UNIVERSITY OF CAPE COAST

PSYCHOSOCIAL PREDICTORS OF RECURRENCE OF BIPOLAR DISORDER IN TWO PSYCHIATRIC HOSPITALS IN GHANA

BY

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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

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

Principal Supervisor's Signature: ……Date: ……..……...

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Co-Supervisor's Signature: …… Date: ……...….

Name: ……

ABSTRACT

In Ghana, about 13 % of the adult population is estimated to be affected by mental health disorders of varying forms of which bipolar is inclusive. Bipolar is a grave and long term mental health problem marked by recurring episodes of mania /hypomania and depression. This study therefore sought to determine the psychosocial factors influencing the recurrence bipolar disorder among patients in Ankaful Psychiatric Hospital and Accra Psychiatric Hospital. Specifically, the sought to: evaluate the role of emotion regulation in predicting recurrence of bipolar disorder, explore the knowledge of patients on interpersonal communication and how it predicts recurrence of bipolar disorder, determine the relationship between stress and rate of recurrence of bipolar disorder and investigate the impact of social support as a predictor of recurrence of bipolar disorder. Employing a retrospective and cross-sectional survey design, data was conveniently collected from 217 participants. Participants were administered measures of social support (Multidimensional Scale of Perceived Social Support), emotion regulation (Difficulties of Emotion Regulation Scale), interpersonal communication (Interpersonal Communication Skills Inventory), and stress (Perceived Stress Scale). Data was evaluated using univariate logistic regression and bivariate analysis as well as through the computation of frequencies, and percentages. The study revealed that patients who had high stress levels, poor interpersonal communication skills and high difficulty in regulating their emotions had a higher rate of recurrence. In addition, it was found out that a staggering majority of 93% of the respondents had good support system in comparison to just 7% who had poor support. Based on these findings, the study concluded that psychosocial stressors played a major role in predicting recurrence and therefore much attention should be given to it just like the psychopharmacological treatment. Psychoeducation and psychotherapy should be aimed at helping patients gain mastery of regulating their emotions, learn adaptive ways of coping with stress, increase knowledge on interpersonal communication and keep encouraging strong social support systems in a bid to reduce incidence of recurrence of bipolar disorder.

KEY WORDS

Bipolar disorder

Emotion regulation

Interpersonal communication

Psychosocial

Recurrence

Social support

Stress

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DEDICATION

In memory of my late mother, the beautiful Elizabeth Amponsah Arthur, the sweetest thing that ever happened to me. OB I know you are smiling down on me from heaven saying everything will be okay.

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CHAPTER ONE

INTRODUCTION

Bipolar Disorder (BD) is a mental illness marked by periods of sadness and periods of great elation, as well as reduced sleep needs, poor decision-making, and/or psychotic symptoms (Anderson, Haddad, & Scott, 2012; American Psychiatric Association, 2013). Despite treatment, outcome is variable, with many individuals experiencing a relapsing-remitting course and impaired functioning (Gitlin & Miklowitz, 2017). To improve treatments, there is a major need to understand the psychosocial mechanisms that may contribute to the course bipolar disorder.

Although, psychosocial resources are vital to every individual (Falcon et al. 2009), they are particularly important to people experiencing negative or adverse life events (Burns and Machin 2013; Navarro-Abal et al. 2018). Quite a number of studies have demonstrated convincingly that social support is beneficial to health among people facing stressful life events (Burns et al. 2012; Gjesfeld et al. 2010; Lazarus and Folkman 1984). Further, recovery from mental health problems has been found to be deep rooted in psychosocial treatment of working with the affected individual (Bengt Karlsson and Borg 2017). Around 2% of the global populace suffers from bipolar disorder types I and II, with another 2% suffering from subthreshold bipolar illness (Merikangas et al., 2011).

Bipolar disorder refers to a group of affective disorders, which together are characterised by depressive and manic or hypomanic episodes. These

disorders include: bipolar disorder type I (depressive and manic episodes: this disorder can be diagnosed on the basis of one manic episode); bipolar disorder type II (depressive and hypomanic episodes); cyclothymic disorder (hypomanic and depressive symptoms that do not meet criteria for depressive episodes); and bipolar disorder not otherwise specified.

For the purpose of this study, both bipolar disorder type I and bipolar disorder type II will be considered as (Phillips & Kupfer, 2013) suggests that they might be better presented as a continuum of affective disorders as there could be a problem in detection of a clear boundary between these disorders.

The intricacy of the relationship between biologic susceptibility, psychosocial factors, psychotherapy, and medication as they connect to progression and results adds to the challenge of identifying these components (psychosocial predictors). The management of bipolar disorder has been biased towards medication adherence for some time as succinctly put by Oppong et al. (2016), "the mental health sector in Ghana hugely adopts the pharmacological method of managing mental illness due to the lack of personnel and resources for psychosocial therapies and rehabilitation". Primarily, this involves the use of medicines, suitably referred to as psychotropic medications in sustaining patients. In Ghana, psychotropic medicines have become the mainstay of therapy.

This research centred on investigating the extent to which psychosocial factors; social support, stress, emotion regulation and interpersonal communication predict recurrence.

Background to the Study

Bipolar disorder (BD) is a psychiatric disorder characterized by periods of mania and depression (American Psychiatric Association, 2013). Bipolar I (BD I) and II (BD II) are defined by a history of phases of elevated mood and a history of major depressive episodes, but BD II is distinguished from BD I by the presence of episodes of hypomania (American Psychiatric Association, 2013). Despite treatment, many individuals with BD experience impaired functioning [Sanchez-Moreno et al., 2009]. BD is associated with high rates of disability, with significant impairment in work, family and social life, beyond the acute phases of the illness (Gitlin, & Miklowitz 2017). These impairments in BD (I and II) persist even after significant mood symptoms have remitted. It is estimated that up to 60% of individuals do not recover completely after episodes (MacQueen, Young, & Joffe, 2001) and only 38% of them achieve functional recovery after a manic phase (Tohen et al.,2000). This means that work productivity and employment may be negatively influenced (Martinez-Aran et al., 2007). Recovery includes not only symptomatic but also functional or premorbid levels of previous psychosocial functionality, and adaptive social relations. The quality of interpersonal relationships is often mentioned as one of the most important outcomes for patients with BD (Michalak et al., 2016), as social impairment is observed in many patients with this disorder (Depp et al., 2010; Mitchell & Young, 2016). Almost half of BD I patients and approximately three quarters of those with BD II will first have an episode of depression (Tondo et al., 2014) and they can be misdiagnosed with unipolar depression (UD). This issue may lead to inadequate treatment (Hirschfeld, 2014), and this may have clinically relevant consequences. In many cases, it is

difficult to distinguish BD from UD, approximately 69% of patients with BD are initially misdiagnosed with UD (Hirschfeld, Lewis, & Vornik, 2003).

Mental disorders are a leading cause of years lived with disability in Ghana, behind iron-deficient anaemia (IHME, 2013). Recent estimates indicate that mental health disorders account for 7.4% of the global disease burden and remain the leading cause of disability worldwide (Becker & Kleinman, 2013; Whiteford, et al., 2015). In low- and middle-income countries, mental disorders are ranked among the ten leading causes of disease burden (Addo, Nonvignon, & Aikins, 2013). In Ghana, estimates based on data from the World Health Organization suggest that approximately 2.1 million people suffer from moderate to severe mental illness, 650,000 of whom are projected to have a severe mental illness (WHO, 2017). Among patients seeking treatment for mental health issues, schizophrenia, substance abuse, and mood disorders are the top three diagnoses, although a large percentage of people receive no specific diagnosis (Nonvignon, 2020).

The re-emergence of bipolar symptoms in a previously recovered client has a devastating consequence on the person, their caregivers and the development of the country as whole (Jan,2014; Lippard & Nemeroff, 2020; Steinkuller, & Rheineck, 2009; Leahy, 2007).

Many people who have had a first episode of bipolar disorders will go on to have one or more relapses of their illness. Furthermore, it has been established that the disease is connected to considerable impairment in functional status in a large number of patients (Duffy et al., 2017; frank, Swartz & Kupfer, 2019; Szentagotai, & David, 2009)

According to published studies, (Elgie & Morselli, 2007; Sanchez-Moreno et al., 2009), bipolar disorder is associated with significant impairment in work, family and social life, beyond the acute phases of the illness. This negative low functioning and disability is high and severely affect patient. Some psychosocial factors that may cause increase rate of relapse in bipolar patients include, work functioning, gender, stigma, lack of interpersonal communication skills, socioeconomic status, level of education, social support, family support, emotional dysregulation and religiosity. The following are some subheadings considered from the prevailing literature of bipolar disorder recurrence.

Due to the chronicity of bipolar disorder, there is significant general disability aggravated by increasing psychosocial impairment that often persists in the face of pharmacotherapy (Fountoulakis et al., 2012). This has led to some contemporary studies suggesting that despite the current advancements in pharmacological treatment, the outcome is unfavorable in a significant proportions of patients (Grunez et al., 2013; Murray et al., 2012; Rosa et al., 2010). This indicates the need for effective and affordable adjunctive psychosocial interventions, tailored to the needs of each individual patient. The efficacy of specific adjunctive psychosocial interventions has been proven not only in short- but also long-term follow-up for some treatments (Miziou et al., 2015). Although, outcomes vary between studies, with most trials focused on clinical variables like recurrence prevention and other aspects such as psychosocial functioning, samples usually focused on patients in remission (Reinares, Sánchez-Moreno, & Fountoulakis, 2014)

There is research to indicating the commonality of psychosocial impairment across the three phases of bipolar disorder (depression, mania and euthymia) although it has been verified that psychosocial functioning in bipolar patients is poorer in depression and hypomania (Malhi, et al., 2007). For example, Gruber (2011) and Owen et al., (2017) discuss how individuals in manic mood states may be impaired in social interactions due to their increased self-esteem or delusions of grandeur, whereas those in depressive episodes may experience a loss of self-esteem and loss of interest to engage in social interactions. They suggested that symptom severity in either state of bipolar disorder can negatively affect communication in its simplest form; between two people. Individuals with bipolar disorder have shown impairment in role-playing scenarios of social interactions relative to healthy comparison participants (Mausbach, et al., 2010; Garcia-Portilla, et al., 2013). In attention studies of emotional stimuli, bipolar participants in manic states have a bias towards positive stimuli and positive emotional cues (Gruber, 2011; Jongen, et al., 2007), whereas participants in depressed states have a bias for negative emotional cues, (Leppänen, 2006; Peckham, McHugh & Otto, 2010).

Non-pharmacologic therapy is critical for avoiding relapse. In a study undertaken by the National Institute of Mental Health, psychotherapies were found to be beneficial in decreasing the likelihood of recurrence in patients with bipolar disease (Vieta,2009). The most evidence-based therapies are cognitive behavioral therapy, psychoeducation, interpersonal and social rhythm therapy, and family-focused therapies (Vieta, 2005; Miklowitz et al., 2007). Many forms of psychotherapy, such as cognitive behavioral therapy,

interpersonal therapy, and dialectical behavioral therapy, as well as multi-family support groups, can be beneficial, according to Miklowitz et al. (2007).

Bipolar disorder (BD) has a long-lasting, progressive, and highly recurring natural history, and the danger of recurrence endures for the rest of one's life (Angst et al., 2003; Perlis et al., 2006). In spite of the evidence that bipolar disorder is occasionally connected to success and artistic creativity (Goodwin and Jamison, 2007; Murray and Johnson, 2010), it is also linked to a high-level anxiety, substance use, suicidality, disability, and unemployment (Goodwin and Jamison, 2007; Murray and Johnson, 2010). (Fajutrao et al., 2009). Bipolar disorder is currently part of the first 20 most disabling diseases globally (Vos et al., 2012), with 20-25 percent of persons having previously attempted suicide (Merikangas et al., 2011).

As a result, avoiding or delaying the start of new episodes is one of the most essential goals in bipolar illness treatment. It is difficult for physicians and researchers to underline the importance of proper maintenance therapy, which includes medication, psychosocial interventions, and lifestyle changes. Despite adequate therapy, long-lasting symptoms and a high risk of recurrence and re-hospitalization characterize the disorder's history

Statement of the Problem

In Ghana, estimates based on data from the World Health Organization suggest that approximately 2.1 million people suffer from moderate to severe mental illness, 650,000 of whom are projected to have a severe mental illness (WHO, 2017).

While it is widely recognized that many people in Ghana prefer non-medical treatment to mental health problems (Ofori-Arra et al., 2018), there is

palpable lack of studies on bipolar disorder and especially the role psychosocial variables play in its recurrence. The psychosocial factors that may play a role in predicting recurrence of bipolar disorder have been seldom studied in Ghana, and understanding how these variables might contribute to recurrence is of essential importance. There is a need to understand how these factors contribute to poor or good outcome in the treatment of bipolar disorder. Thus exploring these psychosocial variables in this population is particularly meaningful for this study. Research on recurrence of bipolar disorder is scarce in Ghana because most researches were on the broad concept of mental health (Read & Doku 2012; Roberts, Mogan, & Asare, 2014; Barke, Nyarko, & Klecha, 2011; Lee et al., 2015; Fournier,2011).

One would have thought that being a disorder that is chronic and debilitating to the individual by severely reducing the quality of life as well as psychosocial function of those affected (Gbadamosi et al., 2022) much studies will be conducted on it.

Read and Doku (2012) reported that just 98 articles on mental health in Ghana were published between 1955 and 2009. They concluded based on their findings that "mental health research in Ghana is restricted in both quantity and quality". This led them to conclude that further research has to be carried out so that treatment can be tailored to suit our sociocultural context. Because of the inadequacy of database on this important aspect of mental health, it has become imperative that studies of this nature are carried out to help guide management of this condition whiles at the same time creating a blueprint for future studies into uncharted areas of mental and emotional health in Ghana. However, in recent times, an increasing number of empirical studies on mental

health services in Ghana have been undertaken. These studies employ both qualitative and quantitative primary data and are largely focused on the gaps in policies, treatment pathways, mental health systems weaknesses and caregivers' experiences (Badu, O'Brien, & Mitchell, 2018).

However, despite this growing literature, there has not been much systematic reviews done on bipolar disorder.

This paper aims to address this gap by determining the influence of social support, interpersonal communication, stress and emotion regulation in the recurrence of bipolar disorder.

The cumulative consequences of relapsing and dispatching episodic mood modifications, which are frequently exacerbated by increased stress levels, have a significant impact on bipolar disorder (Altman et al., 2006; Chang et al., 2016). While mental illnesses are projected to account for 9% of Ghana's disease burden and 16% of the burden among people aged 15 to 59, the true frequency of mental disorders in the overall population has never been investigated (WHO, 2009). According to a recent World Health Organization report (WHO, 2020), 650,000 of Ghana's 21.6 million individuals suffer from an extreme mental disease, with another 2,166, 000 suffering from a restrained to mild mental disorder. The management breach is anticipated to be 98 percent of the overall population with a mental disease.

In spite of this, studies researching the effect psychosocial factors have on bipolar disorder recurrence is relatively lacking and difficult to find as Read and Doku (2012) succinctly stated, "psychiatry in Ghana is neglected in health care and research". There are however, a few anecdotal accounts of people's experiences about bipolar disorder. According to Quality Rights

Ghana (2019), in a report compiled by Amoakwa-Fordjour, the director of the Mental Health Authority (MHA) talked about a recent study that showed that Ghana had a 41% prevalence of psychological problems in different dimensions and that 19% of those in this distress get severe enough to be considered as a mental illness. There is also an anecdotal account of a young man who suffered from bipolar disorder and the role his family played in helping him recover (QualityRights Ghana,2019).

Constant relapse rates have the potential for increased economic and emotional weight on the person, immediate family and the society as a whole. It creates more room for stigmatization and induces a state of emotional, psychological and social isolation of individuals from normal life activities. Psychotic symptoms, reduced functioning, a lower quality of life, and stigmatization are also common among patients (Judd et al., 2005; Michalak et al., 2011).

Again, Salcedo et al. (2016) discovered that psychosocial therapies for bipolar disorder treatment had considerable evidence of efficacy. According to their findings, psychosocial factors "appear to have a major impact on the treatment outcome of bipolar illness, and should be taken into account accordingly".

Purpose of the Study

The purpose of the study is to determine the psychosocial factors influencing the recurrence bipolar disorder among patients in Ankaful Psychiatric Hospital and Accra Psychiatric Hospital.

Specifically, the sought to:

1. evaluate the role of emotion regulation in predicting recurrence of bipolar disorder
2. explore the knowledge of patients on interpersonal communication and how it predicts recurrence of bipolar disorder.
3. determine the relationship between stress and rate of recurrence of bipolar disorder.
4. investigate the impact of social support as a predictor of recurrence of bipolar disorder.

Research Questions

Motivated by the research problem, the researcher was encouraged to ask the following questions to help in the realization of the study objectives.

1. How does emotion regulation predict recurrence of bipolar disorder?
2. How does level of knowledge of interpersonal communication predict recurrence?
3. What is the relationship between stress and rate of bipolar disorder recurrence among patients at the two psychiatric hospitals?
4. What is the impact of social support as a predictor of bipolar disorder recurrence?

Research Hypothesis

H_o: Psychosocial factors will not predict recurrence of bipolar disorder.

H_1: Psychosocial factors will predict recurrence of bipolar disorder.

Significance of the Study

The research's goal was to provide theoretical and empirical evidence to back timely interventions in Ghana's treatment of bipolar disorder. The study was intended to bring relevance to the many already diagnosed bipolar

patients as well as the newly diagnosed patients on the ward and those receiving treatment on Out Patient Department as it will help the health team at the two psychiatric hospitals as well as the various psychiatric wings nationwide to tailor treatment and deliver a more effective recurrence prevention treatment strategy.

The information gathered also sought to prevail upon the Mental Health Authority (MHA) and the Ministry of Health (MOH) to formulate appropriate mental health policies as well as serve as a blueprint for further research into uncharted areas in mental health especially on bipolar disorder, which could aid in identifying promising and innovative therapeutic paths in the future.

Delimitation

The study was confined to two out of the three main psychiatric hospitals in Ghana. This is because they are at the center of mental disease care in Ghana, with many patients being referred to them. These two hospitals also gave timely approval for the research to be carried out in their respective facilities. The study included only patients in remission receiving treatment on Out-Patient Department (OPD) schedule, patients who have had two or more recurrence episodes between the period of 2014 – 2019 and the respondents aged 18-55 years. The variables that were studied included, stress, social support, interpersonal communication and emotion regulation.

Limitations

A couple of limitations of this study were, availability of published studies on bipolar disorder, sampling technique and time constraints. The available published studies conducted specifically on bipolar disorder in

Ghana were insufficient therefore making the majority of the literature upon which the study was conducted culturally biased towards the West. The researcher therefore, had to rely on some anecdotal accounts and the few studies conducted on mental and emotional health in Ghana. The result of this study will help fill in some of the gaps on bipolar disorder literature and serve as a blueprint for further studies in this field as external sources may be culturally biased.

Again, the non- probability sampling technique as compared to the probability sampling does not allow participants to be randomly selected, consequently making statistical inferences about the group difficult. However, due to the nature of this study and the presence of the COVID-19 pandemic, convenient sampling technique was a better fit. Further studies on bipolar disorder can engage the probability sampling technique.

No differentiation was made between the types of bipolar in conducting this study. This makes making inference about the various types not possible. Further studies can be conducted on the individual subtypes for a deeper understanding of each.

Definition of Terms

Bipolar Disorder: a brain disorder that causes changes in a person's mood, energy, and ability to function.

Recurrence: the return of signs and symptoms as part of the natural progress of bipolar disorder.

Remission: the absence of the signs and symptoms of bipolar disorder

Psychosocial: the influence of social factors on an individual's mental health and behavior.

Predictor: a variable that has the probability of causing a change in another variable.

Social support: the perception and actuality that one is cared for, has assistance available from other people and most popularly, that one is part of a network.

Emotion regulation: the ability to modulate emotional experiences or expressions to achieve individual goals and / social adaptation. It also includes the awareness, understanding, and acceptance of one's emotions.

Interpersonal communication: communication with a shared meaning between two people.

Stress: a physical, emotional or psychological event that initiates a feeling of being overwhelmed, worried, or run-down.

Lucid: a period in which a bipolar disorder patient is cognitively and behaviorally adequate to engage in legally binding contracts or associations.

Chapter Disposition

The research is structured into five sections. The introduction is discussed in the first chapter. It consists of the study background, the problem statement, objectives as well as the delimitation, limitation and definition of terminology.

The second chapter touched on the theoretical and empirical literature as well as the conceptual review.

The research method was expressed distinctly in chapter three. It tackled the design of the research, the study area, population, and the sampling procedure. This chapter also looked at the data gathering instrumentation, how data collection processes were carried out, and how the information gathered

was processed and analyzed. The analysis and discussion of the findings are discussed in Chapter four.

The fifth chapter summarized the study's results and highlighted the most important discoveries that resulted from them. Additionally, chapter five provided sound suggestions, conclusion and recommendations relative to the outcome of the research.

CHAPTER TWO

LITERATURE REVIEW

Introduction

This chapter examines secondary sources such as journals, books, and other online sites for studies on the topic psychosocial predictors of recurrence of bipolar disorder. The chapter is further outlined to provide in-depth definition and meanings of key concepts found in the research topic. It also provides an examination of literary works in connection with the research objectives.

Theoretical Review

THE SOCIAL CONSTRUCTIONIST PERSPECTIVE

This theory is based on the pragmatic philosophy and social psychology of James, Dewey, and Mead. This perspective views reality, including social support and the self as social constructions. Social constructions refer to the assumption that people's perceptions about the world do not reflect ultimate reality, instead, people construct theories and concepts about the world that reflect their social context (Dewey, 1997). Applying the constructionist perspective to social support suggests new predictions and emphasis not found in other perspectives. First, this perspective suggests that there may be no clear consensus across individuals or groups as to what constitutes supportive behaviors. Second, it predicts that the self and social world (including social support) are inextricably linked. In other words, the experience of "self" is largely a reflection of how one is viewed by others (Mead, 1934).

Social Cognition

One modern manifestation of social constructionism is social cognition (Barone et aI., 1997), and several authors have applied social-cognitive thought to understanding social support (e.g. Lakey & Drew, 1997; Mankowski & Wyer, 1997; Pierce, Baldwin, & Lydon, 1997; Pierce, & Sarason, 1990). This approach to social support draws heavily from social-cognitive theories of personality and psychopathology (e.g. Beck et al., 1979; Markus, 1977; Lakey & Drew, 1997).

Social-cognitive views of social support are concerned primarily with the perception of support. A major premise is that once a person develops stable beliefs about the supportiveness of others, day-to-day thoughts about social support are shaded to fit these preexisting beliefs. In comparison to those with low levels of perceived support, those with high levels interpret the same behaviors as more supportive, have better memory for supportive behaviors, display greater attention to supportive behaviors, and be able to think about support with greater ease and speed (Baldwin, 1992; Lakey & Drew, 1997; Mankowski & Wyer,1997).

In explaining the mechanism by which social support is related to health, social-cognitive views of social support draw from cognitive models of emotional disorders (e.g. Beck et al., 1979). According to this view, negative thoughts about social relations are thought to overlap with and stimulate negative thoughts about the self which in turn, overlap with and stimulate emotional distress (Baldwin, 1992; Lakey & Cassady. 1990; Pierce, & Sarason, 1990). That is, negative emotion makes negative evaluations of the self and others more accessible (i.e., they come to mind more easily), and such

negative evaluations make negative emotions more accessible (i.e., they are felt more easily and intensely). This view holds that negative thinking alone is sufficient to activate negative emotion and vice versa. Supportive social interaction makes negative thoughts and negative emotion less accessible as well as making positive thoughts and emotions more accessible. For example, there is evidence that perceived support is associated strongly with self-evaluation (Barrera & Li, 1996; Lakey & Cassady, 1990; Maton, 1990) and that priming cognitive representations of different social relations influences self-evaluation and emotion (Baldwin, Carrell, & Lopez, 1990; Baldwin & Sinclair, 1996).

Process Model of Emotion Regulation

James J. Gross. Gross (2001) defines emotion regulation as "all of the conscious and non-conscious strategies we use to increase, maintain, or decrease one or more components of an emotional response." The process of decreasing components of an emotional response is often called downregulation of an emotion, whereas the opposite process is called upregulation.

According to Gross (2001), emotion regulation is concerned with three distinct components of the emotional response namely, the experiential component (i.e., the subjective feeling of the emotion), the behavioral component (i.e., behavioral responses), and the physiological component (i.e., responses, such as heart rate and respiration). Human beings use a wide variety of strategies to influence their level of emotional response for a given type of emotion. On the highest level of abstraction, these strategies can be divided into antecedent-focused strategies and response-focused strategies.

Antecedent-focused strategies are applied to the process preparing for response tendencies before they are fully activated. Response-focused strategies are applied to the activation of the actual emotional response, when an emotion is already underway.

In his process model of emotion regulation, Gross (1998) delineates four different types of antecedent-focused emotion regulation strategies, which can be applied at different points in the process of emotion generation: situation selection, situation modification, attentional deployment, and cognitive change. A fifth strategy, response modulation, is a response-focused strategy.

Situation selection simply means an individual can choose to either avoid a situation or engage in a situation which invariably comes with a resultant emotion. This has been classified as downregulation of emotion (e.g. anger) or upregulation (e.g. excitement). In situation modification, the individual modifies an existing situation so that they can obtain a different level of emotion. The third antecedent-focused emotion regulation strategy attentional deployment, employs a number of psychological strategies like distraction, rumination and thought suppression. Gross and Thompson (2007), noted that distraction involves shifting attention away from or towards a different aspect of a situation other than the situation itself. This strategy refers to shifting your attention away from a stimulus that evokes emotions or toward non-emotional aspects of a situation (Gross, 2013).

The fourth antecedent-focused emotion regulation strategy cognitive change, refers to the process of changing how a person appraises a situation, with the aim to alter its emotional impact. Reappraisal which involves a

reinterpretation of the meaning of an event is a specific form of cognitive change, which is often aimed at downregulating emotion.

The fifth emotion regulation strategy, response modulation, is a response-focused strategy. As opposed to the other four categories, this strategy is applied after the emotion response tendencies have been generated: here, the individual tries to influence the process of response tendencies becoming a behavioral response. It is important to note that all these are aimed at downregulating emotions (e.g. engaging in purposeful physical activity or drug use).

The original process model has since been successively revised and extended. Gross and Thompson (2007, p.16) in one of the reformulation, recognized that "emotion generation is an ongoing process, not a one-shot deal". According to this view, "emotion regulation can also occur in parallel at multiple points in the emotion generative process. Using many forms of emotion regulation might in fact be the modal case" (p. 17). A subsequent update of the process model (Sheppes & Gross, 2011) replaced the notion that emotion regulation is more effective when it is instigated early during emotion generation with the idea that emotion-generative and emotion-regulatory processes compete with one another at earlier or later stages of information processing. The process model has again, recently been extended to explain how emotion regulation unfolds dynamically over time (Gross, 2015).

The extended process model (EPM) of emotion regulation attempts to describe central regulatory stages and links them to psychopathology. At the core of each stage is a central emotion regulation-related decision that needs to be made. Failure to make these decisions can be associated with various forms

of psychopathologies (Gross, 2015). Clinical conditions are not necessarily characterized by difficulties at a single emotion regulation stage; instead, they may implicate failures at multiple stages. Conditions that relate to difficulties in one stage may not be related to failures in another stage.

