AMONG PRE-SURGICAL CATARACT PATIENTS IN THE CAPE COAST METROPOLIS has been read and explained to me. I have been given an opportunity to have any questions about the research answered to my satisfaction. I agree to participate as a volunteer.

_____ _____

Date Name and signature or thumbprint of volunteer

If volunteers cannot read the form themselves, a witness must sign here:

I was present while the benefits, risks and procedures were read to the volunteer. All questions were answered and the volunteer has agreed to take part in the research.

_____ _____

Date Name and signature of witness

I certify that the nature and purpose, the potential benefits, and possible risks associated with participating in this research have been explained to the above individual.

_____ _____

Date

Possible Benefits

By participating in this research, we shall have a general knowledge of depression, anxiety and stress levels that pre surgical cataract patients have.

The results of this research will help validate the role of clinical health psychologists before surgical interventions involving cataracts. Also, it will help eye care givers to better understand the emotional aspect of patients wellbeing and therefore, take better care of pre surgical patients before and even after surgery.

Alternatives to Participation

Not Applicable.

Confidentiality

We will protect information about you to the best of our ability. You will not be named in any reports or write up. Data generated will be encrypted and kept in maximum confidentiality. After the research, data will be securely kept

Compensation

There will be no refreshment for participants

Additional Cost

There will be no additional costs for the participants to bear

Staying in the Research

Not Applicable

Voluntary Participation and Right to Leave the Research

Participation in this research is purely voluntary and you reserve the right to withdraw consent now or at any point during this research.

Termination of Participation by the Researcher

Your participation might be terminated if you decide not to proceed with the cataract surgery

Contacts for Additional Information

For any information pertaining to this research or any injury inflicted by this research contact:

The Principal Investigator

Emmanuel Ekow Ampiah

Mobile: +233243973363

Email: ampiahee@gmail.com

APPENDIX C

ETHICAL CLEARANCE FORM FROM UCC

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
ETHICAL REVIEW BOARD

UNIVERSITY POST OFFIC
CAPE COAST, GHANA

Our Ref.: CES/ERB/ucc/edu/v5/21-95

Date: 24th September

Your Ref: ....

Chairman, CES-ERB
Prof. J. A. Omotosho
jomotosho@ucc.edu.gh
0243784739

Vice-Chairman, CES-ERB
Prof. K. Edjah
kedjah@ucc.edu.gh
0244742357

Secretary, CES-ERB
Prof. Linda Dzama Forde
lforde@ucc.edu.gh
0244786680

Dear Sir/Madam,

ETHICAL REQUIREMENTS CLEARANCE FOR RESEARCH STU

The bearer, Emmanuel E. Ampah, Reg. No. EF/CHP/19/001 M.Phil. / ~~Ph.D.~~ student in the Department of Education and Psychology .... in the College of Education S University of Cape Coast, Cape Coast, Ghana. He / ~~She~~ wishes to undertake a research study on the topic:

Psychological distress among pre-surgical cataract patients.

The Ethical Review Board (ERB) of the College of Education Studi (CES) has assessed his/~~her~~ proposal and confirm that the proposal satisfies the College's ethical requirements for the conduct of the study.

In view of the above, the researcher has been cleared and given appr to commence his/~~her~~ study. The ERB would be grateful if you woul give him/~~her~~ the necessary assistance to facilitate the conduct of the research.

Thank you.
Yours faithfully,

Prof. Linda Dzama Forde
(Secretary, CES-ERB)

APPENDIX D

ETHICAL CLEARANCE FORM FROM CCTH

In case of reply the reference number and the date of this Letter should be quoted

P. O. Box CT.1363
Cape Coast
CC-071-9967
Tel: 03321-34010-14
Fax: 03321-34016
Website:
www.ccthghana.org
email:
info@ccthghana.com

Our Ref.: CCTH

Your Ref.:

16th August, 2021

Dr. Emmanuel Ekow Ampiah
Department Of Education and Psychology
College Of Education Studies, UCC
Cape Coast

Dear Sir,

ETHICAL CLEARANCE – REF: CCTHERC/EC/2021/061

The Cape Coast Teaching Hospital Ethical Review Committee (CCTHERC) has reviewed your research protocol titled, "**Psychological Distress Among Pre-Surgical Cataract Patients**" which was submitted for Ethical Clearance. The ERC is glad to inform you that you have been granted provisional approval for implementation of your research protocol.

The CCTHERC requires that you submit periodic review of the protocol and a final full review to the ERC on completion of the research. The CCTHERC may observe or cause to be observed procedures and records of the research during and after implementation.

Please note that any modification of the project must be submitted to the CCTHERC for review and approval before its implementation.

You are required to report all serious adverse events related to this study to the CCTHERC within ten (10) days in writing. Also note that you are to submit a copy of your final report to the CCTHERC Office.

Always quote the protocol identification number in all future correspondence with us in relation to this protocol.

Yours sincerely,

Prof. Ganiyu Rahman
Chairman, ERC

CCTH ETHICAL REVIEW - REF: CCTHERC/EC/2021/061

Research Title	Psychological Distress Among Pre-Surgical Cataract Patients
Principal Investigator	Dr. Emmanuel Ekow Ampiah
Recommendation(s)	a. Kindly mention the types of PD in your background as you have stated in your research question. b. Explain your research methodology c. Indicate your source of questionnaire d. Kindly provide clear benefits of this study to the care of cataract patients e. Indicate your sample size and duration of the research
Conclusion	Contingent Approval

APPENDIX E

INTRODUCTORY LETTER

UNIVERSITY OF CAPE COAST
COLLEGE OF EDUCATION STUDIES
FACULTY OF EDUCATIONAL FOUNDATIONS
DEPARTMENT OF EDUCATION AND PSYCHOLOGY

Telephone: 0332091697
Email:dep@ucc.edu.gh

UNIVERSITY POST OFFICE
CAPE COAST, GHANA

Our Ref:

Your Ref:

17th February, 2021

TO WHOM IT MAY CONCERN

Dear Sir/Madam,

THESIS WORK
LETTER OF INTRODUCTION
MR. EMMANUEL EKOW AMPIAH

We introduce to you Mr. Ampiah, a student from the University of Cape Coast, Department of Education and Psychology. He is pursuing a Master of Philosophy degree in Clinical Health Psychology and he is currently at the thesis stage.

Mr. Ampiah is researching on the topic: "**PSYCHOLOGICAL DISTRESS AMONG PRE-SURGICAL CATARACT PATIENTS.**"

He has opted to collect or gather data at your institution/establishment for his Thesis work. We would be most grateful if you could provide him the opportunity and assistance for the study. Any information provided would be treated strictly as confidential.

We sincerely appreciate your co-operation and assistance in this direction.

Thank you.

Yours faithfully,

Ama A. Ocran (Ms.)
Principal Administrative Assistant
For: **HEAD**