The extended process model has important implications for clinical assessment because it moves from a categorical description of mental disorders to a transdiagnostic approach (Insel et al., 2010). Application of the extended process model to intervention involves forming treatment protocols that focus on improving the functioning of basic elements associated with various regulatory stages. Recent interventions seem to have advanced in a direction that is premised on the extended process model; emotion regulation therapy (Mennin & Fresco, 2014) and dialectical behavioral therapy (Neacsiu, Bohus, & Linehan, 2013), involves improving basic regulatory elements in specific clinical disorders. The affect regulation training (Berking & Schwarz, 2014) systematically targets basic elements of several regulatory stages across various clinical conditions. Koole and Veenstra (2015) also proposed a new approach (situated cognition approach to emotion regulation) that is premised on the idea that emotion regulation dynamics is the outcome of the interplay between the personality and characteristics of the situation.

Stress Vulnerability Model (Zubin, J., & Spring, B. (1977)

Stress has been recognized as an important contributor to the development and course of psychopathology so much so that a variety of models have featured stress as a primary determinant of disordered functioning (Demke, 2022). Such models suggest that severe enough negative events could precipitate psychological disorders even without reference to

individual psychological or biological characteristics (Goh & Agius, 2010; Toussaint et al., 2016; Sato et al., 2018; Weger & Sandi, 2018; Umeoka et al., 2020; Demke, 2022).

The stress vulnerability model was propounded by Zubin and Spring in 1977. The model explores the interaction between biological factors and stress and how this relationship influences the likelihood of developing a psychiatric disorder. "It is assumed that exogenous and/or endogenous challengers elicit a crisis in all humans, but depending on the intensity of the elicited stress and the threshold for tolerating it (i.e., one's vulnerability), the crisis will either be contained homeostatically or lead to an episode of disorder. Vulnerability and episode stand in a trait–state relation, and markers for each must be provided to distinguish between them", (Zubin & Spring, 1977).

According to the model, biological vulnerability, stress and protective factors are responsible for the development and course of a psychosis. In order for a person to develop a psychiatric disorder, he or she must have some biological or tendency, to that disorder. The actual amount of vulnerability varies from one person to the next, as does the severity of the disorder. An individual's vulnerability is thought to be determined from genetic factors and early biological factors. Jaracz (2008) found that people with bipolar disorder had smaller prefrontal lobes, subgenual prefrontal cortex as well as enlarged amygdala and striatum volume. Again, (Javadapour et al. 2010), found out that functional neuroimaging studies have implicated a number of limbic and paralimbic regions in the pathophysiology of bipolar disorder, where the primary regions included the hippocampus, thalamus, caudate and amygdala. Several studies have highlighted the role genetic vulnerability play in mental

illness and bipolar disorder (Rice ,2010; Tielbeek et al., 2012; Pettersson, Larsson & Lichtenstein, 2016; Cai, Choi, & Fried 2020; Moreno-De-Luca & Martin 2021; Radonjić et al., 2021)

Stress has an impact on vulnerability that can either trigger the onset of the disorder or worsen its course. Stress (life events such as, death of a loved one, birth of a child, strong feelings of anger and resentment etc.) can be thought of as a response to life situations that require the individual to adapt or change. If the person is not capable of adapting to the stress, psychiatric symptoms will develop or worsen. Several studies of stress on physical health largely concluded that stress tend to negatively affect physical health (Kivimäki et al., 2012; Steptoe & Kivimäki, 2013; Dhabhar, 2014; Toussaint et al., 2016; Kivimäki & Steptoe, 2018) and this is no different from mental health studies. It is well-recognized that stressful life events affect vulnerability, onset, and relapse or recurrence of bipolar disorder (Sato et al., 2018). Another study reported that the prevalence of stressful life events in patients with bipolar disorder is higher than that in healthy people (Horesh & Iancu, 2010).

Again, although researchers do not completely understand how stress increases the risk for onset and poorer course of bipolar disorder, knowledge of stress physiology is being studied. Despite this shortcoming, there is some evidence for a causal role of the stress system in the etiology and clinical outcomes of bipolar disorder (Umeoka et al., 2020).

Protective factors reduce the person's biological vulnerability and stress (Menon, Fauth & Easterbrooks, 2020). Important protective factors are prescribed medication and good coping skills like good communication skills

and strong social support system. These factors can lessen symptoms and lower the risk of relapses. Traditionally, positive emotions and thoughts, as well as basic psychological needs of belonging and acceptance has been seen as strong cornerstones of psychological health (Kashdan & Rottenberg 2010). Layous, Chancellor and Lyubomirsky (2014), also found that that positive activities like expressing gratitude, practicing generosity and practices that make people happy, serve as protective factors and this led them to conclude that positive activities when taught to especially the youth can serve as protective factors over the course of their lifetimes. Rackoff and Newman (2020) in a 7year longitudinal study of 1517 participants, the results showed that positive emotions (serving as a protective factor) plays a major role for mental health and that Susceptibility to reduced positive emotions in the context of stress may increase risk for poor mental health outcomes, including anxiety and depressive disorders and low overall levels of positive emotion.

In conclusion, psychiatric disorders have a biological basis, but environmental factors can influence their course over time. The stress-vulnerability model points out that a positive outcome of a psychiatric disorder is more likely if environmental stress is minimized or managed well. Relatives and individuals working together can improve the long-term course of a psychiatric disorder, resulting in a better quality of life for all family members.

Conceptual Base of Study

This section captures the explanations of all the key concepts related to the research topic and provides in-depth meaning to these concepts. The concepts that are believed to be predictors of psychosocial functioning include

bipolar disorder, interpersonal communication, stress as well as social support and emotion regulation.

Mental Disorders

Mental illnesses are conditions that impair an individual's thinking, mood, emotions or behavior (National Alliance on Mental Illness [NAMI], 2020). Furthermore, the American Psychiatric Association (APA) (2018) defines mental diseases as "health situations characterized by major alterations in thought, feeling, or behavior, as well as a combination of these changes." The World Health Organization notes that there are various mental disorders with their different presentations characterized generally by abnormal perceptions, thoughts, emotions, relationship with others and behaviours (WHO, 2019). These disorders include bipolar disorder, depression, schizophrenia, dementia, as well as developmental disorders like autism. Depression is a prevalent mental disease considered a leading source of debility globally and it is characterized by extreme sadness, feelings of guilt/low self-worth, low interest/pleasure, tiredness, poor concentration, and insomnia (WHO, 2019). Again, schizophrenia encompasses distortions in perception, thinking, emotions, behavior, sense of self and language and may present as hallucinations and delusions (APA, 2018; WHO, 2019). Bipolar disease comprises gloomy and manic events with period of normal mood while dementia is a chronic and progressive deterioration of cognitive function beyond expectations associated with normal ageing (WHO, 2019).

Multiple linking causes have been associated with mental illnesses including genetics, lifestyle, traumatic life events, biochemical processes and basic brain structure, and environment (NAMI, 2020). Also, the WHO (2019)

recognizes that the determinants of mental illness may be socio-cultural, economic, environmental or political factors like social protection, working conditions, community support, and standard of living. Nevertheless, an estimated one billion people lived with mental disorders in 2016 alone accounting for 7% and 19% of global burden of disease and all years living with disability (Rehm & Shield, 2019).

Although mental illnesses are treatable and most people living with the conditions are able to live functional lives, limited attention has been given to the prevention and management of these conditions. In fact, in the developing world, low- and middle-income nations, below half (24% and 15% respectively) of people living with mental disorders receive treatment for their condition (Wang et al., 2007). Also, globally, less than two percent of government expenditure on health is used for mental health care (WHO, 2017) However, very severe mental illness, mental, behavioural or emotional disorders significantly impair functionality, interfering with or limiting major life activities (APA, 2018). As a result, mental disorderss have been associated to decreased productivity in grownups (De Graaf et al., 2011) and a lower overall quality of life (Leijdesdorff et al., 2020).

Meaning of Bipolar disorder

Bipolar disorder is a chronic and complex mood disorder that is characterized by an admixture of manic (bipolar mania), hypomanic and depressive (bipolar depression) episodes, with significant subsyndromal symptoms that commonly present between major mood episodes (Grande et al., 2016). Ranked among the leading causes of worldwide disability (Whiteford et al., 2016), bipolar I disorder has been consistently associated

with significant medical and psychiatric comorbidity, premature mortality, high levels of functional disability and reduced quality of life (Blanco et al., 2017). The essential feature of bipolar I disorder requires the occurrence of at least one fully syndromal lifetime manic episode, although depressive episodes are common (American Psychiatric Association, 2013). Bipolar II disorder requires the occurrence of at least one hypomanic episode and one major depressive episode; it is no longer considered a milder form of bipolar disorder as it is associated with considerable time spent depressed and with functional impairment that accompanies mood instability (American Psychiatric Association, 2013). Bipolar disorder with mixed features is a complex presentation in which a mood episode from either the manic or depressive pole is complicated by the presence of subsyndromal but clinically significant symptoms from the opposite pole. Patients with bipolar depression have greater morbidity and mortality than patients with bipolar mania, with depressed patients having a higher risk of suicide, interepisode panic attack and psychosis (Post, 2005).

The WHO indicated that bipolar illness is one of the commonest, extreme, and long-term mental diseases (Boeker, Binder, Hirokawa, Windhorst, & Hirsch, 2009), and it is among the top ten debilitating disorders worldwide. According to the National Institute of Mental Health (2015), "bipolar disorder is a chronic mental illness characterized by fluctuations in mood, energy, activity, and concentration that are very intense".

The bipolar disorder cannot be compared to the normal ups and downs people go through and this is because the period of mood swings or changes is very erratic and extreme in many cases (Thase, 2006). There are varying

degrees of this ailment with respect to the level of severity that constitutes the types of bipolar according to Angst (1998) and these include bipolar I, II, cyclothymia and major depression. The symptoms associated with this illness include inadequate sleep, pressured speech, increased libido, irresponsible behaviour with no care for the consequences and extreme thought disorders. Hirschfeld et al. (2010) indicated that several causes (environmental variables including traumatic life episodes and multiple biochemical pathways) are associated with the ailment. Godwin and Jamesson (2007) attributed the illness to biological issues like genetic and brain malfunction.

Concept of Recurrence

Recurrence is the return or reappearance of a new episode of signs and symptoms of a disease after a period of recovery or remission from the signs and symptoms. It has been claimed that mental problems have a great recurrence rate (Crown et al., 2002; Yonkers, Bruce, Dyck, & Kelly, 2003; Burcusa & Iacono, 2007; Robinson & Sahakian, 2008; Hardeveld, Spijker, De Graaf, Nolen, & Beekman, 2010).

Bipolar disorder is a grave and long-term psychological disease marked by recurring episodes of mania / hypomania and depression. The lifetime prevalence of bipolar disorder I is predicted to be 1.0 percent, and the lifetime prevalence of bipolar disorder II is expected to be 1.1 percent. Bipolar disorder I is marked by episodes of intense excitement and depressed states. Milder mood advancement (hypomania) is alternated with episodes of intense depression in bipolar disorder II.

Recurrence of events can enhance receptivity (sensitivity) to them, as well as cross-sensitize to stress or medications, accelerating disease

development (Post, 2010). Many individuals develop a more malicious, less responsive disease, as well as increased handicap, as they advance down this course (Kapczinski et al., 2008; Post, 2010).

As a result, even during non-episodic times, there seems to be an association between the number of events and mental deficiencies (Lopez-Jaramillo et al., 2010), impaired role performance, and a decrease in quality of life. (Bonnin et al., 2011; MacQueen et al., 2000). There is evidence suggesting that the frequency of prior events increases recurrence possibilities, according to previous epidemiological studies (Gitlin et al., 1995; Kessing et al., 1999, 2004a, b)

Concept of Psychosocial

Psychosocial means "pertaining to the influence of social factors on an individual's mind or behavior, and to the interrelation of behavioral and social factors" (Oxford English Dictionary, 2012). This concept highlights the impact of social elements on human thinking and behavior, as well as the impact of thoughts and behaviors on people's social environments.

In effect, the term "psychosocial" denotes a strong link between psychological and social elements. Emotions and cognitive development, or the ability to learn, perceive, and recall, are examples of psychological elements. The ability to build relationships with others and to understand and obey culturally relevant social standards are two social factors to consider (Loughry & Eyber 2003). The influence of public variables on person's psychological well-being and conduct is described by psychosocial factors, which are extensive and span all elements of life.

"Psychosocial influences, in the context of health research, can be defined as the intercession of the effects of social structural components on a person's wellbeing as accustomed and transformed by the social constructions settings in which they occur" (Martikainen, Bartley, & Lahelma, 2002 as cited in Vizzotto, de Oliveira, Elkis, Cordeiro, & Buchain,2013).

It is therefore important that a critical attention is given to psychosocial factors and how they affect recurrence in bipolar disorder. Knowledge of these factors can help roll out appropriate interventions in caring for such people.

Psychosocial intercessions, according to Loughry & Eyber (2003), aim to impact human growth favorably by tackling the adverse effects of social variables on people's ideas and behavior. They also aim to reduce the harmful consequences of adverse views and behavior on the social setting by promoting activities that encourage positive connections between thinking, behavior, and the social life. Proper psychosocial function refers to the development of the psychosocial self, be it physical, emotional or cognitive. Psychosocial morbidity or dysfunction occurs when the individual's psychological and social characteristics and interaction is thrown into a state of confusion.

Concept of Interpersonal Communication

Communication is a link to humanity thereby involving the deliberate or accidental transfer of meaning. Thus, communication is a characteristic feature that enables one to make intentions known to other people. Interpersonal communication, therefore, is a complex process that can be described in simplified terms as the exchange of messages containing ideas and feelings between a sender and a receiver (Hartley, 1999). It is a face-to-

face communication process, however, Burkill et al. (2000) assert that aside from the message given, it involves the way the message was given with respect to tone of voice, facial expression, gestures and body language. Therefore, it can be deduced that interpersonal communication has to do with the skills or tactics an individual use to send a message to another. In other words, how (techniques) a person communicates the message makes the difference. These techniques are categorized into verbal and non-verbal where they include active listening summarization, stating the obvious and eye contact, body posture respectively (Hayes, 2002). All these indicate that interpersonal communication is an art.

Several reasons have been identified with the relevance of communication thus humans are social beings and live in a world filled with their kind, therefore, interact with each other (Naumovski et al., 2016). In that respect, communication provides the means for people to improve their relationships. Interpersonal communication between two people is therefore said to be effective when elicits the right response from its intended receiver (Guffey& Loewy, 2011).

Meaning of Stress-Vulnerability

In mental health concerns, the stress-vulnerability theory states that each person has an innate susceptibility that is influenced by life experiences and other stressors. This was confirmed by Brietzke et al., (2012) who found that stress interacts with genetic vulnerability to hasten the onset of bipolar illness. The amount of stress and the severity of the vulnerability tendency interact to regulate whether or not the person experiences a stage of psychological ill health.

A rising body of research indicates that mental and social factors play a function in the onset and course of bipolar disorder. Life experiences have been linked to the onset, severity, and duration of both manic and depressive episodes in previous studies (Johnson and Roberts 1995; Johnson and Miller, 1997; Alloy et al., 2005). Stress is part of our everyday life as many people consider it to be a changing event that happens to them as well as how they respond to that event (Shahsavarani et al. 2015). They therefore respond to such events differently according to Vokić and Bogdanić (2007).

Fink (2016) asserts that, the definition of stress varies due to the conditions associated with it; one such definition is Selye's generic definition of "stress as a non-specific response by the body to any demand". Another definition is stress is a consequence of an action or a situation that places a psychosocial demand on a person (Arnetz & Ekman, 2006). In psychosocial sciences, however, Tucker et al. (2008) asserted that, "stress is a feeling of mental pressure and tension" on an individual and therefore could cause mental unbalance. Since stress has a strain on the human body, it often comes with diverse problems with regard to its severity and handling. Thus Sallis (2013) therefore, indicates these problems could result in physical reactions including migraine headache, tension-type headache as well as musculoskeletal disorders. Maton et al. (2010) also associated difficulties in respiration as stress-related problems. Also, prolonged stress could result in high blood pressure, hypertension, heart attack, as well as both heart and brain stroke.

Exposure to trauma has also been linked to psychosocial difficulties such as anger, anxiety, depression, hostility, relationship problems, drug abuse

and functional disability (Rosenthal 2000). Trauma, whether physical, emotional or psychological is also another important factor that brings about stress leading to mental health problems. If traumatic events which are stressful and presents with significant morbidity and mortality co-occur with bipolar disorder (Rakofsky, Ressler & Dunlop, 2012), then, it is possible for such trauma to potentiate a recurrence of bipolar disorder. They also found out that traumatic stress comorbid with bipolar disorder has poor prognosis for bipolar as evidenced by bipolar severity and high rates of suicide. Maguire et al. (2008) also discovered that there is sufficient evidence, both clinically and logically, to establish the link between trauma as a stressor and its negative result in bipolar disease. They also discovered that trauma projected hospital admissions, quality of life, and depressed symptoms between episodes.

Another important factor in stress vulnerability in relation to bipolar disorder is cortisol dysregulation as a result of stress. Although short-term stress may be adaptive and necessary for survival, a protracted stress response may increase the chances of a cortisol dysfunction. Sustained or Chronic stress arising from this prolonged stress response, comes with elevated cortisol levels (Hannibal & Bishop, 2014) which paves way for other health problems such as anxiety, depression and trouble sleeping (Dombeck, 2020). Dysregulation of cortisol activity due to stress has been found to have an impact on psychiatric comorbidities and mental illness such as bipolar disorder (Manenschijn et al., 2012). Wirth, Scherer, Hoks, and Abercrombie (2011) revealed that cortisol levels increase during stress and are often times related with negative affect in another study with a small sample size (46) and female responders who were previously on hormonal contraception.

Concept of Social Support

Amissah & Nyarko (2020), defined social support, as the multiple facets of social interactions that are convenient to most individuals in the most challenging periods of their life when faced with anxiety-ridden events.

Owing to the multidimensional nature of social support, the conceptualization and perception of social support is both complex and diverse, as testified by a plethora of conceptual frameworks and definitions which have been postulated to describe this subjective and yet important phenomenon (Ayernor, 2016; Wilson, Yendork, & Somhlaba, 2017; Van der Geest, 2013).

The construct of social support has been very useful in understanding mental and physical health, including mortality and some specific illnesses (Anakwa, Teye-Kwadjo & Kretchy 2021). It is important to distinguish among three different types of social support: perceived support, enacted support, and social integration. For example, measures of perceived support are especially good at predicting mental health. There are different measures for each of these types of support, and the types are only weakly related to each other (Dunkel-Schetter & Bennett, 1990; Lakey & Drew, 1997). Furthermore, each type of social support displays its own unique pattern of correlations with other constructs and variables, indicating that each type is a distinct construct, i.e., the three types have surprisingly little in common (Barrera, 1986; Lakey & Drew, 1997).

For the purpose of this study, perceived social support will be discussed. Perceived social support is multidimensional and can be understood as the subjective experience of social, psychological and interpersonal

assistance that sustains and elevates health and well-being (Gottlieb, 2009; Tariq et al., 2020). According to this conceptualization, social support and its perception is important to the overall functioning of the individual. This is particularly true for Ghanaians and Africans who are known to be interdependent, share strong ties and rely heavily on social networks for support (Adams and Dzokoto, 2003; Gyekye, 1996).

Social support is an intervention that arises from the conduct of personal relationships. Gottlieb and Bergen (2010) indicate that since it is an intervention process, it provides meaning to behaviour and this behaviour also gives meaning to interactions. Therefore, Cohen et al (2000), defined social support as the availability of social resources that are perceived by individuals or the resources that are provided by people. Talwar and Ar (2013), also refer to social support as a period when people perceive they are being cared for. The authors further indicate that the care being perceived includes assistance from colleagues and important associates.

Despite the fact that social support seems to be associated with physical intervention, Ostberg and Lennartsson (2007) argue that it is a work-related source that works as a protective element for a health-related system. Emotional esteem, tangible, informational, or appraisal support are three categories of social support identified by Semmer et al. (2008). Furthermore, social support is also thought to improve people's cognitive behavior. Individuals who receive social assistance are able to lessen their stress levels and, as a result, cope better with their problems (Dusselier et al., 2005). This, therefore, indicates social support benefits individuals both in physical and mental terms.

Emotion Regulation

Gross' (1998) process model conceptualizes emotion regulation as effortful and automatic attempts to downregulate, upregulate or sustain emotions that can be antecedent-focused (before the emotion is generated) or response-focused (enacted after the emotion is generated). For the purposes of this study, emotion regulation is defined as given by Gross (1998, 2007, 2015): the external and internal processes that determine how individuals express or inhibit reactions of an emotional nature, which includes frequency, duration, intensity, and type.

The most prominent characterization of emotional regulation is that which has been formulated by Gross and his colleagues (Gross, 1998; Gross, Richards, & John, 2006; Quoidbach, Mikolajczak, & Gross, 2015). According to this characterization, emotion regulation pertains to how we control, experience, and express our emotions as they develop over a very brief time period of time, usually on the order of a few seconds (Quoidbach et al., 2015). How the strategies of upregulation and downregulation are enacted has been examined through the lens of Gross (2015) process model of emotion regulation. Dodd et al., (2019) found that both positive and negative emotion regulation are clinically and theoretically relevant to bipolar disorder.

Humans experience emotion in their everyday lives and have several ways of dealing with what they go through. According to Polk and Liss (2009), emotion regulation is a notion that describes a person's capability to control and respond to an emotional situation that has occurred. People subconsciously adopt strategies on their own to cope with difficult situations many times and these strategies are sometimes able to solve their emotional

problems. Thus, the strategies can be adapted from the person's environment or it could also be innate. This implies that when an individual is faced with a situation which generates emotions, that individual can resort to an external commodity like music to regulate the emotions. Alternatively, an innate strategy could be developing a strong inner resistance against the prevailing situation. Thus Gross (2002), outlines strategies like reappraisal and suppression to be the commonest strategies used during the former and latter stages of experiences of emotional impact.

According to Thompson et al. (2008), emotion regulation comprises both external and internal processes that help with responding to stimuli by monitoring, evaluating and modifying processes. This means that one can overcome any sort of emotional instability and recover from a mental disturbance should they have the ability to manage or control the issues they ingest.

Burden of Bipolar Disorder

Burden of illness

Persons with BD suffer from syndromal or subsyndromal signs, primarily depression, for over half of their lives (Yatham et al., 2018). Bipolar disorder patients are not able to maintain correct job duty function around 30% of the time (Judd et al., 2008; Yatham et al., 2018). When compared to healthy controls, both symptomatic and non-symptomatic patients have lower quality of life, and patients have recognized a number of domains of functioning as being particularly important, including corporal, sleep, disposition, thought, vacation, public, piety, moneys, household, self-esteem, freedom, identity, work, and education (Bonnin et al., 2012; Michalak et al., 2010). Persons with

depressive symptoms (Van Rheenen & Rossell, 2014; Rosa et al., 2012; Oldis et al., 2016), those with preceding occurrences/lengthier period of disease (Michalak et al., 2013; Rosa et al., 2012), and those with lesser cognition (Michalak et al., 2013; Rosa et al., 2012) have more disabilities in both psychosocial functioning and quality of life (Simonsen et al., 2010).

According to the Global Burden of Disease Study, bipolar dsiorder is the 16th biggest cause of Years Lost to Disability (YLD) globally, accounting for 9.9 million years lost to disability (Ferrari et al., 2013). BD has a particularly negative impact on young people, since it is the world's 6th leading contributor of disability-adjusted life years in those between 10 to 24 years (Gore et al., 2011). The global annual expenditure per person with bipolar disorder ranges from US $1904 to $33 090, according to a systematic assessment of cost of disease investigations. Higher per individual expenditures are connected to bipolar disorder illness, delayed or misdiagnosis, regular psychiatric intercessions, use of atypical antipsychotics, treatment non-compliance, poor prognosis, and comorbidity (Jin & McCrone, 2015).

About 45 million people are affected by bipolar disorder globally (GBD 2017 Disease and Injury Incidence and Prevalence Collaborators, 2018). Bipolar disorder is major agent of disability amongst young people (Vigo, Thornicroft, & Atun, 2016; Vieta et al., 2018). It exerts significant impairments on those affected that negatively interferes with social, personal, and occupational functioning as well as poor quality of life (Moreno et al., 2012; Rubio et al., 2014; Jin & McCrone, 2015). The disorder is also associated with other conditions including medical and psychiatric conditions

(Kleine-Budde et al., 2014; Jin & McCrone, 2015), increasing direct healthcare costs for those affected due to increase utilization of medical services (Goldstein et al., 2011; APA, 2013; Vancampfort et al., 2013). Almost all patients with bipolar disorder (more than 90%) will have a recurrence at some point in their lives (Solomon, Keitner, Miller, Shea, & Keller, 1995), usually within two years after the first occurrence. For the majority of individuals, the effects of recurrent condition are severe (Vieta et al., 2011).

Management of Bipolar Disorder

Because BD is long-lasting, degenerating, and dispatching, it necessitates a multidisciplinary, long-term strategy to treatment. The Chronic Disease Management Model recommends some critical concepts for enhancing long-term treatment for these people and their relatives. Health education on condition and medication should be the foremost action taken to manage patients, after essential medical management, such as devotion to diagnosis, comorbidities, and medical health (Yatham et al., 2018). In addition to the psychiatrist, the patient should be assigned to a medical care professional that includes one or more other medical care expert (usually a nurse) for psychoeducation, continuing monitoring, psychosocial care, and recommendation to public resources (Parikh & Kennedy, 2004; Yatham et al., 2018). While medication is essential for the effective handling of BD, other psychosocial therapies could be helpful for severe gloomy occurrences and maintenance treatment to avoid recurrence and reestablish quality of life to the person and household (Murray et al., 2017; Reinares et al., 2014). There is no prove that specific psychiatric therapy could help people with acute mania,

hence no recommendations are made. Psychoeducation, cognitive behavioral therapy (CBT), family-focused therapy (FFT), interpersonal and social-rhythm therapy (IPSRT), and peer support have all been shown to be effective the treatment of bipolar, and are now being suggested as additional management choices.

Empirical Review

This section seeks to give adequate knowledge through appraisal of related studies that are dependent on the current study's objectives, such as knowledge of patients on interpersonal communication, the association between stress and the rate of recurrence of bipolar illness. It also considers the role of social support in predicting bipolar disorder recurrence, as well as the necessity of emotion management in predicting recurrence of bipolar disorder. Included also in this chapter is a global, Africa and Ghana snapshot of related literature of bipolar disorder.

Prevalence, Burden of Bipolar Disorder, Literature on objectives

Prevalence of Bipolar Disorder

Global

Psychological diseases, such as bipolar illness, are a leading cause of impairment globally, which results in 14 percent of all illness cases (Omar et al., 2010). A WHO survey looked at the global lifetime occurrence of psychological illnesses. The research, which began in 2005, is by far the largest current cross-national initiative aimed at determining the occurrence of mental diseases (Alonso et al., 2014). Over 150,000 people participated in the poll, which was performed in 28 countries. The lifetime frequency of any mental health condition including bipolar illness was expected to vary from

18.1 percent to 36.1 percent (Alonso et al., 2014). Further analysis using the Diagnostic Statistical Manual of Mental Disorders (DSM-IV) and the WHO Composite International Diagnostic Interview (CIDI Version 3.0) revealed greater prevalence in the US, Belgium, South Africa, and Japan, with prevalence ranging from one-third to one-sixth of the population (Alonso et al., 2014).

According to the same survey, 12-month occurrence levels for any psychological diseases ranged from 6% in Japan to 30% in Brazil and the US. Based on a comprehensive examination of 174 researches from 63 nations, Steel et al. (2014) found that one out of every five people (17.6%) had a psychological disorder in the 12-month period prior to the analysis, and 29.2% had experienced a communal psychological ailment at some point in their lives. Bipolar disorders are the world's 12th most common subtly to severely incapacitating condition for people of any age group, according to the World Health Organization (WHO) (WHO, 2004; Merikangas et al., 2007; Neff & Marzani, 2012). Bipolar type I has a lifetime frequency of roughly 1% in the overall population, according to epidemiological studies (Pini et al., 2005; Rowland & Marwaha, 2018).

The general lifetime occurrence of bipolar spectrum diseases was 2.4 percent, with 0.6 percent for bipolar type I and 0.4 percent for bipolar type II, according to a significant cross-sectional study of 11 nations (Merikangas et al., 2011). Whereas the occurrence of bipolar type I and II have been discovered to be less than in earlier studies (Bauer & Pfennig, 2005; Rowland & Marwaha, 2018), bipolar type I was found to be 1% in the United States, slightly higher than in other countries. It's uncertain if the disparities were

related to the study's stricter diagnostic methods or real discrepancies in bipolar prevalence among countries and ethnic groupings. The Adult Psychiatric Morbidity Survey 2014, which is one of the rare epidemiological studies in England, found a lifetime prevalence of probable bipolar disorder of 2%. Although the assessment technique revealed that this was an underestimation, the study failed to distinguish between bipolar subtypes (Marwaha et al., 2016). Despite the fact that the bulk of the research involved were from North or South America, a current research found a collective lifetime occurrence of 1.06 percent and 1.57 percent for bipolar type I and II, respectively (Clemente et al., 2015). Nonetheless, a comparable rate has been observed in the United Kingdom, Germany, and Italy (Fajutrao et al., 2009), while a systematic analysis of studies from African nations indicated a lifetime occurrence of 0.1–1.83 percent (Esan & Esan, 2016).

The cause of global differences in bipolar prevalence is unknown, however ethnicity (Tsuchiya et al., 2003), cultural factors (Johnson et al., 2014), and differences in diagnostic methods and study technique (Clemente et al., 2015) could all play a part. The findings supporting varying rates of bipolar in diverse ethnic groups is mixed, with some research finding greater levels in Caucasians (Blanco et al., 2017) and others showing higher rates in nonwhite populations (Blanco et al., 2017). (Kessler et al., 1997; Rowland & Marwaha, 2018). According to a systematic analysis, which discovered no significant evidence for disparities between ethnic groups revealed that distinct research discrepancies could be attributed to cultural variables, movement, and greater levels of misdiagnosis of black ethnic groups as having schizophrenia instead of bipolar disorder (Crump et al., 2013). Bipolar

disorders can afflict persons of any age; however, they are more prevalent among people below 25 years. The typical stage of symptom inception in bipolar I disorder is 18 years, and 22 years in bipolar II disease (Merikangas et al., 2007; Neff & Marzani, 2012).

Bipolar disorders are common in basic care surroundings. Using a structured interview, 21 to 26 percent of patients with depression or anxiety will meet standards for bipolar disorders (Neff & Marzani, 2012). Individuals suffering from bipolar disorders have a higher likelihood to experience other psychological health problems, such as anxiety, impulse control, and attention debit/hyperactivity illness, together with substance misuse, all of which are linked to poorer results (Merikangas et al., 2007; Neff & Marzani, 2012; Parikh et al., 2010). Suicide levels in bipolar patients are 20 folds greater than in the normal populace (Novick et al., 2010). Bipolar illness patients try suicide at a level that is among the greatest of any mental disease (Cassidy, 2011).

Prevalence of Bipolar Disorder Africa

The frequency of psychiatric illnesses is thought to be significant in Sub-Saharan Africa, but more recent national data is needed. The dearth of contemporary systematic information on the occurrence of public psychological diseases in some West African nations like Guinea, Sierra Leone and Liberia was discussed in a report on the World Bank Group website titled "As Liberia and Sierra Leone recover from civil wars and Ebola, demand for mental health services surges" (Mayhew, 2016). The writer quoted a research by Johnson et al. (2008) showing that, 40% of Liberia citizens experienced signs of major depression and 44% had post-traumatic stress

illness in the five years after the civil war ended. The author went on to say that the Ebola outburst in Liberia Sierra Leone and Guinea, as well as the secrecy surrounding the onset of a mental disorder, such as bipolar disorder, by a person or family member, could have accounted for a rise in the prevalence of public psychological diseases in the zone (Mayhew, 2016).

In spite of the predictions, lesser occurrence levels were found in different areas of the world. In Nigeria, as an example, a research showed that 12% of participants had a psychiatric ailment, and 6% had had a psychological illness in the previous year (Alonso et al., 2014). South Africa has a prevalence of over 15%, according to the same report (Alonso et al., 2014). Additionally, a research in Kenya found that common psychiatric diseases such as bipolar disorder affected 10.8% of the population (Jenkins et al., 2012). It's possible that the disparity between perceived greater prevalence levels and recorded lower incidence levels is due to incorrect survey replies (Alonso et al., 2014).

Prevalence of Bipolar Disorder in Ghana

In Ghana, just like other West African nations, there are no contemporary research evidence on the prevalence of bipolar illness (Sipsma et al., 2013). The majority of countrywide prevalence researches are small-scale, and nationwide prevalence estimates for basic bipolar conditions are frequently speculative (Read & Doku, 2012). However, the WHO (2017), reported that in Ghana, approximately 2.1 million people suffer from moderate to severe mental illness, 650,000 of whom are projected to have a severe mental illness (WHO, 2017). Sipsma et al. (2013) investigated the occurrence of inadequate psychological wellbeing including bipolar disorder across

Ghana. They used data acquired between 2009 and 2010 by the University of Ghana's Institute of Statistical, Social, and Economic Research and Yale University's Economic Growth Centre. According to Sipsma et al. (2013), 18.7% of participants stated that they were experiencing serious or intense mental anguish. Females exhibited higher rates of psychological anguish compared to men, with 21.2 percent of females experiencing moderate-to-severe distress compared to 15.5 percent of males.

Aside from these two studies, Roberts et al. (2014) reported that 95% of persons with psychological illnesses were incapable to receive medical care, raising worries regarding medical breaches. Despite the fact that no research has been carried out to determine the exact nationwide occurrence of bipolar diseases in Ghana (De Menil et al., 2012), they stated huge treatment breaches and paucity of epidemiological information on psychopathology (Wilson & Somhlaba, 2016) indicate that there is a high occurrence of public bipolar diseases in Ghana, with the majority of the sufferers not receiving treatment.

Prevalence of Bipolar Disorder Recurrence

Studies have shown difference proportions of people treated for BD who experience recurrence, some as high as more than 90% (Solomon et al., 1995). For instance, De Dios and colleagues assessed predictors of recurrence in people being managed for bipolar disorder by carrying out quarterly assessments involving clinical, mood and functioning psychometric evaluations amongst 595 consecutive bipolar patients. The researchers found that 141 (23.78%) had at least a recurrence 12 months at follow-up (De Dios et al., 2012a). However, a community cohort study among 225 BD patients in

a cohort study found that more than half (57.3%) had at least one recurrence when followed up (De Dios et al., 2012b).

In a reflective cohort research of 276 Italian women suffering from bipolar illness, the researchers sought to assess recurrence and its frequency (Maina, Rosso, Aguglia & Bogetto, 2014). It was found that three-fourth (75%) had a recurrent BD episode (Maina et al., 2014). Again, a retrospective cohort study among 400 bipolar disorder patients in western Iran investigated those factors associated with recurrence of bipolar disorder among the patients (Najafi-Vosough, Ghaleiha, Faradmal, & Mahjub, 2016). It was observed that all the patients had recurrence over the 6-year period.

Again, in their study to examine the recurrence rates and associated treatment and clinical factors, Vázquez, Holtzman, Lolich, Ketter, and Baldessarini (2015) analyzed naturalistic data from 3904 bipolar patients. It was observed that the recurrence rate was 55.2%. Additionally, the data from the randomized control trials indicated a recurrent rate of 38.3% among those on mood-stabilizing treatment and 60.6% among those on placebo (Vázquez et al., 2015). Their finding suggested that bipolar disorder patients being on antipsychotic medication have lowered risk of recurrence.

More specifically, Belete, Ali, and Legas (2020) carried out a cross-sectional investigation involving 400 bipolar illness patients in Central Ethiopia to determine the prevalence and associated determinants of recurrence. In their study showed that 71% of the patients had recurrence (Belete et al., 2020). Among the adult bipolar disorder population of three studies reviewed by Kessing, Andersen, and Vinberg (2017), prevalence of recurrence ranged from 31% to 42% within one year following recovery while

among the children and adolescents 40% and 60%. Fekadu et al. (2006) also evaluated bipolar disorder outcomes in Ethiopia among 68,378 patients aged 15-49 years and found that more than half (65.9%) of the cohort experienced recurrence.

Similarly, in the prospective cohort research among pregnant mothers suffering from bipolar illness by Viguera et al. (2007) revealed that 71% experienced at least one recurrence. Again, among the 858 of 1,469 bipolar disorder patients in Perlis et al. (2006) who recovered, 48.5% of them experienced recurrence when followed up for two years. They further not that some developed depressive episodes while others developed hypomanic, manic, or mixed occurrences.

Knowledge of patients on interpersonal communication

In the medical perspective, communication is a fundamental clinical art that if well performed facilitates the establishment of a relationship of trust between both patient and medical practitioner (Chichirez & Purcarea, 2018). This implies that should the opposite be the case; patients will not be able to have a functional interpersonal communication process. In light of this, Sigel et al. (2015) investigated the link between mood episode severity and associations in patients with bipolar illness. The study involved 413 youths suffering from the illness. The study followed the patients' engagements with family and friends over a period. The correlation model was used to analyse the association between increased fluctuation episodes and poor relations with family. The study found that greater mood episodes were related to worse relationships. This, therefore, implies the degree of mood changes goes with

how patients articulate themselves and hence communicate less with people around them.

Similarly, Goldstein et al. (2006) looked into the lack of social skills in teenagers with bipolar illness. The study included 18 children living with the bipolar disease as well as their parents. The knowledge of the patients' appropriate social skill was measured and it was found that the adolescents displayed better social skill performance than social skill knowledge.

Relationship between stress and rate of recurrence of bipolar disorder

Patients with BD experience substantial life stressors, which are linked to shorter recovery and increased relapse levels. Bipolar teenagers' mood symptoms have been connected to stress and age (Birmaher & Axelson, 2006; Truer & Tohen, 2010). In the prediction of bipolar recurrence, there is no substantial interface between stress and the number of episodes; however, the interplay of initial severity and stressful life events substantially forecasts recurrence in a manner dependable with the sensitization hypothesis (Dienes et al., 2006]. Few researches have looked into whether BD patients who are more upset by their relatives' critiques have more severe depression and manic symptoms, as well as fewer days well (Miklowitz et al., 2005; Truer & Tohen, 2010). Brown et al. (2005) found that a history of childhood abuse affects the course of the disease in BD patients. Aside from the link between high emotionality and unipolar depression, studies looking at the association between temperament, current and distant life events, and psychopathology in the offspring of BD parents found that psychopathology is linked to the number of current adverse life events, but not to the number of initial losses (Duffy et al., 2007; Truer & Tohen, 2010). Adversity in childhood may be a

danger element for early-onset illness, and a variety of stressors may be related not only to the beginning, recurrence, and progression of depressive episodes, but also to the highly prevalent substance-abuse comorbidities (Post & Leverich, 2006).

Sam and Verghese (2019) used a cross-sectional study design to investigate the relationship between stressful life experiences and selected clinical characteristics in the course of bipolar affective disorder. Patients who had been readmitted due to relapse were included in the study. According to the findings, majority of the patients had gone through difficult life events, with some of them suffering from mania and despair. Similarly, Kemmer et al. (2015) investigated the impact of stressful events on first and recurring bipolar illness admissions. The study involved 51 bipolar patients and used the Anderson-Gill model to test the effect of life events on the recurrent disorder. The study revealed that both life event burden and recurrent had a relationship with the risk of significantly increased subsequent admissions of the patients.

Similarly, a study conducted by Estrada-Prat et al. (2019) on childhood factors associated with increased risk for mood episode recurrences in bipolar disorder discovered that stress is more likely to result into more recurrences. Nevertheless, the type of stressors ranged from stressful life events, childhood abuse and how maternal warmth, which are considered to result into diverse rates of influence.

Likewise, Subramanian et al. (2017), assessed the influence of stressful life events and kindling in bipolar disorder in India. This study adopted the cross-sectional design to address the kindling bipolar disorder with manic polarity. A total of 149 of type I bipolar patients on admission took part in the

research. Results showed that the greater part the patients suffered recurrent mania and this recurrence was attributed to family conflict and altered sleep patterns.

Mancini (2021) stated that the influence of stress on survivors' health and behavioural health long after exposure to a traumatic incident is significant and could result in high diseases and deaths. This conclusion had been previously alluded to by DeLisi et al. (2015), who found out that there was an increase in the prevalence of psychopathology among New Yorkers, weeks after the September 11 attacks.

Again, in a study of 132 Katrina evacuees experience, (Mills, Edmond & Park, 2011), found common health concerns including depressed immune functioning, increases in negative health behaviours and elevated rates of pre-existing health conditions. They concluded that, the study had important implications for mental health consequences.

They discovered that 77.8% of those with a prior psychiatric history fit the standards for acute stress disorder, whereas 71.4 percent of those who had previously been depressed fit the standards for acute stress disorder. However, the study's use of non-random sampling methodologies and self-report measures were limited.

In another study, Benight and Bandura (2004) found that exposure to a potentially traumatic event (PTE) was linked to a higher risk of psychiatric diseases than no history of a PTE. PTE exposure was substantially linked to an increased risk of psychiatric illnesses such as dysthymic disorder, panic disorder, and alcohol and drug use problem, among others. Because the study was cross-sectional, it was impossible to assume a direct cause-and-effect

association between trauma exposure and psychiatric morbidity; also, existing diseases or loss were not taken into consideration, which could have muddled the results. The role of trauma as a major cause of stress leading to re-occurring health and psychological health conditions has been established by the above findings.

In addition, Carmassi et al. (2020) found that 72.3 percent of in-patients with DSM-5 bipolar illness revealed lifetime trauma experience, with 35.6 percent reporting a DSM-5 PTSD diagnosis. Despite the absence of data on the length of time after trauma experience, they came to the conclusion that a history of repeated traumatic exposures was linked to severe bipolar disorder conditions. Finally, stress has been linked to variations in mood symptoms among bipolar disorder adolescents as reported by Kim, Miklowitz, Biuckians and Mullen (2007). They also concluded that chronic stress resulting from high frequency of severe life independent events were related to mood symptoms.

The impact of social support as a predictor of recurrence of bipolar disorder

Social support refers to the extent of social relationships that afford personal benefits, based on social interactions and networks of relationships that are intended to strengthen the well-being of members (Lee et al., 2020). Social support is an essential buffer to stressful life events (Wilson, Yendork & Somhlaba, 2017; Pedersen et al., 2009) and further studies indicate that social support in adequate amounts improves mental health by mitigating the effects of negative psychosocial outcomes such as depression, anxiety, low self-efficacy, stress and loneliness or social isolation (Wilson, Yendork &

Somhlaba, 2017; Pedersen et al., 2009; Wohl et al., 2010**;** Uchino et al., 2012). The impact of social support in reducing distress and promoting well-being cannot be overemphasized (Kim, 2020; Myers and Diener, 2018; Quoidbach et al., 2019).

Social support comprises three important agents, which are the family, friends and significant others (Zimet et al., 1988), distinctions however, have been made between the types of social support: Quality vs Quantity and Perceived vs Received (Gottlieb and Bergen, 2010; Melrose et al., 2015). Perceived social support is the support that a person believes they are receiving; received social support is the support that a person is actually acquiring from others (Thoits, PA. 2011, Lakey, B. 2011). Perceived social support was found to be a primary interpersonal resource in coping with stress (Haber, Cohen, Lucas, &Baltes, 2007), a protective factor against mental health problems (Clara et al., 2003), and a mediator of the links between stressful life events and psychological consequences, such as anxiety, depression, and behavioral distress (Thoits, 2011). Further studies have shown perceived support as being consistently linked to good mental health, which is typically explained as resulting from objectively supportive actions that buffer stress (Lakey & Orehek, 2011; Uchino et al., 2012**).**

Amissah and Nyarko (2020) in a cross sectional survey of 362 participants on the role of religiosity and social support in coping with mental health problems with unemployment, found that social support was essential to all individuals irrespective of the nature of their life situation. They concluded that "social support generally improved and was a significant predictor for mental health". Nukunya (2003), emphasised that the Ghanaian

society is one that is so closely knit to the extent that there is a probable lack of clear distinction between family, friends and significant others and this was corroborated by (Van der Geest ,2013). The Ghanaian society collectivist in nature (Wilson & Somhlaba, 2017) and as such presents as one with a lot of social interaction. High value is placed on these social interactions as they provide some form of relief to the individual during challenging times (Amissah & Nyarko 2020).

Social support is embedded in the daily life of Ghanaians and individuals depend heavily on their networks for support in times of difficulties and stress (Gyekye 1997). Research on well-being in the Ghanaian context has pointed to social support and perceptions of it as important factors for well-being (Addai and Adjei 2013; Amoah and Jørgensen 2014; Glozah and Pevalin 2014).

Social support is associated with mental health status, as low social support is found to be associated with the risk of developing mental health and/or addiction problems or the worsening of an already existing mental health problem (Baiden, Den Dunnen, & Fallon 2017; Stockdale et al. 2007).

The association between mental health and social support was also evident in high-risk population groups such as among immigrants in Canada (Puyat, 2013), or people living in socially isolated neighbourhoods (Stockdale et al. 2007). Being immigrants may be a risk factor for developing mental health problems with the added effect of low social support, which may be more prevalent among recent immigrants found in studies in Canada (Puyat 2013). This is transferable to other countries depending on the social context, culture, welfare system, and environment. The combined effect of

being a recent immigrant and having low social support seems to be associated with a greater risk of developing mental health disorders (Puyat, 2013). In comparison with individuals who have moderate levels of social support, individuals with low social support have greater odds of experiencing mental health disorders and this association appeared the strongest among recent immigrants.

Further, Baiden, Den Dunnen, & Fallon (2017) found that close to one in five Canadians (19.6%) had mental healthcare needs, of which 68% had their needs fully met and 32% had unmet needs. Social support was the strongest factor associated with unmet needs.

Bjornestad et al. (2017) explored the effect of friendship after the first episode of psychosis in a Norwegian context. A baseline sample of 178 individuals experiencing the first episode of psychosis were followed up for over 2 years regarding their social functioning and clinical status. The researchers longitudinally followed up on those who had recovered to those who had not. The results showed that the frequency of social interactions with friends was a significant positive predictor of clinical recovery over a period of 2 years. The study concluded that interactions with friends is a malleable factor that can be targeted for early intervention, and seems to have an overall stronger impact on recovery and functional social support effects than interactions with family.

As mentioned, social support in the form of interactions with friends has a solid positive impact on the recovery of people with psychosis, as was seen when they were examined longitudinally (Bjornestad et al. 2017), and increased social support was positively associated with the quality of life in

people with schizophrenia (Munikanan et al. 2017). The respondents in the study conducted by Munikanan et al. (2017), who had all experienced schizophrenia, reported that at higher levels of quality of life, they all had different types of social support available (Munikanan et al. 2017).

Social support affects the experiences of people with mental health problems in various ways. At the baseline, the strength and quality of the social support, the social network, and social relationships tend to be lower for people with mental health problems. People with severe mental health problems tend to have fewer social relationships than others, and are more likely to experience social exclusion (Baiden, Den Dunnen, & Fallon 2017; Forrester-Jones et al. 2012). Furthermore, the social network seems to be the most important support system that impacts the general well-being of people with mental health problems (Kogstad, Mönness, and Sörensen 2013).

In inter-episode bipolar illness, Eidelman et al. (2015) looked at social support and social strain, as well as their links to sleep and social rhythm disruptions. The study involved two groups; 35 adults suffering from the bipolar illness type I as well as a controlled group. These two groups were asked to complete questionnaires about social support and social strain. The connections were examined using correlation and regression models. Bipolar patients reported less social support and more social pressure than the control group, according to the findings. Within the bipolar group, there was also a link between social strain and manic and depressed symptoms.

Similarly, Cohen et al. (2004) investigated the impact of stress and social support on bipolar illness recurrence. The study utilised the cross-sectional design and involved 52 out-patients with the type of bipolar disease

from an urban community. Stressful life events, symptomatology, and medication compliance were all assessed in the patients. In order to analyze recurring episodes, the researchers used a logistic regression model. Greater degrees of stress and poorer degrees of social support, particularly less availability and poor-quality close relationships, were found to predict depressed recurrence of the condition.

It is generally established that proper social assistance can help people cope with the negative effects of mental health including bipolar disorder (Chou, 2012; Jurado et al., 2014; Yu et al., 2014; Ornelas & Perrira, 2011). For example, among Greek students in the United Kingdom, the degree of ‘‘culture shock" was inversely associated to the quality of social assistance and the quantity of close friends (Pantelidou & Craig, 2006). The recurrence of bipolar disorder was negatively linked with the existence of support from both family and instructors among first-generation Latino kids in the United States (Potochnick & Perreira, 2010).

Additionally, social support mitigated the negative impact of depression symptoms among new people from mainland China to Hong Kong. A one-year follow-up on the same sample indicated that social support and ‘‘neighborhood collective efficacy" (social cohesion and informal social control) both reduced the effect of perceived discrimination on individuals’ mental health (Chou, 2009; 2012). The recurrence of bipolar disorder among individuals may also be mitigated by family resilience and perceived support from both family and friends. The situation of Latino people in the United States is a notable illustration of this, where both familism (a strong bond and loyalty to family members, which is particularly an imperative attribute of this

ethnic group) and effective social assistance minimized the likelihood of mental anguish (Yu et al., 2014; Ornelas & Perreira, 2011). Low social support, on the other hand, is linked to the presence of common mental disorder including bipolar disorder in people (Ladin & Reinhold, 2013; Tinghog et al., 2010; Jurado et al., 2017).

The role of emotion regulation in predicting recurrence of bipolar disorder

According to Davidson et al. (2002), disturbed emotional regulation may represent an important component of disorders of emotion. Campbell-Sills et al. (2006) suggested that ineffective and maladaptive emotion regulation, particularly a tendency towards suppression in the regulation of negative emotions, may be of relevance to anxiety and mood disorders. Furthermore, Campbell-Sills and Barlow (2007) discussed the debilitating effects of ineffective situation selection strategies in relation to mood disorders.

Emotion regulation strategies are used, both consciously and unconsciously, within a variety of domains, tasks, and situations, including sports (Hanin, 2007), demanding jobs (Grandey et al., 2004) and therapeutic settings (Campbell-Sills and Barlow, 2006). Nevertheless, some strategies are claimed to be more effective than others. For instance, Gross (2001) predicts that early emotion regulation strategies are more effective than the strategies that are applied at a later time point in the process. Reviews of emotion regulation strategies focused on one specific emotion regulation strategy (e.g., rumination; Silveira & Kauer-Sant' Anna, 2015), or on positive emotion regulation in cross-diagnostic samples (Carl et al., 2013).

A negative appraisal of positive affect would be expected to prompt attempts to downregulate, whereas a positive appraisal would be expected to prompt attempts to upregulate, (Feldman et al., 2008). This means the push-and-pull between opposing valuation systems (Gross, 2015) could be one of the mechanisms underlying the ups-and downs of mood characteristic of bipolar disorder. Henry et al., (2008), found that just like mood episodes, people living with bipolar disorder experience significant affect instability and intensity between episodes. While regulating positive or activated moods can be problematic in those with bipolar disorder, which is defined by excessively high mood states (Gruber et al., 2013), extremes of low mood are also characteristic of bipolar disorder, just as the majority of manic episodes involve both negative and positive affect, and low and high activation (Dodd et al., 2019).

Given the traditional delineation of emotion regulation strategies as adaptive or maladaptive, there has been considerable interest in the role of emotion regulation strategies in psychopathology (Dodd et al., 2019). In a systematic critical review of 47 studies on emotion regulation strategies in bipolar disorder, Dodd et al. (2019), found that maladaptive strategies such as rumination and dampening were elevated in bipolar disorder compared to controls and these particular strategies had a detrimental impact on outcomes such as mood symptoms. Other studies demonstrated compelling evidence that negative emotion regulation strategies such as rumination and catastrophizing appear particularly problematic in bipolar disorder, (Fletcher et al., 2014; Pavlickova et al., 2013; Rowland et al., 2013).

Improving coping strategies is a key facet of relapse prevention (Morriss et al., 2007). However, while avoiding future relapse is important, current difficulties, and not just episodes of hypomania and depression, should be acknowledged (Mansell et al., 2014).

Xuan et al. (2020) in a systematic review and meta-analysis of ten studies on mindfulness-based cognitive therapy for bipolar disorders, found that improving emotion regulation strategies was effective for symptom alleviation of depression and anxiety among bipolar disorder patients.

Becerra et al. (2016) investigated reports of emotion regulation among three different groups: the bipolar individuals, individuals who suffer from depression and healthy people serving as a controlled group. The study involved 24 bipolar disorder participants as well as 38 each of persons suffering from major depression and the controlled group. The study found out that both the bipolar disorder and the patients suffering from depression were not able to regulate their emotions at all as they were faced with difficulties. Also, among the three groups, it was revealed that bipolar patients found difficulties assessing strategies that could be used to regulate their emotion.

Again, Becerra et al. (2015) looked into the predictive validity of different clinical cognitive, functional, and emotion regulation processes for bipolar disease retrieval. The study included 27 residually depressed bipolar patients. The study found out there was some degree of a hindrance to psychosocial functioning. This was attributed to both residual depressions along with problems with emotion regulation as they were found to be predictors of poor psychosocial functioning.

Conceptual Framework

This section illustrates the relationship that exists between the clinical variables that are associated with the subject matter of study. These variables are categorized into independent and dependent. In this context, the dependent variable is the bipolar disorder whereas the predictors' variables (independent) cause a change in the outcome of the dependent variable. Below is a figure to illustrate the relationships

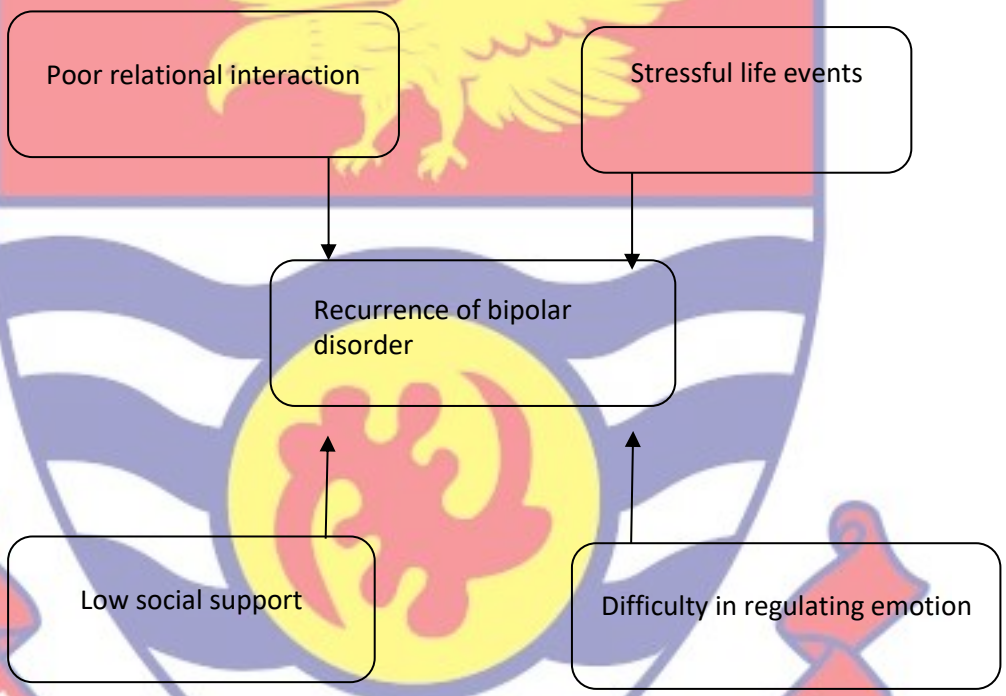

Figure 1: Conceptual framework of psychosocial predictors of recurrence of bipolar disorder
Source: Author's construct, 2020.

Figure 1 depicts the psychosocial predictors of recurrence of bipolar disease. Bipolar disorder is an episodic mental illness characterized by periods of depression and or at least a manic episode (Miklowitz & Johnson, 2006). Hence, its recurrence is attributed to some psychosocial variables whose influence aggravates the problem. From the study, it was deduced that the recurrence of bipolar disorder episodes resulted from poor relational interactions and this is consistent with Sigel et al. (2015) study. Secondly,

bipolar disorder episodes can also be attributed to anything that acts as stressors to the patient. Eidelman et al. (2015), study also agree that persons that have a minimal perception of care from close relations can trigger the occurrence of the illness. Also, the recurrence of bipolar disorder can be traced to ones' inability to regulate emotions. In effect, bipolar disorder people are unable to communicate well due to brain regions that fail to process information to make sense. Meanwhile, the study by Weinstock and Miller (2010) emphasized that lower social support among the psychosocial variables seem to be a major danger variable for consequent symptoms of type I bipolar disorder.

Conclusion

Bipolar disorder has been identified as a serious chronic mental illness with unusual mood swings occurring among people. The study sought to examine psychosocial predictors that trigger the recurrence of bipolar disorder illness. Having conducted a thorough review in this chapter, it was realized that psychosocial variables adversely impact and play a major role in bipolar disorder disease. Subsequently from the review bipolar disorder patients find difficulty in articulating their emotions or expressing themselves through communication. It was also deduced that events that cause stress also have a significant association with the recurrence of the illness.

Even though support received from family, friends and people around bipolar disorder patients is key to improve the illness, it also came to light from the reviews that patients with lower perception concerning social support often have recurrent episodes. Again, from the study difficulty in assessing strategies to regulate one's emotions has a strong association with recurrent

episodes of bipolar disorder. These psychosocial variables indeed negatively impact people suffering from bipolar disorder. The strategies used to achieve the study's research objectives are demonstrated in the following chapter.

CHAPTER THREE

RESEARCH METHODS

Introduction

The researcher's methodological approaches for reaching the research objectives are discussed in this chapter. This chapter covered the research design, study area, population, sampling procedure, data collection instruments, data gathering procedures, processing and analysis.

It also includes steps taken to address ethical issues, voluntary consent, potential risks/benefits, compensation, COVID-19 prevention protocol and a chapter summary that addresses the limitations of this study.

This study employed the quantitative research approach, specifically, a hospital-based retrospective and cross-sectional survey design research was carried out at two out of the three key psychiatric hospitals. The study employed both descriptive and inferential approaches to data analysis to determine the role of psychosocial factors in predicting recurrence of bipolar disorder. The study areas were Accra and Cape Coast.

Research Paradigm

According to Creswell and Creswell (2017), the Post positivism paradigm "reflects a deterministic philosophy in which causes probably determine effects or outcomes. Thus, the problems studied by postpositivists reflect a need to examine causes that influence outcomes, such as issues examined in experiments".

The methodology entails testing hypotheses and employing quantitative techniques (Lincoln & Guba, 2000). This technique implies that the researcher must recognize and examine the factors that influence outcome, as well as remain detached from the study and take steps to increase objectivity while decreasing the researcher's participation in the research.

Research Design

The study used a retrospective and cross-sectional survey design. The researcher was able to determine how stress, emotion control, interpersonal communication, and social support influence bipolar illness recurrence. A retrospective study looks backwards at a group of participants to assess exposures that are thought to influence a result and discover how these exposures connect to the result. In a retrospective study, the desired result is already known and has been confirmed at the start of the research period.

This type of study can be used to generate ideas that can then be investigated further in bigger, costlier prospective studies. It can also be used to help discover potential risk factors and is faster, cheaper, and easier than prospective cohort studies. However, there are some drawbacks, such as a lower degree of evidence than prospective studies, the fact that participants are frequently recruited through convenience sampling and consequently are not representative of the general population and susceptible to selection bias, and the possibility that participants will be subject to recall bias. (Sedgwick, 2014).

According to Rothman, Greenland and Lash (2008), a cross-sectional study is one that uses all or a representative sample of all people in the population at the moment of ascertainment as participants, with no regard for exposure or illness status. This cross-sectional study helped the researcher to

gather data from participants at a specific given time frame since the study was conducted within a period of time (Sedgwick, 2015). Its advantages are that; it will not require follow-up and is therefore less costly and quicker than other designs and can be used to examine a large number of variables. Although cross sectional studies lack time dimensions and thus cannot back conclusions or causal links, one technique to overcome this limitation is to ask questions about the participant's background, such as inquiries about former lifestyles, occupations, or other exposures. Even if the data is collected at a specific point in time, the researcher can categorize participants based on previous exposure.

Study Area

A hospital-based retrospective and cross-sectional study was carried out in two of the three main psychiatric hospitals providing mental health care in Ghana, thus, Ankaful Psychiatric Hospital, and Accra Psychiatric Hospital. Participants for the study were recruited from these two hospitals.

Ankaful psychiatric hospital precisely is located at a village called Ankaful where it derives its name. It shares boundaries with Ankaful Leprosarium Hospital to the south, Ankaful Maximum Prisons to the west and Tsikweikrom to the north. The hospital is approximately 12.5 kilometers from Cape Coast and 6 kilometers from Elmina. It was established in 1965.

Accra psychiatric hospital is located at the heart of the Greater Accra region in Adabraka. It is the first major mental health facility established in 1904 and commissioned in 1906. This hospital serves patients from Greater Accra region, Eastern region, part of Central region and other places in the

country. In addition to that, it serves as a training center for nurses, doctors and other health practitioners. (Accra Psychiatric Hospital, 2017).

Population

A research population, according to Creswell (2009), is a precise group of instances, persons, or groups of individuals that the researcher desires to explore. All people with bipolar disorder who visit a review clinic at the Out Patient Department (OPD) and are lucid were included in the study. The principal investigator with mental health background in collaboration with the recruited nurses who are also mental health nurses conducted Mental Status Exams (MSE) to determine the lucidity of participants. This assessment tool is employed to evaluate the different facets of a person's psychological and behavioural functions such as thought process, appearance, motor activity, mood and speech. The MSE is a clinical base assessment without cut off points, but rather gives the clinician the required information needed to make an impression when compared to the DSM-5.

In addition, respondents who qualified to be part of the study population were those that had had two or more recurrent episodes between the period of 2014-2019. Participants should have been diagnosed within the period 2014-2015 and are between 18-55 years of age. With a population size of 361 from Accra Psychiatric Hospital and 172 from Ankaful Psychiatric Hospital, the study took into account a total population of 533 people.

Participants who responded to the questionnaire fell within the age range of 18-55 years.

Sampling Procedure

A non-probability sampling approach, quota sampling was employed to determine the number of participants that were selected from the study areas. Quota sampling is a non-probability sampling approach in which samples are taken from a group of people who share certain qualities or characteristics in proportion to their population size. It aids in sample selection by providing crucial information on how many samples are required for each target group in order for them to be proportionate to the original population. Some of the benefits of this method include saving time and money by providing important information about how many samples of each group must be collected, speeding up the sampling process, and obtaining a high level of accuracy because quota sampling is scientific and follows a well-defined process. Its drawbacks stem mostly from its non-random nature, and include the inability to detect sample error and the risk of sampling bias.

Convenience sampling, which is a non-random technique, was engaged in the selection of respondents once they satisfied the inclusion criteria. Participants are selected once they are present and satisfy the inclusion criteria. Convenience sampling is useful for pilot project that aims at getting information by selecting samples that satisfy certain criteria and useful, if the population is random (Acharya et al., 2013). It is also less time consuming and can be applied to large samples. Using the Krejcie and Morgan (1970) table, a sample size of 217 was used based on the total population size realized. To achieve the respective quotas sample sizes from the study areas, firstly, percentages of the respective sample sizes were calculated. Accra psychiatric hospital with a population size of 361 represented 68% of the total population

size and Ankaful Psychiatric hospital with 172 respondents represented 32% of the total population size. Then based on the percentages achieved, the respective sample sizes were calculated out of the total population of 533. Hence, from the total sample size of 217, Accra Psychiatric hospital had a quota of 148 while Ankaful Psychiatric hospital had 69.

Inclusion Criteria

1. The condition for the inclusion of patients in the study are given below.
2. Participant should be between the age of 18-55 years
3. Participant should have had two or more recurrent episodes between 2014-2019
4. Participant should have been in remission and receiving treatment at the Out Patient Department (OPD).
5. Participant should have consented to take part in the study

Exclusion Criteria

1. The conditions that will exempt an individual from taking part in the study are stated below.
2. Patient has no diagnosis of bipolar disorder
3. Patients below 18 years and those above 55 years.
4. Patients who have had only one episode during the period under review
5. Patients who are on admission on the wards

Data Collection Instrument

All instruments employed in the gathering of data were adapted. Four instruments were administered to represent the four psychosocial variables under study.

A five-part questionnaire was administered for collection of the data. The five sections were:

Section A: Sociodemographic data

This section contained basic sociodemographic data such as age, sex, marital status, education and occupation.

Section B: Difficulties of Emotion Regulation Scale (DERS-16)

The DERS-16 developed by Bjureberg et al. (2016), assesses both general deficits in emotion regulation and deficits in specific domains of emotional regulation. Difficulties in emotion regulation are assessed via six subscales: "non acceptance of emotions", "difficulties in engaging in goal directed behaviour when distressed", "impulse control difficulties", "lack of emotional awareness", "limited access to emotion regulation strategies" and "lack of emotional clarity". The higher the score, the more difficult it is to regulate emotions. Participants must rate how often each item pertains to them on a scale of 1 to 5, where 1 is "almost never" (0% - 10%), 2 is "sometimes" (11% - 35%), 3 is "about half the time" (36% - 65%), 4 is "most of the time" (66% - 90%), and 5 is "almost always" (91% - 100%). According to Bjureberg et al. (2016), the DERS-16 has good psychometric qualities, with a Cronbach alpha of 0.903. The DERS-16 is a viable and brief approach for assessing general emotion control issues.

Section C: Interpersonal Communication Skills Inventory (ICSI)

Learning Dynamics 2002 provided the inspiration for the Interpersonal Communication Skills Inventory. Its goal is to give people a better understanding of their communication strengths and areas for improvement. The inventory measures how well you communicate in four important areas, "sending clear messages", "listening", "giving and getting feedback", and "handling emotional interaction". This instrument has a Cronbach alpha of 0.751.

Section D: Perceived Stress Scale (PSS)

The 10-item self-report Perceived Stress Scale (PSS-10; Cohen and Williamson, 1988) is extensively used to determine how stressful conditions in one's life are. On a five-point scale ranging from (0) Never to (4) Very Often, respondents rate the frequency of their feelings and thoughts regarding life events and situations over the last month. The PSS yields a total score that describes overall perceived stress. It boasts a Cronbach alpha of 0.84 – 0.86.

Section E: Multidimensional Scale of Perceived Social Support (MSPSS)

The Multidimensional Scale of Perceived Social Support (Zimet et al., 1988), measures the subjective assessment of the adequacy of received emotional social support" (Zimet, 1998, p. 186). It is a self-reported instrument that measures the adequacy of one's perceived social support from three domains: family: family (items 3, 4, 8, and 11), friends (items 6, 7, 9, and 12), and significant others (items 1, 2, 5, and 10). It is a self-rating scale measured on a 7-point Likert from 1 = "very strongly disagree" to 7 = "very strongly agree". The total scores can be summed as family, friends, significant others, or total scale. The sum is ascertained when the 12-items are added.

Strong psychometric properties have been reported for this scale. For instance, Doku et al. (2015) reported accepted Cronbach coefficient alpha of .91 for the total scale. Multidimensional Scale of Perceived Social Support (MSPSS) boasts a Cronbach alpha of 0.92-0.94 in clinical samples.

Cronbach Alpha results from the study are; Difficulty in emotion regulation scale-0.922; Interpersonal communication skill inventory-0.711; Perceived stress scale-0.720 and Perceived social support scale- 0.829. Compared to the original scales, DERS-16-0.903; ICSI-0.751; PSS-0.84-0.86 and MSPSS-0.92-0.94. This shows how well the internal consistency of the measuring instruments are.

Although no formal measuring instrument was used in measuring recurrence, all participants who had two episodes during the period under review were graded as low and those who experienced two more than two episodes were graded high.

Pre-testing of instruments

To determine the effectiveness of the questionnaire, it was necessary to conduct a pre-test before distributing it to the actual participants. Pre-testing is the stage in survey research when questionnaires are tested on members of target study population, to help determine if respondents understand the questions as well as if they can perform the tasks or have the information that questions require. Pre-testing of the instrument helped to evaluate the reliability and validity of the survey instruments prior to their final distribution for the actual data collection. Many scholars are of the opinion that 10% of your effective sample size for your study as whole will be appropriate to be pilot tested and this is reinforced by Perneger, Courvoisier, Hudelson, and

Gayet-Ageron (2014). For this quantitative study, 22 participants between the ages of 18 to 55 years were pilot tested at Odumase Krobo Health Centre. Cronbach Alpha results were; Difficulty in emotion regulation scale-0.872; Interpersonal communication skill scale-0.705; Perceived stress scale-0.798 and Perceived social support scale- 0.820.

Data Collection Procedure

Ethical consent for the study was received from the Institutional Review Board of the University of Cape Coast. For permission to engage the respondents who were service users at the facilities, the Ethical Review Boards of the two hospitals gave their approval before the research was carried out. On the days of data collection, a special area was assigned at the outpatient department where respondents completed the questionnaire. Questionnaires were administered to participants after they have satisfied the inclusion criteria and consented to take part in the study. Each participant was handed the four measuring instruments to complete with stand by research assistants to offer clarifications when necessary. The ICSI took averagely 15 minutes to fill, PSS 6 minutes, DERS-16, 7 minutes and MSPSS 7 minutes. The respondents who could read and write were administered the questionnaires in a pen-and-paper form. However, for those who could not read and write, the questionnaire was read to them in Fante and Asante languages.

Using the patients' folders, participants were selected if they qualified for the inclusion criteria. On a typical OPD day, they reported to the records and had their folders retrieved and sent to the nurses' station where they will be called to be reviewed by the nurse or the attending doctor on duty. Doctors

were informed about the study and supported by certifying that participants were in remission and fit for the study.

At Ankaful where the researcher is a staff, a passive role was played so as to avoid any thought of coercion on the participants or avoid bias responses. However, at the Accra psychiatric hospital researcher took apart in data collection. Data was collected face to face and during the day.

Permission was sought from the individual participants before the questionnaires were given to them. The questionnaires were followed by details describing the purpose of the research, directions for completing the questionnaire and returning it. In achieving orderliness, the different measuring instruments were separated into sections.

A period of six weeks was used to administer the questionnaire. The researcher recruited some nurses from the respective study sites to help with data gathering. The information was gathered throughout the day at the out-patient departments of the study sites.

Ethical Consideration

It is critical that all researchers remain aware of research ethics at all times. The conductor for research purposes and the "researched upon," who has basic rights that should be respected, are both concerned with ethics (Samkange, 2011). Before collecting data, the ethical review board of University of Cape Coast and the ethical review committees of the two psychiatric facilities were consulted. Anonymity, privacy and confidentiality was ensured during the data collection process.

A written informed consent was then handed over to the participant to sign or thumbprint before being included in the study. A witness was

employed to explain the process in the instances where the participant could not read in English. Copies of the signed consent was given to the participants.

Corona Virus Disease (COVID-19) Precautions

Efforts were made to keep the area or room used for the data collection well ventilated. The principal investigator ensured that all participants put on the approved nose mask and maintained the World Health Organization (WHO) guidelines on physical distancing. Measures were taken to ensure that all COVID-19 infection prevention protocols in the various hospitals were strictly adhered to.

Data Processing and Analysis

For all data analysis, the Statistical Program for Social Science (SPSS version 24; IBM Corporation, Armonk, NY, USA) was used. Age, sex, marital status, religion, and education were also examined and reported using words, tables, and charts, as were sociodemographic (age, sex, marital status, religion, and education) and clinical aspects (diagnosis, number of relapse episodes, and so on). For continuous data, measure of central tendency such as mean and median were computed, as well as measures of dispersion, standard deviation, and ranges, while frequencies were used to describe categorical data. To establish the results of the four objectives, descriptive, composite, correlation and linear regression analysis where use. Specifically, Bivariate analysis and univariate binary logistic regression were both used to determine the empirical association between each of the four predictor variables; interpersonal communication, stress, social support and emotion regulation. Statistical properties e.g. size and power was taken into account to ensure

objectivity and validity of the study, also, statistical significance level was set at $p < 0.05$.

CHAPTER FOUR

RESULTS AND DISCUSSIONS

Introduction

This chapter presents the findings of the research conducted to evaluate psychosocial factors as predictors of recurrence of bipolar disorder among patients at the main psychiatric hospitals in Ghana. It covers the descriptive, composite, correlation and linear regression analysis which lead to the results of the four specific objectives. The study focused on four key variables, emotion regulation, interpersonal communication, stress, and social support. The chapter ends with a discussion based on the results gathered.

Sociodemographic details

This part presents the biodata of participants. This included respondents' gender, age range, marital status, educational level and occupational status.

Table 1: *Demographic details of respondents*

Variable	Category	Frequency (n=217)	Percentage (%)
Gender	Female	138	63.6
	Male	79	36.4
Age	18-25	34	15.7
	26-35	124	57.1
	36-45	34	15.7
	46-55	25	11.5
Marital status	Single	99	45.6
	Married	103	47.5
	Divorced	15	6.9
Education	No formal education	9	4.1
	Primary/Junior high school education	20	9.2
	Senior High school education/ O& A Level	30	13.8
	Tertiary education	158	72.8
Occupation	Employed	162	74.7
	Unemployed	55	25.3

Source: Field Data, 2020

The majority of the participants,138 as seen in Table 1 representing, 63.6% were females while 79 representing, 36.4% were males and this implies that data was collected from both genders. The lifetime incidence of BD is approximately 1:1 in men and women, although the incidence of manic episodes and unipolar mania is higher in men with the disease (Diflorio & Jones, 2010). Research suggests an increased prevalence of BD II and hypomania in women, with general functioning being significantly better for men with this BD subtype (Diflorio & Jones, 2010). Reports of sex differences in psychosis symptoms are inconsistent, with some studies finding an

increased prevalence in men versus women (Morgan, Mitchell, & Jablensky, 2005) or vice versa (Bräunig, Sarkar, Effenberger, Schoofs, & Krüger, 2009) and others finding no differences at all (Kessing, 2004).

Most extant studies indicate an equal age of onset across the sexes, although some have reported that women may be slightly older than men when the disease is manifested (Diflorio & Jones, 2010; Kawa et al., 2005; Robb et al., 1998; Suppes et al., 2001). Recurrent depressive polarity and a depressive or mixed onset has been shown to predominate in women with BD (Kessing, 2004; Viguera, Baldessarini, & Tondo, 2001), while mania may be more prevalent in men at first onset (Kawa et al., 2005; Suppes et al., 2001). Owing to inconsistent literature, it is not clear if there are sex differences in the *number* of depressive or manic episodes (Baldassano et al., 2005; Diflorio & Jones, 2010; Robb et al., 1998). However, some studies do show an increased use of antidepressant treatment in women with BD, as well as of benzodiazepines, ECT, and psychotherapy (Baldassano et al., 2005; Karanti et al., 2015). On the other hand, men appear to be treated with lithium more often (Karanti et al., 2015), but sex differences in its clinical response are not evident (Viguera et al., 2001). Women with BD have much increased rates of hypothyroidism (when lithium-treated) and are at increased risk of migraine, compared to men; while rates of metabolic syndrome appear to be equal across the sexes (Diflorio & Jones, 2010; Saunders et al., 2014).

Again, out of the two hundred and seventeen respondents, 124 (57.1%) representing the majority of respondents, were 26 to 35 years of age which implies that most of the respondents were adults. The findings are within the range predicted by most studies as evidence from community studies is

highlighted by the clinical description of bipolar disorder as an episodic disorder that usually emerges in early adulthood, with a mean age of onset estimated to be between age 20 and 30 (Pini et al., 2005; Waugh et al., 2014, Dagani et al., 2019). However, in recent years, it has been acknowledged that the age of onset in bipolar disorder is not a simple unimodal distribution, but can better be explained by a mixture of distributions. Evidence has suggested that BD can start at any age (Bolton et al., 2021).

From the data in Table 1, not much difference was observed in relation to respondents' marital status, with results showing 47.5% as married and 45.6% as single with a low 6.9% being divorced. Likewise, the majority 158 (72.8%) of the respondents had tertiary education. This implies that the respondents have adequate knowledge and can produce accurate data. Finally, 162 representing (74.7%) of the respondents were employed and 55 (25.3%) were unemployed.

Measurement Model Evaluation

Cronbach's Test

Table 2: *Cronbach's Alpha result*

Variable	Cronbach's Alpha	Questions Item
Difficulty in emotion regulation scale	0.922	16
Interpersonal communication skill	0.711	40
Perceived stress scale	0.720	10
Perceived social support	0.829	12

As shown in Table 2, a Cronbach test which measures the consistency of the instrument used for the study indicated that all four variables were acceptable as the alpha coefficient was above 0.7. Thus, difficulty emotionally

in regulation scale (r=0.922), interpersonal communication skill (r=0.771), perceived stress scale (r=0.720) and perceived social support (r=0.829) were eligible to be used for the study.

Normality Test

Table 3: *Normality Test results*

Variable	Skewness Statistics	St. Error	Kurtosis Statistics	St. Error
Difficulties in Emotional Regulation Scale (EMOREG)	0.457	0.195	-0.747	0.329
Interpersonal Communication Skills Inventory (COMSKIL)	0.195	0.165	-0.563	0.329
Perceived Stress Scale (PSS)	0.035	0.165	-1.616	0.329
Multidimensional Scale of Perceived Social Scale Support (MSPSS)	-1.181	0.165	0.961	0.329

Source: Field Data, 2020

To use regression analysis, it was essential for the normality of the data to be checked with the help of Skewness and Kurtosis measures as shown in Table 3. Based on the sample size of 217 which falls between the medium range of sample size, the process adopted to determine if a test is normally distributed or not in terms of score is between -3.29 to 3.29. As revealed in the table, all the indicators used in the study were approximately normally distributed.

Descriptive Analyses

Difficulties in Emotional Regulation Scale (DERS-16)

This section entails the descriptive analysis which assessed the difficulty in regulating emotions amongst the respondents.

Table 4: *Difficulties in Emotional Regulation Scale (DERS-16)*

Variable	N	Min	Max	Mean (x)	Std. Dev
I struggle to make sense of my feelings.	217	1.00	4.00	1.89	0.94
I'm undecided about how I feel.	217	1.00	5.00	1.93	0.91
I have difficulty getting work done when I'm upset.	217	1.00	4.00	2.25	0.94
When I'm upset, I lose control of myself.	217	1.00	4.00	1.98	0.97
When I'm upset, I have the impression that I'll be that way for a long time.	217	1.00	4.00	1.70	0.87
I believe that when I'm upset, I'll end up feeling depressed.	217	1.00	5.00	1.96	1.07
When I'm upset, it's tough for me to concentrate on anything else.	217	1.00	5.00	2.24	1.04
I feel out of control when I'm upset.	217	1.00	5.00	1.89	0.99
When I'm upset, I feel bad about myself because I'm angry.	217	1.00	5.00	2.23	1.11
When I'm upset, I feel I'm weak.	217	1.00	5.00	2.33	1.37
When I'm upset, I have a hard time controlling my behavior.	217	1.00	5.00	2.10	1.21
I generally feel as if there is nothing I can do to make myself feel better when I am upset.	217	1.00	5.00	2.19	1.33
I become angry with myself for feeling upset	217	1.00	5.00	2.12	1.14
I start to feel bad about myself when I'm irritated.	217	1.00	5.00	2.25	1.31
When I'm in a bad mood, I have difficulty thinking.	217	1.00	5.00	2.14	1.11
When I'm upset my emotions feel overwhelming	217	1.00	5.00	2.36	1.17

Source: Field Data, 2020

Table 4 as illustrated, presents the level of difficulty in emotion regulation. Table 4 as illustrated, presents the level of difficulty in emotion regulation. In analyzing the difficulties in emotional regulation scale among the respondents, the scale ranged from 1-5. The minimum range is 1 and the maximum range is 5. This explains that, between the scale of 1-5, respondents

answered 4 questions with a minimum of 1 and a maximum of 4 whereas 12 items had a minimum of 1 and a maximum of 5 from the analysis.

It was revealed that sometimes respondents faced difficulty in making sense out of their feelings (x=1.89, Std=0.94), were confused about how they felt (x=1.93, Std=0.91), faced difficulty getting work done when upset (x=2.25, Std=0.94) and became out of control when upset (x=1.98, Std=0.97).

Similarly, the results demonstrated that respondents when upset, remained that way for a long time (x=1.70, Std=0.87), ended up feeling very depressed (x=1.96, Std=1.07), faced difficulty focusing on other things (x=2.24, Std=1.04) and felt out of control (x=1.89, Std=0.99). Likewise, respondents sometimes when upset, felt ashamed with themselves for feeling that way (x=2.23, Std=1.11), felt weak (x=2.33, Std=1.37), faced difficulty controlling behaviours (x=2.10, Std=1.21) and felt that there was nothing to do to feel better (x=2.19, Std=1.33).

Finally, respondents when sometimes upset, became irritated for feeling that way (x=2.12, Std=1.14), started to feel bad (x=2.25, Std=1.31), faced difficulty thinking about anything else (x=2.14, Std=1.11) and felt emotionally overwhelmed (x=2.36, Std=1.17).

Interpersonal Communication Skills Inventory

This section entails the descriptive analysis which assessed the communication skill of the respondents.

Table 5: *Interpersonal communication skill*

Variable	N	Min	Max	Mean (x)	Std. Dev
Is it tough for you to converse with others?	217	1.00	3.00	2.14	0.66
Do others tend to put words in your mouth or finish your sentences for you while you're attempting to explain something?	217	1.00	3.00	2.08	0.75
Do your words always come out the way you want them to?	217	1.00	3.00	2.56	0.62
Do you have trouble expressing yourself when your thoughts differ from those of others?	217	1.00	3.00	2.03	0.73
Do you presume the other person understands what you're trying to convey and rely on him or her to ask you questions?	217	1.00	3.00	2.18	0.72
When you chat to others, do they seem interested and attentive?	217	1.00	3.00	2.40	0.66
Is it easy for you to tell how people are reacting to what you're saying when you're speaking?	217	1.00	3.00	2.31	0.63
Do you inquire as to how the other person feels about the point you're attempting to make?	217	1.00	3.00	2.18	0.61
Are you conscious of how your voice tone affects others?	217	1.00	3.00	2.43	0.70
Do you try to talk about topics that are interesting to both you and the other person when you're conversing?	217	1.00	3.00	2.37	0.69
Do you tend to talk more than the other person during a conversation?	217	1.00	3.00	2.06	0.64
Do you ask the other person questions when you don't understand what they've said in a conversation?	217	1.00	3.00	2.51	0.59
Do you ever try to guess what the other person is going to say before they are done speaking?	217	1.00	3.00	1.90	0.58
Do you ever find yourself not paying attention while talking with others?	217	1.00	3.00	1.90	0.64
Can you identify the difference between what someone is saying and how they are feeling during a conversation?	217	1.00	3.00	1.84	0.68
Do you clarify what you heard after the other person is done speaking before responding?	217	1.00	3.00	1.84	0.73
Do you tend to finish sentences or provide words for the other person in conversation?	217	1.00	3.00	2.10	0.73
Do you find yourself focusing on facts and det ails during a conversation, but missing the emo tional tone of the speaker's voice?	217	1.00	3.00	1.95	0.75
Do you wait till the other person has finished s peaking before responding to what she or he ha s said in a conversation?	217	1.00	3.00	1.94	0.69
Is it difficult for you to understand things from another person's perspective?	217	1.00	3.00	2.12	0.71

Is it tough for you to listen to or accept constructive criticism from others?	217	1.00	3.00	2.22	0.72
Do you avoid saying something that you feel may irritate or aggravate someone?	217	1.00	3.00	2.26	0.62
Do you discuss with the other person when they hurt your feelings?	217	1.00	3.00	2.35	0.61
Do you try to put yourself in the shoes of the other person during a conversation?	217	1.00	3.00	2.21	0.60
Do you feel uncomfortable when someone compliments you?	217	1.00	3.00	2.24	0.73
Do you find it difficult to disagree with others because you are concerned that they may become angry?	217	1.00	3.00	2.14	0.76
Do you have trouble complimenting or praising others?	217	1.00	3.00	2.30	0.73
Do people say that you always think you are right?	217	1.00	3.00	2.33	0.69
Do you notice that when you disagree with someone's point of view, they become defensive?	217	1.00	3.00	1.79	0.60
Do you make it easier for others to understand you by expressing your feelings?	217	1.00	3.00	2.18	0.61
When the other person's feelings come up in conversation, do you tend to shift the subject?	217	1.00	3.00	2.12	0.68
When someone disagrees with you, does it bother you a lot?	217	1.00	3.00	1.97	0.71
When you're upset with someone, do you find it difficult to think clearly?	217	1.00	3.00	1.94	0.75
Can you address a disagreement with another person without becoming angry?	217	1.00	3.00	2.30	0.63
Are you happy with how you handle disagreements with others?	217	1.00	3.00	2.30	0.70
When someone irritates you, do you sulk for a long time?	217	1.00	3.00	2.13	0.71
Do you offer an apology to someone whose feelings you may have hurt?	217	1.00	3.00	2.47	0.65
Do you acknowledge it when you're wrong about something?	217	1.00	3.00	2.41	0.68
When someone expresses their feelings in a conversation, do you avoid or switch the subject?	217	1.00	3.00	2.14	0.73
Do you find it difficult to continue a conversation with someone who is upset?	217	0.00	3.00	1.88	0.63

Source: Field Data, 2020

Table 5 illustrates the interpersonal communication skills inventory of respondents. It was revealed that the respondents sometimes faced difficulty talking to other people (x=2.14, Std=0.66), tend to finish their sentences

(x=2.08, Std=0.75), in conversation, words usually come out as liked (x=2.56, Std=0.62) and faced difficulty expressing ideas when they differed from that of others (x=2.03, Std=0.73).

In the same way, the results indicated that respondents sometimes assumed that the other person knows what they are trying to say (x=2.18, Std=0.72), seemed interested and attentive when talking to them (x=2.40, Std=0.66), recognized how others react when speaking to them (x=2.31, Std=0.63), asked the other person to know how they felt about the point you are making (x=2.18, Std=0.61) and are aware of how their tone of voice may have affected others (x=2.43, Std=0.70).

Likewise, the respondents talked about things of interest in conversation (x=2.37, Std=0.69), tend to do more talking than the other person (x=2.06, Std=0.64), also, asked the other person for clarification when they did not understand what was being said (x=2.51, Std=0.59), tried to figure out what the other person was going to say before they finished talking (x=1.90, Std=0.58), and found themselves not attentive while in conversation with others (x=1.90, Std=0.64).

Again, the results showed that the respondents easily told the difference between what the person is saying and how they felt (x=1.84, Std=0.68), clarified what they heard after the other person had finished speaking (x=1.84, Std=0.73), tend to finish sentences or supply words for the other person (x=2.10, Std=0.73), found themselves paying attention to facts and details (x=1.95, Std=0.75), and allowed the other person to finish talking before reacting (x=1.94, Std=0.69).

In addition, the respondents faced difficult to see things from the other person's point of view (x=2.12, Std=0.71), faced difficult to hear and accept constructive criticism (x=2.22, Std=0.72), refrained from saying something they thought would upset someone (x=2.26, Std=0.62), discussed their feelings with others when hurt (x=2.35, Std=0.61) and tried to put themselves in the other person's shoes (x=2.21, Std=0.60). Furthermore, the respondents sometimes become uneasy when someone pays them a compliment (x=2.24, Std=0.73), found it difficult to disagree with others because they are afraid (x=2.14, Std=0.76), found it difficult to compliment or praise others (x=2.30, Std=0.73), others seemed to remark them for always being right (x=2.33, Std=0.69), found that others seemed to get defensive when disagreed to their point of view (x=1.79, Std=0.60), and helped others to understand them by saying how they felt (x=2.18, Std=0.61).

Also, the respondents had the tendency to change the subject when the other person's feelings entered into the discussion (x=2.12, Std=0.68), got upset when someone disagreed with them (x=1.97, Std=0.71), faced difficulty to think clearly when angry with someone (x=1.94, Std=0.75), discussed a problem with another person without getting angry (x=2.30, Std=0.63), and satisfied with how they handle differences with others (x=2.30, Std=0.70).

Finally, the respondents sulked for a long time when someone upset them (x=2.13, Std=0.71), apologized to someone whose feelings have been hurt (x=2.47, 0.65), admitted when wrong about something (x=2.41, Std=0.68), avoided or changed the topic when someone expressed his or her feelings (x=2.14, Std=0.73) and found difficulty continuing the conversation when someone got upset (x=1.88, Std=0.63).

Perceived Stress Scale (PSS)

This section entails the descriptive analysis which assessed the perceived stress level of the respondents.

Table 6: *Perceived stress level*

Variable	N	Min	Max	Mean (x)	Std. Dev
How many times in the last month have you been annoyed because something unexpected happened?	217	0.00	4.00	2.18	1.11
How many times in the previous month have you felt helpless to control the important aspects of your life?	217	0.00	4.00	2.21	1.21
How often have you felt nervous and "stressed" in the last month?	217	0.00	4.00	2.10	1.23
How often in the previous month have you felt confident in your capacity to deal with your personal problems?	217	0.00	4.00	2.68	1.03
How frequently have you felt that things are going your way in the last month?	217	0.00	4.00	2.49	1.18
How frequently in the last month did you find that you couldn't cope with all the things you had to do?	217	0.00	4.00	1.88	1.07
How often in the previous month have you been able to control annoyances in your life?	217	0.00	4.00	2.74	1.11
How many times in the last month did you feel you were on top of things?	217	0.00	4.00	2.29	1.17
How many times in the previous month have you been angered by circumstances beyond your control?	217	0.00	4.00	1.89	1.02
How many times in the last month have you felt as if difficulties were piling up so high that you couldn't manage them?	217	0.00	4.00	1.97	1.33

Source: Field Data, 2020

Table 6 presents the perceived stress level of respondents. It was shown that due to something that happened unexpectedly, the respondents often got upset (x=2.18, Std=1.11), felt unable to control the important things in life (x=2.21, Std=1.21), often felt nervous and stressed (x=2.10, Std=1.23),

often felt confident about ability to handle personal problems (x=2.68, Std=1.03) and felt that things are going their way (x=2.49, Std=1.18).

Finally, the respondents could not cope with all the things that they had to do (x=1.88, Std=1.07), able to control irritations in life (x=2.74, Std=1.11), felt were on top of things (x=2.29, Std=1.17), angered because of things that were outside of control (x=1.89, Std=1.02) and felt difficulties were piling up so high that could not overcome them (x=1.97, Std=1.33).

Multidimensional Scale of Perceived Social Scale Support (MSPSS)

This section entails the descriptive analysis which assessed the perceived social scale support of the respondents. In all 12 questions were used to generate results for this scale.

Table 7: *Social Support scale*

Variable	N	Min	Max	Mean (x)	Std. Dev
When I'm in need, there's a special person who comes to my rescue.	217	1.00	7.00	5.32	1.50
Is there someone special with whom you can share your joys and sorrows?	217	2.00	7.00	5.64	1.28
My family makes an effort to assist me.	217	2.00	7.00	5.35	1.34
My family provides me with the emotional support and assistance I need.	217	2.00	7.00	5.13	1.45
I have a special person in my life who is a true source of comfort to me.	217	2.00	7.00	5.15	1.64
My friends go out of their way to assist me.	217	1.00	6.00	4.21	1.48
When things go wrong, I know I can rely on my friends.	217	1.00	7.00	4.06	1.62
My family and I are able to discuss my difficulties.	217	1.00	7.00	4.72	1.65
I have friends with whom I can share my joys and sorrow.	217	2.00	7.00	5.06	1.42
There is someone important in my life who is concerned about my feelings.	217	2.00	7.00	5.73	1.50
My family is eager to assist me in making decisions.	217	1.00	7.00	5.05	1.44
I can discuss my difficulties with my friends.	217	1.00	7.00	4.65	1.53

Source: Field Data, 2020

As shown in Table 7, this presents the perceived social support of respondents. As illustrated, the respondents mildly agreed that there are special persons who are around when they are in need (x=5.32, Std=1.50), there is a special person with whom they share joys and sorrows (x=5.64, Std=1.38), the family tries to help them (x=5.35, Std.=1.34) and receive emotional help and support needed from their family (x=5.13, Std.=1.45).

Likewise, the respondents mildly agreed that they have a special person who is a real source of comfort (x=5.15, Std.=1.64), friends try to help (x=4.21, Std=1.48), friends can be counted on when things go wrong (x=4.06, Std.=1.62) and capable of talking to family about problems (x=4.72, Std.=1.65).

Similarly, the respondents mildly agreed that they do have friends with whom they can share joys and sorrows with (x=5.06, Std.=1.42), there is a special person who cares about their feelings (x=5.73, Std.=1.50), their family is willing to help in decision making (x=5.05, Std=1.44) and capable of talking about their problems with friends (x=4.65, Std.=1.53).

Composite Analysis

This section presents the composite results for the four independent variables. This included difficulty in emotional regulation, interpersonal communication skill, perceived stress and social support.

Table 8: *Composite result*

Variable	N	Min	Max	Mean (x)	Std. Dev
Difficulties in emotional regulation scale	217	18.00	64.00	33.55	11.98
The interpersonal communication skill inventory	217	66.00	104.00	84.42	8.81
Perceived stress scale	217	0.00	40.00	22.43	6.12
The multidimensional scale of perceived social support	217	40.00	77.00	60.07	10.53

Source: Field Data, 2020

Table 8, presents the composite results of the independent variables (difficult in emotional regulation, interpersonal communication skill, perceived stress and perceived social support). As shown, concerning difficulties in emotional regulation scale there was a mean of 33.55 and a standard deviation 11.98 which implies that the respondents were capable to an extent regulating their emotions. With regards to interpersonal communication skills inventory, there was a mean of 84.42 and a standard deviation of 8.81 which implies that respondents were capable of communicating with others without difficulties. In the same way, in relation to the perceived stress of respondents, there was a mean of 22.43 and standard deviation of 6.12 which implies that the respondents were able to manage their level of stress they experienced. Finally, with regards to perceived social support, there was a mean of 60.07 and a standard deviation of 10.53 which implies that the respondents do get social support massively from their family and friends.

Response category

This table consists of the category of difficulty in regulating emotions. To achieve this all correct answers were labelled as one (1) and wrong answer zero (0).

Table 9: *Difficulties in emotional regulation scale*

	Frequency	**Percentage (%)**
Low	147	67.7
High	70	32.3
Total	**217**	**100.0**

Where a total score of 40 and below = Low difficulty in emotional regulation and 41 or more= High difficulty in emotional regulation

Source: Field Data, 2020

As noted in Table 4.9, less than a third 147 (67.7%) had high difficulty or more than two-thirds had low difficulty in regulating their emotions.

Table 10: *Interpersonal communication skills inventory*

	Frequency	**Percentage (%)**
Low	79	35.9
High	139	64.1
Total	**217**	**100.0**

Where a total score of less than 60= low Interpersonal communication skill and 60 and above= High Interpersonal communication skill

Source: Field Data, 2020

As indicated in Table 4.10, the majority 139 (64.1%) of the respondents had a high level of interpersonal communication skill.

Table 11: *Perceived stress scale*

Variable	**Frequency**	**Percentage (%)**
Low	76	35.0
High	141	65.0
Total	**217**	**100.0**

Where a total score of less than 20 =low level of perceived stress and 20 or more = High level of perceived stress

Source: Field Data, 2020

As presented in Table 4.11, more than half 141 (65.0%) of the respondents had a high perceived stress scale.

Table 12: *Multidimensional scale of perceived social support*

Variable	Frequency	Percentage (%)
Low	15	6.9
High	202	93.1
Total	**217**	**100.0**

Where a total score of less than 42 = low level of perceived social support and 42 or more = high level of perceived social support

Source: Field Data, 2020

As indicated in Table 12, the majority 202 (93.1%) of the respondents had a high perception of social support.

Table 13: *Recurrence of bipolar*

	Frequency	Percentage (%)
Low	59	27.2
High	158	72.8
Total	**217**	**100.0**

Source: Field Data, 2021

As depicted in Table 13, most 158 (72.8%) of the respondents had a high recurrence of bipolar relapse.

Research Question 1: How does emotion regulation in predicting recurrence of bipolar disorder?

This section answers the first research objective which is to pinpoint the role of difficulty in emotion regulation and recurrence of bipolar disorder. To achieve this a cross-tabulation of difficulty in emotional and recurrence of bipolar was analyzed. Furthermore, analysis of linear regression was made to identify the role of difficulty in emotion regulation and recurrence of bipolar disorder.

Table 14: *Bivariate Analysis of emotional regulation and recurrence of bipolar disorder*

Variable	Recurrence of bipolar		Total n(%)	Chi-Square value	P-value
	Low n(%)	High n(%)			
Difficulty in Emotional Regulation Scale				8.691a	0.00
Low	9(33.3)	98(66.7)	147(100.0)		
High	10(14.3)	60(85.7)	70(100.0)		
Total	**59(27.2)**	**158(72.8)**	**217(100.0)**		

Source: Field Data, 2020

As presented in Table 14, of the 147 respondents who had low difficulty in emotional regulation, most 98 (66.7%) had a high recurrence of bipolar and 49 (33.3%) had a low recurrence of bipolar. In the same, out of the 70 respondents who had a high difficulty in emotional regulation, most 60 (85.7%) had a high bipolar recurrence and 10 (14.3%) had a low bipolar recurrence.

Table 15: *Univariate Binary Logistic Regression Estimates of emotional regulation and recurrence of bipolar disorder*

Variables	High Versus Low recurrence of bipolar disorder			
	Odds Ratio	95% CI		P-value
		Lower	Upper	
Difficulty in Emotional Regulation				
Low *(ref)*	1			
High	1.333	1.157	1.707	0.04

Source: Field Data, 2020

Also, as indicated in Table 15, in the univariate analysis (crude), respondents who had a high difficulty in regulating emotions as compared to those with a lower difficulty in regulating their emotions had a higher odds

ratio (cOR=1.33, CI=1.157-1.707, p=0.04) in experiencing bipolar recurrences; therefore, the p≤ 0.05 indicated that the relationship was statistically significant.

Research Question 2: How does the level of knowledge of interpersonal communication and how it predicts recurrence of bipolar disorder?

This section answers the second research objective which is to ascertain whether or not patients' knowledge on interpersonal communication affects recurrence of bipolar disorder. To achieve this a cross-tabulation of respondents' interpersonal communication and recurrence of bipolar was analyzed. Furthermore, analysis of linear regression was made to identify the role of interpersonal communication and the recurrence of bipolar.

Table 16: *Bivariate Analysis of interpersonal communication and recurrence of bipolar*

	Recurrence of bipolar				
	Low n(%)	**High n(%)**	**Total n(%)**	**Chi-Square value**	**P-value**
Interpersonal communication skills inventory				1.454a	0.23
Low	25(32.1)	53(67.9)	78(100.0)		
High	34(24.5)	105(75.5)	139(100.0)		
Total	**59(27.2)**	**158(72.8)**	**217(100.0)**		

Source: Field Data, 2020

As illustrated in Table 16, out of the 78 respondents who had low interpersonal communication skills inventory, most 53 (67.9%) had a high recurrence of bipolar and 25 (32.1%) had a low recurrence of bipolar. In the same way, out of the 139 respondents who had a high communication skill,

most 105 (75.5%) had a high recurrence of bipolar and 34 (24.5%) had a low recurrence of bipolar.

Table 17: *Univariate Binary Logistic Regression Estimates of interpersonal communication skills inventory and recurrence of bipolar disorder*

	High Versus Low recurrence of bipolar disorder			
Variables	**Odds Ratio**	**95% CI**		**P-value**
		Lower	**Upper**	
Interpersonal communication skills inventory				
Low *(ref)*	1			
High	0.686	0.372	1.267	0.00

Source: Field Data, 2020

Also, as indicated in Table 17 in the multivariate analysis (crude), respondents who had a high interpersonal communication skill as compared to those with a lower interpersonal communication skill had a lower odds ratio (cOR=0.686, CI=0.372-1.267, p=0.00) in experiencing bipolar recurrences; therefore, the p≤ 0.01 indicated that the relationship was statistically significant.

Research Question 3: What is the relationship between stress and rate of recurrence of bipolar disorder among patients at the two psychiatric hospitals?

This section answers the third objective of the study which is to identify the relationship between stress rate and recurrence of bipolar disorder. To achieve this, a cross-tabulation of respondents' stress rate and recurrence of bipolar was analyzed. Furthermore, analysis of linear regression was made to identify the role of stress and rate of recurrence of bipolar.

Table 18: *Bivariate Analysis of stress and rate of recurrence of bipolar*

	Recurrence of bipolar				
	Low n (%)	**High n (%)**	**Total n (%)**	**Chi-Square value**	**P-value**
Perceived Stress Scale				88.034a	0.00
Low	50(65.8)	26(34.2)	76(100.0)		
High	9(6.4)	132(93.6)	141(100.0)		
Total	**59(27.2)**	**158(72.8)**	**217(100.0)**		

Source: Field Data, 2020

As depicted in Table 18, out of the 76 respondents who had a perceived low-stress level, most 50 (65.8%) had a low recurrence of bipolar and 26 (34.2%) had a high recurrence of bipolar. In the same way, out of the 141 respondents who had a high perceived stress level, most 132 (93.6%) had a high recurrence of bipolar and 9 (6.4%) had low recurrence of bipolar.

Table 19: *Univariate Binary Logistic Regression Estimates of stress and recurrence of bipolar disorder*

	High Versus Low recurrence of bipolar disorder			
Variables	**Odds Ratio**	**95% CI**		**P-value**
		Lower	**Upper**	
Perceived Stress Scale				
Low *(ref)*	1			
High	0.035	0.016	0.081	0.00

Source: Field Data, 2020

Also, as indicated in Table 19 in the univariate analysis (crude), respondents who had a high perceived stress scale as compared to those with a lower perceived stress scale had a lower odds ratio (cOR=0.035, CI=0.016-0.081, p=0.00) in experiencing bipolar recurrences; therefore, the p≤ 0.01 indicated that the relationship was statistically significant. The results also

suggest that respondents perceived stress scale and recurrence of bipolar is statistically significant.

Research Question 4: What is the impact of social support as a predictor of recurrence of bipolar disorder?

This section answers the fourth objective of the study which is to identify the impact of social support as a predictor of recurrence of bipolar disorder. To achieve this, a cross-tabulation of respondents' social support and recurrence of bipolar was analyzed. Furthermore, analysis of linear regression was made to identify the impact of social support and recurrence of bipolar.

Table 20: *Bivariate Analysis of social support and recurrence of bipolar*

Variable	**Recurrence of bipolar**		**Total n (%)**	**Chi-Square value**	**P-value**
	Low n (%)	**High n (%)**			
The Multidimensional Scale of Perceived Social Support				0.307a	0.58
Low	5(33.3)	10(66.7)	15(100.0)		
High	54(26.7)	148(73.3)	202(100.0)		
Total	**59(27.2)**	**158(72.8)**	**217(100.0)**		

Source: Field Data, 2020

As presented in Table 20, out of the 15 respondents who had a low level of perceived social support, the majority 10 (66.7%) had a high recurrence of bipolar. Likewise, out of the 202 respondents who had a high perceived social support, the majority 158 (72.8%) had a high recurrence of bipolar and 54 (26.7%) had a low recurrence of bipolar.

Table 21: *Univariate Binary Logistic Regression Estimates of social support and recurrence of bipolar disorder*

	High Versus Low recurrence of bipolar disorder			
Variables	**Odds Ratio**	**95% CI**		**P-value**
		Lower	**Upper**	
The Multidimensional Scale of Perceived Social Support				
Low *(ref)*	1			
High	0.738	0.239	2.232	0.00

Source: Field Data, 2020

Also, in Table 21 the univariate analysis (crude), respondents who had a high perceived social support as compared to those with a lower perceived social support had a lower odds ratio (cOR=0.738, CI=0.239-2.232, p=0.00) in experiencing bipolar recurrences; therefore, the p≤ 0.01 indicated that the relationship was statistically significant. The results also suggest that respondents perceived social support and recurrence of bipolar is statistically significant.

Discussion

Evaluate the role of emotion regulation in predicting recurrence of bipolar disorder

The results of the study revealed that out of the 170 bipolar patients who had low difficulty in emotional regulation, most (66.7%) had a high recurrence of bipolar and (33.3%) had a low recurrence of bipolar. In the same way, out of the 70 bipolar patients who had a high difficulty in emotional regulation, most (85.7%) had a high bipolar recurrence and (14.3%) had a low bipolar recurrence. The result, therefore, revealed that bipolar patients had a high difficulty in regulating emotions as compared to those with a lower difficulty in regulating their emotions experienced a higher odds ratio of

bipolar recurrences. Thus, patients who find it difficult in exerting control over their own emotion usually or often experience mood swings or changes is a very erratic and extreme manner. This is to say, patients who found it difficult to make sense out of what they feel, find it overwhelming or out of control when upset and eventually feel depressed due to the inability to control their feelings when upset is likely to experience episodes of bipolar disorder mania, unlike bipolar patients who are capable of staying in control after getting upset after a considerable moment of getting upset. The inability to control one's emotions can cause persistent feelings of sadness and loss of interest among bipolar disorder patients and this mood disorder may affect their personal lives.

This result is therefore supported by a research conducted by Becerra et al. (2015), which revealed that both residual depression along with problems with emotion regulation were predictors of poor psychosocial functioning. Another study which backs the current result is by Becerra et al. (2016) which revealed that both the bipolar disorder and the patients suffering from depression were not able to regulate their emotions appropriately when at faced with difficulties. Also, bipolar disorder patients found difficulty assessing strategies that could be used to regulate their emotion.

Explore the knowledge of patients on interpersonal communication and how it predicts recurrence of bipolar disorder.

Results of the study revealed that out of the 78 bipolar patients who had low interpersonal communication skills inventory, most (67.9%) had a high recurrence of bipolar and (32.1%) had a low recurrence of bipolar. In the same way, out of the 139 bipolar patients who had a high communication skill,

most (75.5%) had a high recurrence of bipolar and (24.5%) had a low recurrence of bipolar. The results revealed that bipolar patients who had a high interpersonal communication skill as compared to those with a lower interpersonal communication skill had a lower odds ratio in experiencing bipolar recurrences. The results also suggest that the interpersonal communication skill and recurrence of bipolar is statistically significant. This implies that the bipolar patients who had poor interpersonal communication skills tend to have a frequent recurrence of bipolar. Thus, bipolar patients who find it difficult to get a message across to their friends or family, find it difficult to express their ideas or recognize how others react to what they say are likely to experience relapses of bipolar unlike those who are capable of talking about things that interest both them and their listeners, identify when others find what they talk about interesting and pay attention.

Consequently, bipolar patients who do fall at a disadvantage in communication may experience a poor social life and have their interpersonal functioning compromised leading to severe psychosocial dysfunction. This result is in line with a study conducted by, Sigel et al. (2015) which observed bipolar disorder patients and their families and discovered that greater mood episodes were related to worse relationships. Thus, the degree of mood changes goes with how patients articulate themselves and hence communicate less with people around them.

Find a relationship between stress and rate of recurrence of bipolar disorder.

The study revealed that out of the 76 bipolar patients who had a perceived low-stress level, most (65.8%) had a recurrence of bipolar and

(34.2%) had a high recurrence of bipolar. In the same way, out of the 141 bipolar patients who had a high perceived stress level, most (93.6%) had a high recurrence of bipolar and (6.4%) had a low recurrence of bipolar. The study further revealed that bipolar patients who had a high perceived stress scale as compared to those with a lower perceived stress scale had a lower odds ratio in experiencing bipolar recurrences. This implies that bipolar patients who were capable of handling or managing their stress level were less likely to experience bipolar recurrences.

The inability to recover from stress or adjust to stress among patients with bipolar as indicated from the results of the study may trigger a recurrence and also cause shifts in mood. The current study's result is backed by a research carried out by Kemmer et al. (2015), which revealed that both life event load and recurrent had a relationship with the risk of significantly increased subsequent admissions of the patients with bipolar. Again, a study by Subramanian et al. (2017) supports the current study as it revealed that most patients who had an altered sleep pattern or family conflict which leads to stress suffer a high level of bipolar disorder recurrences.

Investigate the impact of social support as a predictor of recurrence of bipolar disorder

Results of the study indicate that out of the 15 bipolar patients who had a low scale of perceived social support, the majority (66.7%) had a high recurrence of bipolar. Likewise, out of the 202 bipolar patients who had a high perceived social support, the majority (72.8%) had a high recurrence of bipolar and (26.7%) had a low recurrence of bipolar. The results further revealed that patients with bipolar who had a high perceived social support as

compared to those with a lower perceived social support had a lower odds ratio in experiencing bipolar recurrences. This implies that bipolar patients who do have friends, family and people within the community to provide emotional, physical and other tangible or intangible support were less likely to experience recurrence of bipolar.

Study results by Eidelman et al. (2015), support the current study as it revealed that the bipolar patients reported lower social support and higher social strain than the controlled group. Also, there was a correlation between social strain and manic and depressive symptoms within the bipolar group. Cohen et al. (2004), supports the current study as they revealed a lower level of social support including less availability and poor-quality close relations and predicted depressive recurrence of occurrences of bipolar disorder.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter provides an appropriate overview of the research results on which the researcher concludes with regard to the research objectives. It includes the summary which entails the overview of the study and key findings identified. Recommendations were made based on these findings

Summary

This section comprises the overview of the research that entails the reason for the research and the research method adopted to answer the research questions. It also details the key findings of each specific objective.

Overview

The primary objective of this research is to evaluate psychosocial factors as determinants of recurrence of bipolar disorder among patients in Ankaful psychiatric hospital and Accra psychiatric hospital. Four specific objectives were established in answering the main objective, they were to evaluate the role of emotion regulation in predicting recurrence of bipolar disorder, explore the knowledge of patients on interpersonal communication and how it predicts recurrence of bipolar disorder, find a relationship between stress and rate of recurrence of bipolar disorder and investigate the impact of social support as a predictor of recurrence of bipolar disorder.

The quantitative research approach was used to generate numeric data to reach statistical results in answering the research questionnaire. A

questionnaire was used for data collection from 217 patients with bipolar. The data collected was then coded and processed using the Statistical Packaging for Social Science (SPSS) version 24 and analyzed using the descriptive analysis thus, frequency, percentage, mean and standard deviation.

Key Findings

Findings of the research showed that people suffering from bipolar disorder had high difficulty in regulating emotions as compared to those with a lower difficulty in regulating their emotions, and had a higher odds ratio (cOR=1.33, CI=1.157-1.707, p>0.04) in experiencing bipolar recurrences.

Secondly, the findings revealed that the patients with bipolar disorder had a high interpersonal communication skill as compared to those with a lower interpersonal communication skill, and had a lower odds ratio (cOR=0.686, CI=0.372-1.267, p>0.00) in experiencing bipolar recurrences.

Findings in relation to the third objective revealed that people with bipolar disorder experienced a high perceived stress as compared to those with a lower perceived stress, and had a lower odds ratio (cOR=0.035, CI=0.016-0.081, p>0.00) in experiencing bipolar recurrences.

Lastly, findings discovered that people with bipolar disorder had high social support in comparison with those with least social support, and had a lower odds ratio (cOR=0.738, CI=0.239-2.232, p>0.00) in experiencing bipolar recurrences.

Conclusion

While bipolar disorder is one of the commonly diagnosed mood disorders in the major psychiatric hospitals in Ghana, there is a palpable lack of studies on its prevalence, course and recurrence in Ghana. Given the

cyclical and often chronic nature of bipolar disorders, the study sought to examine psychosocial predictors that trigger the recurrence of bipolar disorder illness. Having conducted a thorough data collection and analysis, it was realised that psychosocial variables (emotion regulation, stress, interpersonal communication, and social support) adversely impact and play a major role in bipolar disorder disease. Subsequently from the study, majority of bipolar disorder patients found it difficult in engaging in goal directed behaviour when distressed, lacked emotional awareness and had limited access to emotion regulation techniques. This means that they handled poorly the daily emotional fluctuations, making them highly prone to a recurrence of their condition. This confirmed that, difficulty in assessing strategies to regulate one's emotions has a strong association with recurrent episodes of bipolar disorder.

In examining the significance of the relationship between stress and rate of recurrence, the study found out that the majority of respondents that experienced more stressful situations daily got affected by the feelings and thoughts about those situations and this increased their rate of recurrence. Stress was therefore a significant predictor of recurrence.

majority of respondents demonstrated that they have a firm grasp when it comes to sending messages, listening, giving and receiving feedback showing that they possess a good knowledge of communication skills per the study, yet, most of them had high recurrence of bipolar. This clearly shows that the respondents' high knowledge of interpersonal communication did not prevent a recurrence.

Recommendations

The following recommendations were made based on the findings of the research:

This current review has mapped and explored essential literature related to various associations between bipolar disorder and social support, interpersonal communication, emotion regulation and stress. And how they influence recurrence of bipolar disorder.

The literature suggests that the association between bipolar disorder and psychosocial variables are multifaceted and interconnected and that these psychosocial elements are crucial for the prevention of mental health problems in general and more especially the prognosis of bipolar disorder as it pertains to its cyclical nature.

Direct strategies can be recurrence prevention-oriented programmes like assertive training, psychoeducation on the importance of good interpersonal relationships and how they help buttress individuals during crisis of all sorts and rigorous stress management campaigns. Indirect psychosocial interventions such as help with emotional problems, direct financial support, prompt conflict resolution are also features that can boost psychosocial support and enhance better treatment outcomes.

Even though participant reported massive social support, seemed to be in control of their emotions and had no trouble communicating with others, which should have been key to improving the illness prognosis, it also came to light from the reviews that most patients still had more recurrent episodes of bipolar disorder. These psychosocial variables indeed if not enhanced in the treatment protocol of bipolar disorder, can negatively aggravate symptoms of

the disorder. Further in-depth research can be carried out on each particular type of variable and their impact on recurrence for detailed understanding of bipolar disorder treatment outcomes.

REFERENCES

Accra Psychiatric Hospital. (2017). *Psychiatric Hospital – Taking care of your psychiatry needs.* Retrieved from http://accrapsychiatrichospital.org/pages/about-us.php on 01/02/2021.

Adams, G., & AFI DZOKOTO, V. I. V. I. A. N. (2003). Self and identity in African studies. *Self and Identity*, *2*(4), 345-359.

Addai, I., & Adjei, J. (2014). Predictors of self-appraised health status in sub-Saharan Africa: The case of Ghana. *Applied Research in Quality of Life*, *9*(2), 233-253.

Aichberger, M. C., Bromand, Z., Montesinos, A. H., Temur-Erman, S., Mundt, A., Heinz, A., ... & Schouler-Ocak, M. (2012). Socio-economic status and emotional distress of female Turkish immigrants and native German women living in Berlin. *European psychiatry*, *27*(S2), S10-S16.

Akinyemi, O. O., Owoaje, E. T., Ige, O. K., & Popoola, O. A. (2012). Comparative study of mental health and quality of life in long term refugees and host populations in Oru-Ijebu, Southwest Nigeria. *BMC research notes*, *5*(1), 1-9.

Alloy, L. B., Abramson, L. Y., Urosevic, S., Walshaw, P. D., Nuusslock, R., Neeren, A. M. (2005). The psychosocial context of bipolar disorder: Environmental, cognitive, and developmental risk factors. *Clinical Psychology Review*, *25*(2005), 1043–1075.

Alloy, L. B., Abramson, L. Y., Walshaw, P. D., Cogswell, A., Grandin, L. D., Hughes, M. E., ... & Hogan, M. E. (2008). Behavioral approach system and behavioral inhibition system sensitivities and bipolar spectrum

disorders: Prospective prediction of bipolar mood episodes. *Bipolar disorders*, *10*(2), 310-322.

Altman, S., Haeri, S., Cohen, L. J., Ten, A., Barron, E., Galynker, I. I., & Duhamel, K. N. (2006). *Predictors of Relapse in Bipolar Disorder: A Review*.

American Psychiatric Association (APA). (2018). *What is mental illness?*. Retrieved from https://www.psychiatry.org/patients-families/what-is-mental-illness on 03/08/2021.

American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders 5th ed*. Arlington, VA: American Psychiatric Publishing.

Amissah, C. M., & Nyarko, K. (2020). Facing the Ills of Unemployment: The Role of Religiosity and Social Support. *Journal of religion and health*, *59*(5), 2577-2594.

Amoah, P. A., & Jørgensen, S. H. (2014). Social capital, health and health care among street children: a case study of street children in Kumasi metropolitan area, Ghana. *Social Capital*, *4*(4).

Amoakwa-Fordjour, K. G. (2019). *The breakdown of Ghana's mental healthcare.* Retrieved from https://www.qualityrights.com.gh/the-breakdown-of-ghanas-mental-healthcare/ on 03/08/2021.

Anakwa, N. O., Teye-Kwadjo, E., & Kretchy, I. A. (2021). Illness perceptions, social support and antiretroviral medication adherence in people living with HIV in the greater Accra region, Ghana. *Nursing open*, *8*(5), 2595–2604. https://doi.org/10.1002/nop2.797

Anderson, I. M., Haddad, P. M., Scott, J. (2012). Bipolar disorder. *BMJ (Clinical research ed.). 345*, e8508.

Andrade, L. H., Wang, Y. P., Andreoni, S., Silveira, C. M., Alexandrino-Silva, C., Siu, E. R., ... & Viana, M. C. (2012). Mental disorders in megacities: findings from the São Paulo megacity mental health survey, Brazil. *PloS one*, *7*(2), e31879.

Angst, J. (1998). The emerging epidemiology of hypomania and bipolar II disorder. *Journal Affect Disorder*, *50*, 143-151

Angst, J., Gamma, A., Sellaro, R., Lavori, P. W., & Zhang, H. (2003). Recurrence of bipolar disorders and major depression. *European archives of psychiatry and clinical neuroscience*, *253*(5), 236-240.

Arnetz, B. B. & Ekman, R. (Eds.) (2006). *Stress in health and disease.* Weinheim: Wiley–VCH Verlag.

Ayernor, P. K. (2016). Health and well-being of older adults in Ghana: social support, gender, and ethnicity. *Ghana Studies*, *19*(1), 95-129.

Baldessarini, R. J., Salvatore, P., Khalsa, H. M. K., & Tohen, M. (2010). Dissimilar morbidity following initial mania versus mixed-states in type-I bipolar disorder. *Journal of affective disorders*, *126*(1-2), 299-302.

Baldessarini, R. J., Undurraga, J., Vázquez, G. H., Tondo, L., Salvatore, P., Ha, K., ... & Vieta, E. (2012). Predominant recurrence polarity among 928 adult international bipolar I disorder patients. *Acta Psychiatrica Scandinavica*, *125*(4), 293-302.

Bauer, M., & Pfennig, A. (2005). Epidemiology of bipolar disorders. *Epilepsia*, *46*, 8-13.

Bauer, I. E., Ouyang, A., Mwangi, B., Sanches, M., Zunta-Soares, G. B., Keefe, R. S., ... & Soares, J. C. (2015). Reduced white matter integrity and verbal fluency impairment in young adults with bipolar disorder: a diffusion tensor imaging study. *Journal of psychiatric research*, *62*, 115-122.

Becerra, R., Bassett, D., & Harms, C. (2016). Emotion regulation in bipolar disorder: Self-report profiles and effects of psychotropic medication. *Clinical Neuropsychiatry, 13*(4/5), 59-67

Becerra, R., Cruise, K., Harms, C., Allan, A., Basset, D., Hood, H., & Murragy, G. (2015). Emotion regulation and residual depression predict psychosocial functioning in Bipolar Disorder: Preliminary study. *Universitas Psychologies, 14*(3), 855-864

Belete, H., Ali, T., & Legas, G. (2020). Relapse and Clinical Characteristics of Patients with Bipolar Disorders in Central Ethiopia: A Cross-Sectional Study. *Psychiatry Journal*, *2020*, 1–6.

Benight, C. C., & Bandura, A. (2004). Social cognitive theory of posttraumatic recovery: The role of perceived self-efficacy. *Behaviour Research and Therapy*, *42*(10), 1129-1148.

Berk, M. (2009). Neuroprogression: pathways to progressive brain changes in bipolar disorder. *International Journal of Neuropsychopharmacology*, *12*(4), 441-445.

Berk, M., Kapczinski, F., Andreazza, A. C., Dean, O. M., Giorlando, F., Maes, M., ... & Malhi, G. S. (2011). Pathways underlying neuroprogression in bipolar disorder: focus on inflammation, oxidative stress and

neurotrophic factors. *Neuroscience & biobehavioral reviews*, *35*(3), 804-817.

Berking, M., & Schwarz, J. (2014). Affect regulation training. *Handbook of emotion regulation*, *2*, 529-547.

Birmaher, B., & Axelson, D. (2006). Course and outcome of bipolar spectrum disorder in children and adolescents: a review of the existing literature. *Development and psychopathology*, *18*(4), 1023-1035.

Birmaher, B., Gill, M. K., Axelson, D. A., Goldstein, B. I., Goldstein, T. R., Yu, H., ... & Keller, M. B. (2014). Longitudinal trajectories and associated baseline predictors in youths with bipolar spectrum disorders. *American Journal of Psychiatry*, *171*(9), 990-999.

Bjureberg, J., Ljótsson, B., Tull, M. T., Hedman, E., Sahlin, H., Lundh, L. G., ... & Gratz, K. L. (2016). Development and validation of a brief version of the difficulties in emotion regulation scale: The DERS-16. *Journal of Psychopathology and Behavioral Assessment*, *38*(2), 284-296.

Blanco, C., Compton, W. M., Saha, T. D., Goldstein, B. I., Ruan, W. J., Huang, B., & Grant, B. F. (2017). Epidemiology of DSM-5 bipolar I disorder: results from the National Epidemiologic Survey on Alcohol and Related Conditions–III. *Journal of psychiatric research*, *84*, 310-317.

Bogic, M., Ajdukovic, D., Bremner, S., Franciskovic, T., Galeazzi, G. M., Kucukalic, A., ... & Priebe, S. (2012). Factors associated with mental disorders in long-settled war refugees: refugees from the former

Yugoslavia in Germany, Italy and the UK. *The British Journal of Psychiatry*, *200*(3), 216-223.

Bond, K., & Anderson, I. M. (2015). Psychoeducation for relapse prevention in bipolar disorder: a systematic review of efficacy in randomized controlled trials. *Bipolar disorders*, *17*(4), 349-362.

Bonful, H. A., & Anum, A. (2019). Sociodemographic correlates of depressive symptoms: a cross-sectional analytic study among healthy urban Ghanaian women. *BMC public health*, *19*(1), 1-9.

Bonnin, C. M., Sanchez-Moreno, J., Martinez-Aran, A., Sole, B., Reinares, M., Rosa, A. R., … & Torrent, C. (2011). Subthreshold symptoms in bipolar disorder: Impact on neurocognition, quality of life and disability. *Journal of Affective Disorders*, *136*(3), 650–659.

Breslau, J., Miller, E., Jin, R., Sampson, N. A., Alonso, J., Andrade, L. H., ... & Kessler, R. C. (2011). A multinational study of mental disorders, marriage, and divorce. *Acta Psychiatrica Scandinavica*, *124*(6), 474-486..

Brietzke, E., Mansur, R. B., Soczynska, J., Powell, A. M., & McIntyre, R. S. (2012). A theoretical framework informing research about the role of stress in the pathophysiology of bipolar disorder. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *39*(1), 1-8.

Brown, G. R., McBride, L., Bauer, M. S., Williford, W. O., & Cooperative Studies Program 430 Study Team. (2005). Impact of childhood abuse on the course of bipolar disorder: a replication study in US veterans. *Journal of affective disorders*, *89*(1-3), 57-67.

Burcusa S.L., & Iacono W.G. (2007). Risk for recurrence in depression. *Clin Psychol Rev., 27*, 59-985.

Burkill, S. Corey, D. & Healy, M. (2000). Improving students' communication skills. Cheltenham: Geography Discipline Network (GDN).

Burns, M. N., Kamen, C., Lehman, K. A., & Beach, S. R. (2012). Attributions for discriminatory events and satisfaction with social support in gay men. *Archives of sexual behavior*, *41*(3), 659-671.

Burns, R. A., & Machin, M. A. (2013). Psychological wellbeing and the diathesis-stress hypothesis model: The role of psychological functioning and quality of relations in promoting subjective well-being in a life events study. *Personality and Individual Differences*, *54*(3), 321-326.

Cai, N., Choi, K. W., & Fried, E. I. (2020). Reviewing the genetics of heterogeneity in depression: operationalizations, manifestations and etiologies. *Human molecular genetics*, *29*(R1), R10-R18.

Calabrese, P., & Cardy, J. (2004). Entanglement entropy and quantum field theory. *Journal of statistical mechanics: theory and experiment*, *2004*(06), P06002.

Campbell-Sills, L., Barlow, D. H., Brown, T. A., & Hofmann, S. G. (2006). Acceptability and suppression of negative emotion in anxiety and mood disorders. *Emotion*, *6*(4), 587.

Campbell-Sills, L., Barlow, D. H., Brown, T. A., & Hofmann, S. G. (2006). Effects of suppression and acceptance on emotional responses of individuals with anxiety and mood disorders. *Behaviour research and therapy*, *44*(9), 1251-1263.

Campbell-Sills, L., & Barlow, D. H. (2007). Incorporating emotion regulation into conceptualizations and treatments of anxiety and mood disorders.

Carl, J. R., Soskin, D. P., Kerns, C., & Barlow, D. H. (2013). Positive emotion regulation in emotional disorders: A theoretical review. *Clinical psychology review*, *33*(3), 343-360.

Carmassi, C., Bertelloni, C. A., Dell'Oste, V., Foghi, C., Diadema, E., Cordone, A., ... & Dell'Osso, L. (2020). Post-traumatic stress burden in a sample of hospitalized patients with bipolar disorder: Which impact on clinical correlates and suicidal risk? *Journal of Affective Disorders*, *262*, 267-272.

Cassidy, F. (2011). Risk factors of attempted suicide in bipolar disorder. *Suicide and Life-Threatening Behavior*, *41*(1), 6-11.

Chang, C. M., Wu, C. S., Huang, Y. W., Chau, Y. L., & Tsai, H. J. (2016). Utilization of psychopharmacological treatment among patients with newly diagnosed bipolar disorder from 2001 to 2010. *Journal of Clinical Psychopharmacology*, *36*(1), 32-44.

Chen, L., Li, W., He, J., Wu, L., Yan, Z., & Tang, W. (2012). Mental health, duration of unemployment, and coping strategy: a cross-sectional study of unemployed migrant workers in eastern China during the economic crisis. *BMC public health*, *12*(1), 1-12.

Chichirez, C. M. & Purcarea, V. L. (2018). Interpersonal communication in healthcare. *Journal of Medical Life, 11*(2), 119-122.

Chick, C. F., & Reyna, V. F. (2012). A fuzzy trace theory of adolescent risk taking: Beyond self-control and sensation seeking.

Chou, C. C., Cardoso, E. D. S., Chan, F., Tsang, H. W., & Wu, M. (2007). Development and psychometric validation of the Task-Specific Self-Efficacy Scale for Chinese people with mental illness. *International Journal of Rehabilitation Research, 30*(4), 261-271.

Christie, D. & Wessell, M. (2022). *Conflict Analysis*: Encyclopedia of Violence, Peace& and Conflict (Third Edition). Academic Press.

Clara, I. P., Cox, B. J., Enns, M. W., Murray, L. T., & Torgrudc, L. J. (2003). Confirmatory factor analysis of the multidimensional scale of perceived social support in clinically distressed and student samples. *Journal of personality assessment, 81*(3), 265-270.

Clemente, A. S., Diniz, B. S., Nicolato, R., Kapczinski, F. P., Soares, J. C., Firmo, J. O., & Castro-Costa, É. (2015). Bipolar disorder prevalence: a systematic review and meta-analysis of the literature. *Brazilian Journal of Psychiatry, 37*, 155-161.

Cohen, A. N., Hammen, C., Henry, R., Daley, S. E. (2004). Effects of stress and social support on recurrence in bipolar disorder. *Journal of Affective Disorders, 82*(1), 143-147.

Cohen, S. Gottlib, B. H., & Underwood, L G. (2000). Social relationships. In *Social support measurement and intervention.* Oxford: Oxford University Press.

Colom, F., Vieta, E., Tacchi, M. J., Sánchez-Moreno, J., & Scott, J. (2005). Identifying and improving non-adherence in bipolar disorders. *Bipolar disorders, 7*, 24-31.

Colom, F., Vieta, E., Daban, C., Pacchiarotti, I., & Sanchez-Moreno, J. (2006). Clinical and therapeutic implications of predominant polarity in bipolar disorder. *Journal of affective disorders*, *93*(1-3), 13-17.

Colom, F., & Vieta, E. (2006). *Psychoeducation manual for bipolar disorder*. Cambridge University Press.

Craddock, N., & Sklar, P. (2013). Genetics of bipolar disorder. *The Lancet*, *381*(9878), 1654-1662.

Creswell, J. W. (2009). *Research design: qualitative, quantitative, and mixed methods approach* (3rd ed.). Thousand Oaks: CA, Sage.

Creswell, J. W., & Creswell, J. D. (2017). *Research design: Qualitative, quantitative, and mixed methods approaches.* Sage publications.

Crown, W. H., Finkelstein, S., Berndt, E. R., Ling, D., Poret, A. W., Rush, A. J., & Russell, J. M. (2002) The impact of treatment –resistant depression on health care utilization and costs. *Journal of Clinical Psychiatry*, *2002*(63), 963-971.

Crump, C., Rivera, D., London, R., Landau, M., Erlendson, B., & Rodriguez, E. (2013). Chronic health conditions and school performance among children and youth. *Annals of epidemiology*, *23*(4), 179-184.

Cuijpers, P. (2016). Are all psychotherapies equally effective in the treatment of adult depression? The lack of statistical power of comparative outcome studies. *Evidence-Based Mental Health*, *19*(2), 39-42.

Cutrona, C. E., & Suhr, J. A. (1992). Controllability of stressful events and satisfaction with spouse support behaviors. *Communication research*, *19*(2), 154-174.

Dadson, D. A., Annor, F., & Salifu Yendork, J. (2018). The burden of care: Psychosocial experiences and coping strategies among caregivers of persons with mental illness in Ghana. *Issues in mental health nursing*, *39*(11), 915-923.

Das-Munshi, J., Chang, C. K., Dutta, R., Morgan, C., Nazroo, J., Stewart, R., & Prince, M. J. (2017). Ethnicity and excess mortality in severe mental illness: a cohort study. *The Lancet Psychiatry*, *4*(5), 389-399.

Davis, J., Maes, M., Andreazza, A., McGrath, J. J., Tye, S. J., & Berk, M. (2015). Towards a classification of biomarkers of neuropsychiatric disease: from encompass to compass. *Molecular psychiatry*, *20*(2), 152-153.

De Dios, C., Ezquiaga, E., Agud, J. L., Vieta, E., Soler, B., & García-López, A. (2012). Subthreshold symptoms and time to relapse/recurrence in a community cohort of bipolar disorder outpatients. *Journal of affective disorders*, *143*(1-3), 160-165.

De Dios, C., González-Pinto, A., Montes, J. M., Goikolea, J. M., Saiz-Ruiz, J., Prieto, E., & Vieta, E. (2012). Predictors of recurrence in bipolar disorders in Spain (PREBIS study data). *Journal of Affective Disorders*, *141*(2-3), 406-414.

De Graaf, R., Tuithof, M., van Dorsselaer, S., & ten Have, M. (2011). *Verzuim door psychische en somatische aandoeningen bij werkenden*. Trimbos-instituut.

Del Amo, J., Jarrín, I., García-Fulgueiras, A., Ibáñez-Rojo, V., Alvarez, D., Rodríguez-Arenas, M. Á., ... & Llácer, A. (2011). Mental health in Ecuadorian migrants from a population-based survey: the importance

of social determinants and gender roles. *Social psychiatry and psychiatric epidemiology*, *46*(11), 1143-1152.

DelBello, M. P., Hanseman, D., Adler, C. M., Fleck, D. E., & Strakowski, S. M. (2007). Twelve-month outcome of adolescents with bipolar disorder following first hospitalization for a manic or mixed episode. *American Journal of Psychiatry*, *164*(4), 582-590.

DeLisi, E. L., Maurizio, A., Yost, M., Papparozi, F. C., Fulchino, C., Katz, L. C., Altesman, J., Biel, M., Lee, J., Stevens, P. (2015). A survey of New Yorkers after the Sept. 11, 2001 terrorist attacks. *American Journal of Psychiatry*, *160*(4), 780-783.

De Menil, V., Osei, A., Douptcheva, N., Hill, A. G., Yaro, P., & Aikins, A. D. G. (2012). Symptoms of common mental disorders and their correlates Among women in Accra, Ghana: A population based survey. *Ghana medical journal*, *46*(2), 95-103.

Demke, E. (2022). The Vulnerability-stress-model–Holding up the construct of the faulty individual in the light of challenges to the medical model of mental distress. *Frontiers in Sociology*, 67.

Depp, C. A., Mausbach, B. T., Harvey, P. D., Bowie, C. R., Wolyniec, P. S., Thornquist, M. H., ... & Patterson, T. L. (2010). Social competence and observer-rated social functioning in bipolar disorder. *Bipolar Disorders*, *12*(8), 843-850.

de Wit, M. A., Tuinebreijer, W. C., Dekker, J., Beekman, A. J. T., Gorissen, W. H., Schrier, A. C., ... & Verhoeff, A. P. (2008). Depressive and anxiety disorders in different ethnic groups. *Social psychiatry and psychiatric epidemiology*, *43*(11), 905-912.

Dey, N. E. Y., & Amponsah, B. (2020). Sources of perceived social support on resilience amongst parents raising children with special needs in Ghana. *Heliyon*, *6*(11), e05569.

Dhabhar, F. S. (2014). Effects of stress on immune function: the good, the bad, and the beautiful. *Immunologic research*, *58*(2), 193-210.

Dienes, K. A., Hammen, C., Henry, R. M., Cohen, A. N., & Daley, S. E. (2006). The stress sensitization hypothesis: understanding the course of bipolar disorder. *Journal of affective disorders*, *95*(1-3), 43-49.

Dilsaver, S. C. (2009). An estimate of the minimum economic burden of bipolar I and II disorders in the United States: 2009. *J Affect Disord*, *129*, 79–83.

Dodd, A., Lockwood, E., Mansell, W., & Palmier-Claus, J. (2019). Emotion regulation strategies in bipolar disorder: A systematic and critical review. *Journal of Affective Disorders*, *246*, 262-284.

Dombeck, M. (2020). Chronic cortisol exposure causes mood disorders. Retrieved from https://www.mentalhelp.net/blogs/chronic-cortisol-exposure-causes-mood-disorders on 20/05/2021.

Duffy, A., Alda, M., Crawford, L., Milin, R., & Grof, P. (2007). The early manifestations of bipolar disorder: a longitudinal prospective study of the offspring of bipolar parents. *Bipolar Disorders*, *9*(8), 828-838.

Dusselier, L. Dunn, B., Wang, S. M. C., & Whalen, D. F. (2005). Personal health academic and environmental predictors of stress for residence hall students. *Journal of American College Health*, *5*(4), 15-24.

Esan, O., & Esan, A. (2016). Epidemiology and burden of bipolar disorder in Africa: a systematic review of data from Africa. *Social psychiatry and psychiatric epidemiology*, *51*(1), 93-100.

Estrada-Prat, X., Van Meter, A. R., Camprodon-Rosanas, E., Batlle-Vila, S., Goldstein, B. I., & Birmaher, B. (2019). Childhood factors associated with increased risk for mood episode recurrences in bipolar disorder—A systematic review. *Bipolar disorders*, *21*(6), 483-502.

Fajutrao, L., Locklear, J., Priaulx, J., & Heyes, A. (2009). A systematic review of the evidence of the burden of bipolar disorder in Europe. *Clinical practice and epidemiology in mental health*, *5*(1), 1-8.

Falcón, L. M., Todorova, I., & Tucker, K. (2009). Social support, life events, and psychological distress among the Puerto Rican population in the Boston area of the United States. *Aging and Mental Health*, *13*(6), 863-873.

Fekadu, A., Kebede, D., Alem, A., Fekadu, D., Mogga, S., Negash, A., ... & Shibre, T. (2006). Clinical outcome in bipolar disorder in a community-based follow-up study in Butajira, Ethiopia. *Ethiopia. Acta Psychiatrica Scandinavica*, *114*(6), 426–434.

Fink, G., & Yolles, M. (2016). Political meaning of mindset types created with Sagiv-Schwartz values. *European Journal of Cross-Cultural Competence and Management*, *4*(2), 87-115.

Fleury, J., Keller, C., & Perez, A. (2009). Social support theoretical perspective. *Geriatric Nursing (New York, NY)*, *30*(2 0), 11.

Frank, E., Gonzalez, J. M., & Fagiolini, A. (2006). The importance of routine for preventing recurrence in bipolar disorder. *American Journal of Psychiatry*, *163*(6), 981-985.

Frank, E. (2007). Interpersonal and social rhythm therapy: a means of improving depression and preventing relapse in bipolar disorder. *Journal of clinical psychology*, *63*(5), 463-473.

Garcia-Portilla, M. P., Gomar, J. J., Bobes-Bascaran, M. T., Menendez-Miranda, I., Saiz, P. A., Muñiz, J., ... & Goldberg, T. E. (2013). Validation of a European Spanish-version of the University of California performance Skills Assessment (Sp-UPSA) in patients with schizophrenia and bipolar disorder. *Schizophrenia research*, *150*(2-3), 421-426.

Gater, R., Tomenson, B., Percival, C., Chaudhry, N., Waheed, W., Dunn, G., ... & Creed, F. (2009). Persistent depressive disorders and social stress in people of Pakistani origin and white Europeans in UK. *Social psychiatry and psychiatric epidemiology*, *44*(3), 198-207.

GBD 2017 Disease and Injury Incidence and Prevalence Collaborators. (2018). Global, regional, and national incidence, prevalence, and years lived with disability for 354 diseases and injuries for 195 countries and territories, 1990–2017: A systematic analysis for the Global Burden of Disease Study 2017. *The Lancet*, *392*(10159), 1789-1858.

Geddes, J. R., & Miklowitz, D. J. (2013). Treatment of bipolar disorder. *The lancet*, *381*(9878), 1672-1682.

Gillespie, S. M., & Beech, A. R. (2017). Theories of emotion regulation.

Gitlin, M. J., Swendsen, J., Heller, T.L (1995). Relapse and impairment in bipolar disorder. *Am J Psychiatry, 152*, 1635–40.

Gjesfjeld, C. D., Greeno, C. G., Kim, K. H., & Anderson, C. M. (2010). Economic stress, social support, and maternal depression: Is social support deterioration occurring?. *Social Work Research*, *34*(3), 135-143.

Glozah, F. N., & Pevalin, D. J. (2014). Social support, stress, health, and academic success in Ghanaian adolescents: A path analysis. *Journal of adolescence*, *37*(4), 451-460.

Godwin, F. K., & Jameson, K. R. (2007). Manic-depression illness: bipolar disorders and recurrent depression. Oxford University Press.

Goh, C., & Agius, M. (2010). The stress-vulnerability model how does stress impact on mental illness at the level of the brain and what are the consequences? *Psychiatria Danubina*, *22*(2), 198–202.

Goldstein, B. I., Liu, S. M., Zivkovic, N., Schaffer, A., Chien, L. C., & Blanco, C. (2011). The burden of obesity among adults with bipolar disorder in the United States. *Bipolar Disorder*, *13*(4), 387–395.

Goldstein, T. R., Miklowitz, D. J., & Mullen, K. L. (2006). Social skills knowledge and performance among adolescents with bipolar disorder. *Bipolar Disorders*, *8*(4), 350-361

Gottlieb, B. H., & Coppard, A. E. (2009). Using social network therapy to create support systems for the chronically mentally disabled. *Canadian Journal of Community Mental Health*, *6*(2), 117-131.

Gottlieb, B., & Bergen, A. E. (2010). Social support concepts and measures. *Journal of Psychosomatic Research*, *69*(5), 511-520.

Grande, I., Fries, G. R., Kunz, M., & Kapczinski, F. (2010). The role of BDNF as a mediator of neuroplasticity in bipolar disorder. *Psychiatry investigation*, *7*(4), 243.

Grande, I., Berk, M., Birmaher, B., & Vieta, E. (2016). Bipolar disorder. *Lancet (Review)*, 387(10027), 1561–72.

Grandey, A. A., Dickter, D. N., & Sin, H. P. (2004). The customer is not always right: Customer aggression and emotion regulation of service employees. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, *25*(3), 397-418.

Grandin, L. D., Alloy, L. B., & Abramson, L. Y. (2006). The social zeitgeber theory, circadian rhythms, and mood disorders: review and evaluation. *Clinical psychology review*, *26*(6), 679-694.

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of general psychology*, *2*(3), 271-299.

Gross, J. J. (2001). Emotion regulation in adulthood: Timing is everything. *Current directions in psychological science*, *10*(6), 214-219.

Gross, J. J. (2002). Emotion regulation: Affective, cognitive and social consequences. *Psychophysiology*, *39*, 281-291

Gross, J. J. (2013). Emotion regulation: taking stock and moving forward. *Emotion*, *13*(3), 359.

Gross, J. J. (2015). Emotion regulation: Current status and future prospects. *Psychological inquiry*, *26*(1), 1-26.

Gruber, J. (2011). Can feeling too good be bad? Positive emotion persistence (PEP) in bipolar disorder. *Current Directions in Psychological Science*, *20*(4), 217-221.

Gruber, J., Kogan, A., Mennin, D., & Murray, G. (2013). Real-world emotion? An experience-sampling approach to emotion experience and regulation in bipolar I disorder. *Journal of abnormal psychology*, *122*(4), 971.

Guffey, M. E., & Loewy, D. (2011). *Business communication, process and product. (7th ed.)* Mason: Cengage Learning.

Gyekye, K. (1997). *Tradition and modernity: Philosophical reflections on the African experience*. Oxford University Press.

Haber, M. G., Cohen, J. L., Lucas, T., & Baltes, B. B. (2007). The relationship between self-reported received and perceived social support: A meta-analytic review. *American journal of community psychology*, *39*(1), 133-144.

Hanin, Y. L. (2007). Emotions and athletic performance: Individual zones of optimal functioning model.

Hannibal, K. E., & Bishop, M. D. (2014). Chronic stress, cortisol dysfunction, and pain: A psychoneuroendocrine rationale for stress management in pain rehabilitation. *Physical therapy*, *94*(12), 1816–1825. https://doi.org/10.2522/ptj.20130597

Hardeveld, F., Spijker, J., De Graaf, R., Nolen, W. A., & Beekman, A. T. (2010). Prevalence and predictors of recurrence of major depressive disorder in the adult population. Acta Psychiatry Scand.

Harmon-Jones, E. (2004). Contributions from research on anger and cognitive dissonance to understanding the motivational functions of asymmetrical frontal brain activity. *Biological psychology, 67*(1-2), 51-76.

Hartley, P. (1999). *Interpersonal communication*. Routledge.

Hayes, J. (2002). *Interpersonal skills at work* (2nd ed.). Routledge.

He, X., & Wong, D. F. K. (2013). A comparison of female migrant workers' mental health in four cities in China. *International Journal of social psychiatry*, *59*(2), 114-122.

Henry, J. D., Rendell, P. G., Green, M. J., McDonald, S., & O'Donnell, M. (2008). Emotion regulation in schizophrenia: affective, social, and clinical correlates of suppression and reappraisal. *Journal of abnormal psychology*, *117*(2), 473.

Hirschfeld, R. M., Lewis, L., & Vornik, L. A. (2003). Perceptions and impact of bipolar disorder: how far have we really come? Results of the national depressive and manic-depressive association 2000 survey of individuals with bipolar disorder. *Journal of clinical psychiatry*, *64*(2), 161-174.

Hirschfeld, R. M. A., Bodwen, C. L., Gitlin, M. J., Keck, P. E., Suppes, T., Wagner, K. D., Thase, M. E., & Perlis, R. H. (2010). *Practice guideline for the treatment of patients with bipolar disorder (2nd ed.)*. APPI Permission and Licensing Centre.

Hirschfeld, R. M. (2014). Differential diagnosis of bipolar disorder and major depressive disorder. *Journal of affective disorders*, *169*, S12-S16.

Hoberg, A. A., Ponto, J., Nelson, P. J., & Frye, M. A. (2013). Group interpersonal and social rhythm therapy for bipolar depression. *Perspectives in psychiatric care*, *49*(4), 226-234.

Horesh, N., & Iancu, I. (2010). A comparison of life events in patients with unipolar disorder or bipolar disorder and controls. *Comprehensive Psychiatry*, *51*(2), 157-164.

Hovey, J. D., & Magaña, C. G. (2002). Exploring the mental health of Mexican migrant farm workers in the Midwest: Psychosocial predictors of psychological distress and suggestions for prevention and treatment. *The Journal of Psychology*, *136*(5), 493-513.

Inder, M. L., Crowe, M. T., Luty, S. E., Carter, J. D., Moor, S., Frampton, C. M., & Joyce, P. R. (2015). Randomized, controlled trial of Interpersonal and Social Rhythm Therapy for young people with bipolar disorder. *Bipolar disorders*, *17*(2), 128-138.

Insel, T., Cuthbert, B., Garvey, M., Heinssen, R., Pine, D. S., Quinn, K., ... & Wang, P. (2010). Research domain criteria (RDoC): toward a new classification framework for research on mental disorders. *American Journal of psychiatry*, *167*(7), 748-751.

Islam, F., Khanlou, N., & Tamim, H. (2014). South Asian populations in Canada: migration and mental health. *BMC psychiatry*, *14*(1), 1-13.

Jairam, R., Srinath, S., Girimaji, S. C., & Seshadri, S. P. (2004). A prospective 4–5 year follow-up of juvenile onset bipolar disorder. *Bipolar Disorders*, *6*(5), 386-394.

Jaracz, J. (2008). The anatomy of depression in light of evidence from neuroimaging studies. *Psychiatria Polska*, *42*(6), 875-888.

Jarrín, I., García-Fulgueiras, A., Ibánez-Rojo, V., Alvarez, D., García-Pina, R., Fernández-Liria, A., ... & Del Amo, J. (2013). Absence of protective ethnic density effect on Ecuadorian migrants' mental health in a recent migration setting: a multilevel analysis. *Social psychiatry and psychiatric epidemiology*, *48*(1), 95-103.

Javadapour, A., Malhi, G. S., Ivanovski, B., Chen, X., Wen, W., & Sachdev, P. (2010). Hippocampal volumes in adults with bipolar disorder. *The Journal of neuropsychiatry and clinical neurosciences*, *22*(1), 55-62.

Jenkins, M. M., Youngstrom, E. A., Youngstrom, J. K., Feeny, N. C., & Findling, R. L. (2012). Generalizability of evidence-based assessment recommendations for pediatric bipolar disorder. *Psychological Assessment*, *24*(2), 269.

Jenkins, R., Njenga, F., Okonji, M., Kigamwa, P., Baraza, M., Ayuyo, J., ... & Kiima, D. (2012). Prevalence of common mental disorders in a rural district of Kenya, and socio-demographic risk factors. *International journal of environmental research and public health*, *9*(5), 1810-1819.

Jin, H., & McCrone, P. (2015). Cost-of-illness studies for bipolar disorder: Systematic review of international studies. *Pharmacoeconomics*, *33*(4), 341–353.

Johnson, S. L., & Miller, I. (1997). Negative life events and time to recovery from episodes of bipolar disorder. *Journal of Abnormal Psychology, 106*, 449-457.

Johnson, S. L., & Roberts, J. E. (1995). Life events and bipolar disorder: Implications from biological theories. *Psychological Bulletin, 117*, 434-449.

Johnson, S. L. (2005). Life events in bipolar disorder: towards more specific models. *Clinical psychology review*, *25*(8), 1008-1027.

Johnson, K., Asher, J., Rosborough, S., Raja, A., Panjabi, R., Beadling, C., & Lawry, L. (2008). Association of combatant status and sexual violence with health and mental health outcomes in postconflict Liberia. *Jama*, *300*(6), 676-690.

Jongen, E. M., Smulders, F. T., Ranson, S. M., Arts, B. M., & Krabbendam, L. (2007). Attentional bias and general orienting processes in bipolar disorder. *Journal of behavior therapy and experimental psychiatry*, *38*(2), 168-183.

Joslyn, C., Hawes, D. J., Hunt, C., & Mitchell, P. B. (2016). Is age of onset associated with severity, prognosis, and clinical features in bipolar disorder? A meta-analytic review. *Bipolar disorders*, *18*(5), 389-403.

Judd, L. L., Akiskal, H. S., Schettler, P. J., Coryell, W., Endicott, J., Maser, J. D., ... & Keller, M. B. (2003). A prospective investigation of the natural history of the long-term weekly symptomatic status of bipolar II disorder. *Archives of general psychiatry*, *60*(3), 261-269.

Judd, L. L., Akiskal, H. S., Schettler, P. J., Endicott, J., Leon, A. C., Solomon, D. A., ... & Keller, M. B. (2005). Psychosocial disability in the course of bipolar I and II disorders: a prospective, comparative, longitudinal study. *Archives of general psychiatry*, *62*(12), 1322-1330.

Jurado, D., Alarcón, R. D., Martínez-Ortega, J. M., Mendieta-Marichal, Y., Gutiérrez-Rojas, L., & Gurpegui, M. (2017). Factors associated with psychological distress or common mental disorders in migrant

populations across the world. *Revista de Psiquiatría y Salud Mental (English Edition)*, *10*(1), 45-58.

Kamiya, Y., Doyle, M., Henretta, J. C., & Timonen, V. (2013). Depressive symptoms among older adults: The impact of early and later life circumstances and marital status. *Aging & Mental Health*, *17*(3), 349-357.

Kapczinski, F., Vieta, E., Andreazza, A. C., Frey, B. N., Gomes, F. A., Tramontina, J., ... & Post, R. M. (2008). Allostatic load in bipolar disorder: implications for pathophysiology and treatment. *Neuroscience & Biobehavioral Reviews*, *32*(4), 675-692.

Kapczinski, F., Magalhães, P. V. S., Balanzá-Martinez, V., Dias, V. V., Frangou, S., Gama, C. S., ... & Berk, M. (2014). Staging systems in bipolar disorder: an I nternational S ociety for B ipolar D isorders T ask F orce R eport. *Acta psychiatrica scandinavica*, *130*(5), 354-363.

Karthick, S., Kattimani, S., Rajkumar, R. P., Bharadwaj, B., & Sarkar, S. (2015). Long term course of bipolar I disorder in India: Using retrospective life chart method. *Journal of Affective Disorders*, *173*, 255-260.

Kashdan, T. B., & Rottenberg, J. (2010). Psychological flexibility as a fundamental aspect of health. *Clinical psychology review*, *30*(7), 865-878.

Katon, W., Von Korff, M., Ciechanowski, P., Russo, J., Lin, E., Simon, G., ... & Young, B. (2004). Behavioral and clinical factors associated with depression among individuals with diabetes. *Diabetes care*, *27*(4), 914-920.

Kawa, I., Carter, J. D., Joyce, P. R., Doughty, C. J., Frampton, C. M., Elisabeth Wells, J., ... & Olds, R. J. (2005). Gender differences in bipolar disorder: age of onset, course, comorbidity, and symptom presentation. *Bipolar disorders*, *7*(2), 119-125.

Kemner, S. M., van Haren, N. E. M., Bootsman, F., Eijkemans, M. C., Vonk. R., van de Schot, A. C.., Nolen, W. A. & Hilegers, M. H. J. (2015). The influence of life events on first and recurrent admissions in bipolar disorder. *International Journal of Bipolar Disorders*, *3*(6), 1-9.

Kerkenaar, M. M., Maier, M., Kutalek, R., Lagro-Janssen, A. L., Ristl, R., & Pichlhöfer, O. (2013). Depression and anxiety among migrants in Austria: a population based study of prevalence and utilization of health care services. *Journal of affective disorders*, *151*(1), 220-228.

Kessing, L. V., Hansen, M. G., & Andersen, P. K. (2004). Course of illness in depressive and bipolar disorders: naturalistic study, 1994–1999. *The British Journal of Psychiatry*, *185*(5), 372-377.

Kessing, L. V., Hansen, M. G., Andersen, P. K., & Angst, J. (2004). The predictive effect of episodes on the risk of recurrence in depressive and bipolar disorders–a life-long perspective. *Acta Psychiatrica Scandinavica*, *109*(5), 339-344.

Kessing, L. V., Andersen, P. K., & Vinberg, M. (2018). Risk of recurrence after a single manic or mixed episode–a systematic review and meta-analysis. *Bipolar Disorders*, *20*(1), 9-17.

Kessler, R. C., Akiskal, H. S., Ames, M., Birnbaum, H., Greenberg, P. E., Hirschfeld, R. M., & Wang, P. S. (2007). Considering the costs of bipolar depression: more research is needed on the impact of untreated bipolar depression on society. *Behavioral healthcare*, *27*(1), 45-48.

Kilbourne, A. M., Cornelius, J. R., Han, X., Pincus, H. A., Shad, M., Salloum, I., ... & Haas, G. L. (2004). Burden of general medical conditions among individuals with bipolar disorder. *Bipolar disorders*, *6*(5), 368-373.

Kim, E. Y., Miklowitz, D. J., Biuckians, A., & Mullen, K. (2007). Life stress and the course of early-onset bipolar disorder. *Journal of Affective Disorders*, *99*(1-3), 37-44.

Kivimäki, M., Nyberg, S. T., Batty, G. D., Fransson, E. I., Heikkilä, K., Alfredsson, L., ... & IPD-Work Consortium. (2012). Job strain as a risk factor for coronary heart disease: a collaborative meta-analysis of individual participant data. *The Lancet*, *380*(9852), 1491-1497.

Kivimäki, M., & Steptoe, A. (2018). Effects of stress on the development and progression of cardiovascular disease. *Nature Reviews Cardiology*, *15*(4), 215-229.

Kleine-Budde, K., Touil, E., Moock, J., Bramesfeld, A., Kawohl, W., & Rossler, W. (2014). Cost of illness for bipolar disorder: A systematic review of the economic burden. *Bipolar Disorder*, *16*(4), 337–353.

Koole, S. L., & Veenstra, L. (2015). Does emotion regulation occur only inside people's heads? Toward a situated cognition analysis of emotion-regulatory dynamics. *Psychological Inquiry*, *26*(1), 61-68.

Konopaske, G. T., Lange, N., Coyle, J. T., & Benes, F. M. (2014). Prefrontal cortical dendritic spine pathology in schizophrenia and bipolar disorder. *JAMA psychiatry*, *71*(12), 1323-1331.

Kupfer, D. J., Frank, E., & Phillips, M. L. (2012). Major depressive disorder: new clinical, neurobiological, and treatment perspectives. *The Lancet*, *379*(9820), 1045-1055.

Ladin, K., & Reinhold, S. (2013). Mental health of aging immigrants and native-born men across 11 European countries. *Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, *68*(2), 298-309.

Lakey, B., & Orehek, E. (2011). Relational regulation theory: a new approach to explain the link between perceived social support and mental health. *Psychological review*, *118*(3), 482.

Layous, K., Chancellor, J., & Lyubomirsky, S. (2014). Positive activities as protective factors against mental health conditions. *Journal of Abnormal Psychology*, *123*(1), 3.

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. Springer publishing company.

Learning Dynamics. (2002). *Interpersonal communication skills inventory*. New York: USDA.

Leijdesdorff, S. M. J., Huijs, C. E. M., Klaassen, R. M. C., Popma, A., van Amelsvoort, T. A. M. J., & Evers, S. M. A. A. (2020). Burden of mental health problems: Quality of life and cost-of-illness in youth consulting Dutch walk-in youth health centres. *Journal of Mental Health*, 1-8.

Leppänen, J. M. (2006). Emotional information processing in mood disorders: a review of behavioral and neuroimaging findings. *Current opinion in psychiatry*, *19*(1), 34-39.

Levecque, K., Lodewyckx, I., & Bracke, P. (2009). Psychological distress, depression and generalised anxiety in Turkish and Moroccan immigrants in Belgium. *Social psychiatry and psychiatric epidemiology*, *44*(3), 188-197.

Levenson, J. C. (2013). *What is the effect of social rhythm disrupting events on mood in individuals with bipolar disorder?* (Doctoral dissertation, University of Pittsburgh).

Lincoln, Y. S., & Guba, E. G. (2000). The only generalization is: There is no generalization. *Case Study Method*, *4*, 27-44.

Linkowski, P. (2003). Neuroendocrine profiles in mood disorders. *International Journal of Neuropsychopharmacology*, *6*(2), 191-197.

Lopez-Jaramillo, C., Lopera-Vasquez, J., Gallo, A., Ospina-Duque, J., Bell, V., Torrent, C., … & Vieta, E. (2010). Effects of recurrence on the cognitive performance of patients with bipolar I disorder: Implications for relapse prevention and treatment adherence. *Bipolar Disorders*, *12*, 557–567.

Loughry, M., & Eyber, C. (2003). Psychosocial concepts in humanitarian work with children: A review of the concepts and related literature. Washington (DC): National Academies Press (US).

Lynch, D., Laws, K. R., & McKenna, P. J. (2010). Cognitive behavioural therapy for major psychiatric disorder: does it really work? A meta-

analytical review of well-controlled trials. *Psychological medicine*, *40*(1), 9-24.

MacQueen, G. M., Young, L. T., Robb, J. C., Marriott, M., Cooke, R. G., & Joffe, R. T. (2000). Effect of number of episodes on wellbeing and functioning of patients with bipolar disorder. *Acta Psychiatrica Scandinavica*, *101*(5), 374-381.

MacQueen, G. M., Young, L. T., & Joffe, R. T. (2001). A review of psychosocial outcome in patients with bipolar disorder. *Acta Psychiatrica Scandinavica*, *103*(3), 163-170.

Maguire, C., McCusker, C. G., Meenagh, C., Mulholland, C., & Shannon, C. (2008). Effects of trauma on bipolar disorder: the mediational role of interpersonal difficulties and alcohol dependence. *Bipolar Disorders*, *10*(2), 293-302.

Maina, G., Rosso, G., Aguglia, A., & Bogetto, F. (2014). Recurrence rates of bipolar disorder during the postpartum period: a study on 276 medication-free Italian women. *Archives of Women's Mental Health*, *17*(5), 367-372.

Malhi, G. S., Ivanovski, B., Hadzi-Pavlovic, D., Mitchell, P. B., Vieta, E., & Sachdev, P. (2007). Neuropsychological deficits and functional impairment in bipolar depression, hypomania and euthymia. *Bipolar disorders*, *9*(1-2), 114-125.

Mancini, M. A. (2021) Trauma-Informed behavioral health practice. In *Integrated behavioral health practice.* Cham: Springer.

Manenschijn, L., Spijker, A. T., Koper, J. W., Jetten, A. M., Giltay, E. J., Haffmans, J., ... & van Rossum, E. F. (2012). Long-term cortisol in

bipolar disorder: associations with age of onset and psychiatric co-morbidity. *Psychoneuroendocrinology*, *37*(12), 1960-1968.

Mangalore, R., Knapp, M., & Jenkins, R. (2007). Income-related inequality in mental health in Britain: the concentration index approach. *Psychological medicine*, *37*(7), 1037-1045.

Mansell, W., Morrison, A. P., Reid, G., Lowens, I., & Tai, S. (2007). The interpretation of, and responses to, changes in internal states: an integrative cognitive model of mood swings and bipolar disorders. *Behavioural and Cognitive psychotherapy*, *35*(5), 515-539.

Marneros, A. (2006). Mood disorders: epidemiology and natural history. *Psychiatry*, *5*(4), 119-122.

Martikainen, P., Bartley, M., & Lahelma, E. (2002). Psychosocial determinants of health in social epidemiology. *International Journal of Epidemiology*, *31*, 1091–1093.

Martinez-Aran, A., Vieta, E., Torrent, C., Sanchez-Moreno, J., Goikolea, J. M., Salamero, M., & Malhi, G. S. Gonzalez-18 Pinto A, Daban C, Alvarez-Grandi S, Fountoulakis K, Kaprinis G, Tabares-Seisdedos R, Ayuso-Mateos JL 19 (2007) Functional outcome in bipolar disorder: the role of clinical and cognitive factors. *Bipolar Disorders*, *20*(9), 103-113.

Martinez-Aran, A., & Vieta, E. (2015). Cognition as a target in schizophrenia, bipolar disorder and depression. *European neuropsychopharmacology: the journal of the European College of Neuropsychopharmacology*, *25*(2), 151-157.

Martinowich, K., Schloesser, R. J., & Manji, H. K. (2009). Bipolar disorder: from genes to behavior pathways. *The Journal of clinical investigation*, *119*(4), 726-736.

Maton, A., Hopkins, S., Johnson, C. W., McLaughlin, M., Warner, D., LaHart, J. (2010). Human Biology and Health. Englewood Cliffs: Prentice-Hall.

Mausbach, B. T., Harvey, P. D., Pulver, A. E., Depp, C. A., Wolyniec, P. S., Thornquist, M. H., ... & Patterson, T. L. (2010). Relationship of the Brief UCSD Performance-based Skills Assessment (UPSA-B) to multiple indicators of functioning in people with schizophrenia and bipolar disorder. *Bipolar disorders*, *12*(1), 45-55.

Mennin, D. S., & Fresco, D. M. (2014). Emotion regulation therapy. *Handbook of emotion regulation*, *2*, 469-490.

Menon, M., Fauth, R. C., & Easterbrooks, M. A. (2020). Exploring trajectories of young mothers' parenting stress in early childhood: Associations with protective factors and psychological vulnerabilities. *Parenting*, *20*(3), 200-228.

Merikangas, K. R., Akiskal, H. S., Angst, J., Greenberg, P. E., Hirschfeld, R. M., Petukhova, M., & Kessler, R. C. (2007). Lifetime and 12-month prevalence of bipolar spectrum disorder in the National Comorbidity Survey replication. *Archives of general psychiatry*, *64*(5), 543-552.

Merikangas, K. R., Jin, R., He, J. P., Kessler, R. C., Lee, S., Sampson, N. A. (2011). Prevalence and correlates of bipolar spectrum disorder in the world mental health survey initiative. *Arch Gen Psychiatry*, *68*(3), 241-251.

Meyer, B., Johnson, S. L., & Winters, R. (2001). Responsiveness to threat and incentive in bipolar disorder: Relations of the BIS/BAS scales with symptoms. *Journal of psychopathology and behavioral assessment*, *23*(3), 133-143.

Michalak, E. E., Murray, G., Young, A. H., & Lam, R. W. (2008). Burden of bipolar depression. *CNS drugs*, *22*(5), 389-406.

Michalak, E., Livingston, J. D., Hole, R., Suto, M., Hale, S., & Haddock, C. (2011). 'It's something that I manage but it is not who I am': reflections on internalized stigma in individuals with bipolar disorder. *Chronic Illness*, *7*(3), 209-224.

Michalak, E. E., Livingston, J. D., Maxwell, V., Hole, R., Hawke, L. D., & Parikh, S. V. (2014). Using theatre to address mental illness stigma: a knowledge translation study in bipolar disorder. *International journal of bipolar disorders*, *2*(1), 1-12.

Michalak, E. E., Jones, S., Lobban, F., Algorta, G. P., Barnes, S. J., Berk, L., ... & Johnson, S. L. (2016). Harnessing the potential of community-based participatory research approaches in bipolar disorder. *International journal of bipolar disorders*, *4*(1), 1-9.

Mitchell, R. L., & Young, A. H. (2016). Theory of mind in bipolar disorder, with comparison to the impairments observed in schizophrenia. *Frontiers in psychiatry*, *6*, 188.

Miklowitz, D. J., & Johnson, S. L. (2006). The psychopathology and treatment of bipolar disorder. *Annual Review of Clinical Psychology*, *2*, 199–235.

Miklowitz, D. J., George, E. L., & Richards, J. A., (2003). A randomized study of family-focused psychoeducation and pharmacotherapy in the

outpatient management of bipolar disorder. *Arch Gen Psychiatry, 60*, 904–12.

Miklowitz, D. J., Wisniewski, S. R., Miyahara, S., Otto, M. W., & Sachs, G. S. (2005). Perceived criticism from family members as a predictor of the one-year course of bipolar disorder. *Psychiatry research*, *136*(2-3), 101-111.

Miklowitz, D. J., Otto, M. W., Frank, E., Reilly-Harrington, N. A., Kogan, J. N., Sachs, G. S., ... & Wisniewski, S. R. (2007). Intensive psychosocial intervention enhances functioning in patients with bipolar depression: results from a 9-month randomized controlled trial. *American Journal of Psychiatry*, *164*(9), 1340-1347.

Miklowitz, D. J. (2008). Adjunctive psychotherapy for bipolar disorder: state of the evidence. *American Journal of Psychiatry*, *165*(11), 1408-1419.

Morawa, E., & Erim, Y. (2014). Acculturation and depressive symptoms among Turkish immigrants in Germany. *International journal of environmental research and public health*, *11*(9), 9503-9521.

Moreno, C., Hasin, D. S., Arango, C., Oquendo, M. A., Vieta, E., Liu, S., ... & Blanco, C. (2012). Depression in bipolar disorder versus major depressive disorder: Results from the national epidemiologic survey on alcohol and related conditions. *Bipolar Disorder*, *14*(3), 271–282.

Moreno-De-Luca, D., & Martin, C. L. (2021). All for one and one for all: heterogeneity of genetic etiologies in neurodevelopmental psychiatric disorders. *Current Opinion in Genetics & Development*, *68*, 71-78.

Mundt, A., Kliewe, T., Yayla, S., Ignatyev, Y., Busch, M. A., Heimann, H., ... & Aichberger, M. C. (2014). Social characteristics of psychological

distress in disadvantaged areas of Berlin. *International Journal of Social Psychiatry*, *60*(1), 75-82.

Murray, G., & Johnson, S. L. (2010). The clinical significance of creativity in bipolar disorder. *Clinical psychology review*, *30*(6), 721-732.

Murray, G., Leitan, N. D., Thomas, N., Michalak, E. E., Johnson, S. L., Jones, S., ... & Berk, M. (2017). Towards recovery-oriented psychosocial interventions for bipolar disorder: quality of life outcomes, stage-sensitive treatments, and mindfulness mechanisms. *Clinical Psychology Review*, *52*, 148-163.

Najafi-Vosough, R., Ghaleiha, A., Faradmal, J., & Mahjub, H. (2016). Recurrence in patients with bipolar disorder and its risk factors. *Iranian Journal of Psychiatry*, *11*(3), 173.

National Alliance on Mental Illness (NAMI). (2020). *Mental health conditions.* Retrieved from https://www.nami.org/About-Mental-Illness/Mental-Health-Conditions on 03/08/2021.

National Institute of Mental Health. (2015). *Bipolar disorder*. London: NIH.

Naumovski, V., Dana, L. P., Pesakovic, G., & Fidanoski, F. (2017). Why interpersonal communication is important in public administration?. *Współczesne Problemy Ekonomiczne*, *14*, 55-77.

Navarro-Abal, Y., Climent-Rodríguez, J. A., López-López, M. J., & Gómez-Salgado, J. (2018). Psychological coping with job loss. Empirical study to contribute to the development of unemployed people. *International journal of environmental research and public health*, *15*(8), 1787.

Neacsiu, A. D., Bohus, M., & Linehan, M. M. (2013). Tchapter. *Handbook of emotion regulation*, 491-507.

Neff, A. P., & Marzani, G. (2012). Bipolar disorders: a review. *American family physician*, *85*(5), 483-493.

Nonvignon, J. (2020). Preliminary Findings: Benefit-Cost Analysis of Mental Health Intervention in Ghana.

Novick, D. M., Swartz, H. A., & Frank, E. (2010). Suicide attempts in bipolar I and bipolar II disorder: a review and meta-analysis of the evidence. *Bipolar disorders*, *12*(1), 1-9.

Nukunya, G. K. (2003). *Tradition and change in Ghana: An introduction to sociology*. Ghana Universities Press.

Nusslock, R., Abramson, L., Harmon-Jones, E., Alloy, L., & Coan, J. (2009). Psychosocial interventions for bipolar disorder: Perspective from the behavioral approach system (BAS) dysregulation theory. *Clinical Psychology: Science and Practice*, *16*(4), 449.

Ofori-Atta, A., Cooper, S., Akpalu, B., Osei, A., Doku, V., Lund, C., ... & Mhapp Research Programme Consortium. (2010). Common understandings of women's mental illness in Ghana: results from a qualitative study. *International Review of Psychiatry*, *22*(6), 589-598.

O'Keefe, V. M., Grant, D. M., Tucker, R. P., Lechner, W. V., Mills, A. C., Judah, M. R., & Wingate, L. R. (2016). Autonomy as a prospective predictor of perceived burdensomeness and thwarted belongingness through symptoms of depression. *OMEGA-Journal of Death and Dying*, *73*(1), 70-86.

Oldis, M., Murray, G., Macneil, C. A., Hasty, M. K., Daglas, R., Berk, M., ... & Cotton, S. M. (2016). Trajectory and predictors of quality of life in first episode psychotic mania. *Journal of affective disorders*, *195*, 148-155.

Omar, M. I., Lam, T. B., Alexander, C. E., Graham, J., Mamoulakis, C., Imamura, M., ... & N'dow, J. (2014). Systematic review and meta-analysis of the clinical effectiveness of bipolar compared with monopolar transurethral resection of the prostate (TURP). *BJU international*, *113*(1), 24-35

Ornelas, I. J., & Perreira, K. M. (2011). The role of migration in the development of depressive symptoms among Latino immigrant parents in the USA. *Social science & medicine*, *73*(8), 1169-1177.

Ostberg, V., & Lennartsson, C. (2007). Getting by with a little help: the importance of various types of social support for health problems. *Scandinavian Journal of Public Health*, *35*, 197-204

Otto, M. W., Reilly-Harrington, N., & Sachs, G. S. (2003). Psychoeducational and cognitive-behavioral strategies in the management of bipolar disorder. *Journal of Affective Disorders*, *73*(1-2), 171-181.

Oud, M., Mayo-Wilson, E., Braidwood, R., Schulte, P., Jones, S. H., Morriss, R., ... & Kendall, T. (2016). Psychological interventions for adults with bipolar disorder: systematic review and meta-analysis. *The British Journal of Psychiatry*, *208*(3), 213-222.

Owen, R., Gooding, P., Dempsey, R., & Jones, S. (2017). The reciprocal relationship between bipolar disorder and social interaction: A

qualitative investigation. *Clinical psychology & psychotherapy*, *24*(4), 911-918.

Pacchierotti, C., Iapichino, S., Bossini, L., Pieraccini, F., & Castrogiovanni, P. (2001). Melatonin in psychiatric disorders: a review on the melatonin involvement in psychiatry. *Frontiers in neuroendocrinology*, *22*(1), 18-32.

Pantelidou, S., & Craig, T. K. (2006). Culture shock and social support. *Social psychiatry and psychiatric epidemiology*, *41*(10), 777-781.

Parikh, S. V., & Kennedy, S. H. (2004). Integration of Patient, Provider, and Systems Treatment Approaches in Bipolar Disorder: Where Evidence Meets Practice Reality. *Mood disorders: A handbook of science and practice*, 247-257.

Peckham, A. D., McHugh, R. K., & Otto, M. W. (2010). A meta-analysis of the magnitude of biased attention in depression. *Depression and anxiety*, *27*(12), 1135-1142.

Peplau, L. A. (1985). Loneliness research: Basic concepts and findings. In *Social support: Theory, research and applications* (pp. 269-286). Springer, Dordrecht.

Perlis, R. H., Ostacher, M. J., Patel, J. K., Marangell, L. B., Zhang, H., Wisniewski, S. R., ... & Thase, M. E. (2006). Predictors of recurrence in bipolar disorder: primary outcomes from the systematic treatment enhancement program for bipolar disorder (STEP-BD). *American Journal of Psychiatry*, *163*(2), 217–224.

Perneger, T.V., Courvoisier, D.S., Hudelson, P.M., & Gayet-Ageron, A. (2014). Sample size for pre-tests of questionnaires.

Perlis, R. H., Ostacher, M. J., Patel, J. K., Marangell, L. B., Zhang, H., Wisniewski, S. R., … & Thase, M. E. (2006). Predictors of recurrence in bipolar disorder: primary outcomes from the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). *Am J Psychiatry*, *163*(2), 217-24.

Pettersson, E., Larsson, H., & Lichtenstein, P. (2016). Common psychiatric disorders share the same genetic origin: a multivariate sibling study of the Swedish population. *Molecular psychiatry*, *21*(5), 717-721.

Phillips, M. L., Ladouceur, C. D., & Drevets, W. C. (2008). A neural model of voluntary and automatic emotion regulation: implications for understanding the pathophysiology and neurodevelopment of bipolar disorder. *Molecular psychiatry*, *13*(9), 833-857.

Pini, S., Cassano, G. B., Simonini, E., Savino, M., Russo, A., & Montgomery, S. A. (1997). Prevalence of anxiety disorders comorbidity in bipolar depression, unipolar depression and dysthymia. *Journal of affective disorders*, *42*(2-3), 145-153.

Pinto-Meza, A., Moneta, M. V., Alonso, J., Angermeyer, M. C., Bruffaerts, R., Caldas de Almeida, J. M., ... & Haro, J. M. (2013). Social inequalities in mental health: results from the EU contribution to the World Mental Health Surveys Initiative. *Social psychiatry and psychiatric epidemiology*, *48*(2), 173-181.

Polk, E., & Liss, M. (2009). Exploring the motivations behind self-injury. *Counselling Psychology Quarterly*, *22*, 233-241

Pomarol-Clotet, E., Alonso-Lana, S., Moro, N., Sarro, S., Bonnin, M. C., Goikolea, J. M., ... & Salvador, R. (2015). Brain functional changes

across the different phases of bipolar disorder. *The British Journal of Psychiatry*, *206*(2), 136-144.

Post, R. M., & Leverich, G. S. (2006). The role of psychosocial stress in the onset and progression of bipolar disorder and its comorbidities: the need for earlier and alternative modes of therapeutic intervention. *Development and psychopathology*, *18*(4), 1181-1211.

Qureshi, N. A., & Al-Bedah, A. M. (2013). Mood disorders and complementary and alternative medicine: a literature review. *Neuropsychiatric disease and treatment*, *9*, 639.

Rackoff, G. N., & Newman, M. G. (2020). Reduced positive affect on days with stress exposure predicts depression, anxiety disorders, and low trait positive affect 7 years later. *Journal of abnormal psychology*, *129*(8), 799

Radonjić, N. V., Hess, J. L., Rovira, P., Andreassen, O., Buitelaar, J. K., Ching, C. R., ... & Faraone, S. V. (2021). Structural brain imaging studies offer clues about the effects of the shared genetic etiology among neuropsychiatric disorders. *Molecular psychiatry*, *26*(6), 2101-2110.

Rakofsky, J. J., Ressler, K. J., & Dunlop, B. W. (2012). BDNF function as a potential mediator of bipolar disorder and post-traumatic stress disorder comorbidity. *Molecular psychiatry*, *17*(1), 22-35.

Rancans, E., Renemane, L., Kivite-Urtane, A., & Ziedonis, D. (2020). Prevalence and associated factors of mental disorders in the nationwide

primary care population in Latvia: a cross-sectional study. *Annals of general psychiatry*, *19*(1), 1-10.

Read, U.M., & Doku, V.C.K (2012). Mental health research in Ghana: A literature review. *Ghana Medical Journal, 46*(6), 29-38.

Rehm, J., & Shield, K. D. (2019). Global burden of disease and the impact of mental and addictive disorders. *Curr Psychiatry Rep., 21*(2), 10.

Rendell, L., Fogarty, L., Hoppitt, W. J., Morgan, T. J., Webster, M. M., & Laland, K. N. (2011). Cognitive culture: theoretical and empirical insights into social learning strategies. *Trends in cognitive sciences*, *15*(2), 68-76.

Reyna, V. F. (2004). How people make decisions that involve risk: A dual-processes approach. *Current directions in psychological science*, *13*(2), 60-66.

Reyna, V. F. (2008). A theory of medical decision making and health: fuzzy trace theory. *Medical decision making*, *28*(6), 850-865.

Reyna, V. F., & Rivers, S. E. (2008). Current theories of risk and rational decision making. *Developmental review: DR*, *28*(1), 1.

Rice, F. (2010). Genetics of childhood and adolescent depression: insights into etiological heterogeneity and challenges for future genomic research. *Genome Medicine*, *2*(9), 1-6.

Ritsner, M., Ponizovsky, A., Nechamkin, Y., & Modai, I. (2001). Gender differences in psychosocial risk factors for psychological distress among immigrants. *Comprehensive psychiatry*, *42*(2), 151-160.

Roberts, M., Mogan, C., & Asare, J. B. (2014). An overview of Ghana's mental health system: results from an assessment using the World

Health Organization's Assessment Instrument for Mental Health Systems (WHO-AIMS). *International journal of mental health systems*, *8*(1), 1-13.

Robinson, O. J., & Sahakian, B. J. (2008). Recurrence in major depressive disorder: A neurocognitive perspective. *Psychol Med., 38*, 315-318.

Rosa, A. R., González-Ortega, I., González-Pinto, A., Echeburúa, E., Comes, M., Martínez-Àran, A., ... & Vieta, E. (2012). One-year psychosocial functioning in patients in the early vs. late stage of bipolar disorder. *Acta Psychiatrica Scandinavica*, *125*(4), 335-341.

Rosenthal, D. M. (2000). Consciousness, content, and metacognitive judgments. *Consciousness and cognition*, *9*(2), 203-214.

Rothman, J. K., Greenland, S., & Lash, L.T. (2008). *Modern epidemiology*. Lippincott Williams & Wilkins.

Rowland, T. A., & Marwaha, S. (2018). Epidemiology and risk factors for bipolar disorder. *Therapeutic advances in psychopharmacology*, *8*(9), 251-269.

Rubio, J. M., Olfson, M., Perez-Fuentes, G., Garcia-Toro, M., Wang, S., & Blanco, C. (2014). Effect of first episode axis I disorders on quality of life. *J Nerv Ment Dis.*, *202*(4), 271–274.

Ruiz-Grosso, P., Bernabe-Ortiz, A., Diez-Canseco, F., Gilman, R. H., Checkley, W., Bennett, I. M., & Miranda, J. J. (2015). Depressive mood among within-country migrants in periurban shantytowns of Lima, Peru. *Journal of immigrant and minority health*, *17*(6), 1635-1642.

Salcedo, S., Gold, A. K., Sheikh, S., Marcus, P. H., Nierenberg, A. A., Deckersbach, T., & Sylvia, L. G. (2016). Empirically supported psychosocial interventions for bipolar disorder: current state of the research. *Journal of affective disorders*, *201*, 203-214.

Sallis, R. (2013). *Examination skills of the musculoskeletal system: Self-study*. Washington, DC, USA: American Academy of Family Physicians

Sam, S. P., & Varghese, P. J. (2019). Stressful life events and relapse in bipolar affective disorder: A cross-sectional study from a tertiary care centre of southern India. *Indian Journal of Psychology and Medicine*, *4*(11), 61-67

Sami, M., Khan, H., & Nilforooshan, R. (2015). Late onset mania as an organic syndrome: a review of case reports in the literature. *Journal of affective disorders*, *188*, 226-231.

Sato, A., Hashimoto, T., Kimura, A., Niitsu, T., & Iyo, M. (2018). Psychological distress symptoms associated with life events in patients with bipolar disorder: A cross-sectional study. *Frontiers in psychiatry*, *9*, 200.

Sedgwick, P. (2014). Cross sectional studies: advantages and disadvantages. *BMJ*, *348*, 2276.

Sedgwick, P. (2015). Bias in observational study designs: cross sectional studies. *BMJ*, *350*, h1286.

Semmer, N., Elfering, A., Jacobshagen, N. & Perrot, T. (2008). The emotional meaning of instrumental social support. *International Journal of Stress Management*, *15*(3), 235-251

Shahsavarani, A. M., Abadi, A. M. & Kalkhoran, M. H. (2015). Facts and theories through literature review. *International Journal of Medical Reviews*, *2*(2), 230-241

Sheppes, G., & Gross, J. J. (2011). Is timing everything? Temporal considerations in emotion regulation. *Personality and Social Psychology Review*, *15*(4), 319-331.

Siegel, R. S., Hoeppner, B., Yen, S., Stout, R. L., Weinstock, L. M., Hower, H., … & Keller, M. B. (2015). Longitudinal associations between interpersonal relationship functioning and mood episode severity in youth with bipolar disorder. *Journal of Nerve and Mental Disorder*, *203*(3), 194-204.

Silveira Jr, É. D. M., & Kauer-Sant'Anna, M. (2015). Rumination in bipolar disorder: a systematic review. *Brazilian Journal of Psychiatry*, *37*, 256-263.

Sipsma, H., Ofori-Atta, A., Canavan, M., Osei-Akoto, I., Udry, C., & Bradley, E. H. (2013). Poor mental health in Ghana: who is at risk?. *BMC public health*, *13*(1), 1-9.

Smith, D., Jones, I., & Simpson, S. (2010). Psychoeducation for bipolar disorder. *Advances in psychiatric treatment*, *16*(2), 147-154.

Solomon, D. A., Keitner, G. I., Miller, I. W., Shea, M. T., & Keller, M. B. (1995). Course of illness and maintenance treatments for patients with bipolar disorder. *Journal of Clinical Psychiatry*, *56*(1), 5-13.

Steel, Z., Marnane, C., Iranpour, C., Chey, T., Jackson, J. W., Patel, V., & Silove, D. (2014). The global prevalence of common mental disorders:

a systematic review and meta-analysis 1980–2013. *International journal of epidemiology*, *43*(2), 476-493.

Steptoe, A., & Kivimäki, M. (2013). Stress and cardiovascular disease: an update on current knowledge. *Annual review of public health*, *34*, 337-354.

Stults-Kolehmainen, M. A., & Sinha, R. (2014). The effects of stress on physical activity and exercise. *Sports medicine*, *44*(1), 81-121.

Subramanian, K., Sarkar, S., Kattimani, S. & Rajkumar, R. P. (2017). Role of stressful life events and kindling in bipolar disorder: Converging evidence from a mania-predominant illness course. *Psychiatry Research*, *258*, 1-4.

Swartz, H. A., Levenson, J. C., & Frank, E. (2012). Psychotherapy for bipolar II disorder: The role of interpersonal and social rhythm therapy. *Professional Psychology: Research and Practice*, *43*(2), 145.

Szentagotai, A, David, D (2010). The efficacy of cognitive-behavioral therapy in bipolar disorder: a quantitative meta-analysis. Journal of Clinical Psychiatry 71, 66–

Taloyan, M., Johansson, S. E., Sundquist, J., Koctürk, T. O., & Johansson, L. M. (2008). Psychological distress among Kurdish immigrants in Sweden. *Scandinavian Journal of Public Health*, *36*(2), 190-196.

Talwar, P. & Ar, M. F. (2013). Perceived social support among university students in Malaysia: a reliability study. *Malaysian Journal of Psychiatry E Journal*, *22*(1), 1-8.

Tariq, A., Beihai, T., Abbas, N., Ali, S., Yao, W., & Imran, M. (2020). Role of perceived social support on the association between physical disability

and symptoms of depression in senior citizens of Pakistan. *International journal of environmental research and public health*, *17*(5), 1485.

Tchankoni, M. K., Gbeasor-Komlanvi, F. A., Bitty-Anderson, A. M., Sewu, E. K., Zida-Compaore, W. I. C., Alioum, A., ... & Ekouevi, D. K. (2020). Prevalence and factors associated with psychological distress among key populations in Togo, 2017. *PloS one*, *15*(4), e0231726.

Thapa, S. B., & Hauff, E. (2005). Gender differences in factors associated with psychological distress among immigrants from low-and middle-income countries. *Social psychiatry and psychiatric epidemiology*, *40*(1), 78-84.

Thase, M. E. (2006). Bipolar depression: Diagnostic and treatment consideration. *Dev Psychopathology*, *18*(4), 1213-1230.

Thoits, P. A. (2011). Mechanisms linking social ties and support to physical and mental health. *Journal of health and social behavior*, *52*(2), 145-161.

Thompson, R. A., & Lewis, M. D & Calkins, S. D. (2008). Reassessing emotion regulation. *Child Development Perspective*, *2*(3), 124-131.

Tielbeek, J. J., Medland, S. E., Benyamin, B., Byrne, E. M., Heath, A. C., Madden, P. A., ... & Verweij, K. J. (2012). Unraveling the genetic etiology of adult antisocial behavior: a genome-wide association study.

Tinghög, P., Al-Saffar, S., Carstensen, J., & Nordenfelt, L. (2010). The association of immigrant-and non-immigrant-specific factors with mental ill health among immigrants in Sweden. *International Journal of Social Psychiatry*, *56*(1), 74-93.

Tohen, M., Hennen, J., Zarate Jr, C. M., Baldessarini, R. J., Strakowski, S. M., Stoll, A. L., ... & Cohen, B. M. (2000). Two-year syndromal and functional recovery in 219 cases of first-episode major affective disorder with psychotic features. *American Journal of Psychiatry*, *157*(2), 220-228.

Tondo, L., Visioli, C., Preti, A., & Baldessarini, R. J. (2014). Bipolar disorders following initial depression: modeling predictive clinical factors. *Journal of Affective Disorders*, *167*, 44-49.

Tucker, J., Sinclair, R., Mohr, C., Adler, A., Thomas, J., & Salvi, A. A. (2008). Temporal investigation of the direct, interactive, and reverse relations between demand and control and affective strain. *Work & Stress*, *22*, 81-95.

Uchino, B. N., Bowen, K., Carlisle, M., & Birmingham, W. (2012). Psychological pathways linking social support to health outcomes: A visit with the "ghosts" of research past, present, and future. *Social science & medicine*, *74*(7), 949-957.

Umeoka, E. H., Leeuwen, J., Vinkers, C. H., & Joëls, M. (2020). The role of stress in bipolar disorder. In *Bipolar Disorder: From Neuroscience to Treatment* (pp. 21-39). Springer, Cham.

Van Rheenen, T. E., & Rossell, S. L. (2014). Objective and subjective psychosocial functioning in bipolar disorder: an investigation of the relative importance of neurocognition, social cognition and emotion regulation. *Journal of affective disorders*, *162*, 134-141.

Vancampfort, D., Vansteelandt, K., Correll, C. U., Mitchell, A. J., De Herdt, A., Sienaert, P., ... & De Hert, M. (2013). Metabolic syndrome and metabolic abnormalities in bipolar disorder: a meta-analysis of prevalence rates and moderators. *American Journal of Psychiatry*, 170(3), 265–274.

Van der Geest, S. (2013). Kinship as friendship: brothers and sisters in Kwahu, Ghana. *The Anthropology of Sibling Relations: Shared Parentage, Experience, and Exchange/eds E. Alber, C. Cati, T. Thelen. New York: PALGRAVE MACMILLAN*, 51-70.

Vázquez, G. H., Holtzman, J. N., Lolich, M., Ketter, T. A., & Baldessarini, R. J. (2015). Recurrence rates in bipolar disorder: systematic comparison of long-term prospective, naturalistic studies versus randomized controlled trials. *European Neuropsychopharmacology*, *25*(10), 1501-1512.

Vieta, E. (2005). Improving treatment adherence in bipolar disorder through psychoeducation. *J. Clin. Psychiatry*, *66*(Suppl 1), 24–29.

Vieta, E., Berk, M., Schulze, T. G., Carvalho, A. F., Suppes, T., Calabrese, J. R., ... & Grande, I. (2018). Bipolar disorders. *Nat Rev Dis Primers*, *4*(1), 18008.

Vieta, E., Blasco-Colmenares, E., Figueira, M. L., Langosch, J. M., Moreno-Manzanaro, M., & Medina, E. (2011). Clinical management and burden of bipolar disorder: a multinational longitudinal study (WAVE-bd study). *BMC Psychiatry*, *11*(1), 1-8.

Vigo, D., Thornicroft, G., & Atun, R. (2016). Estimating the true global burden of mental illness. *Lancet Psychiatry*, *3*(2), 171–178.

Viguera, A. C., Whitfield, T., Baldessarini, R. J., Newport, D. J., Stowe, Z., Reminick, A., ... & Cohen, L. S. (2007). Risk of recurrence in women with bipolar disorder during pregnancy: prospective study of mood stabilizer discontinuation. *American Journal of Psychiatry*, *164*(12), 1817–1824.

Villarroel, N., & Artazcoz, L. (2012). Heterogeneous patterns of health status among immigrants in Spain. *Health & place*, *18*(6), 1282-1291.

Vizzotto, A. D. B., de Oliveira, A. M., Elkis, H., Cordeiro, Q., & Buchain, P. C. (2013). Psychosocial characteristics. In Gellman, M. D. and Turner, J. R. (Eds.) *Encyclopedia of behavioral medicine*. New York: Springer.

Vokić, N. P. & Bogdanić, A. (2007). Individual differences and occupational stress perceived: A Croatian survey. *Working Paper Series 07-05*, 2-15.

Vos, T., Flaxman, A. D., Naghavi, M., Lozano, R., Michaud, C., Ezzati, M., ... & Harrison, J. E. (2012). Years lived with disability (YLDs) for 1160 sequelae of 289 diseases and injuries 1990–2010: a systematic analysis for the Global Burden of Disease Study 2010. *The lancet*, *380*(9859), 2163-2196.

Wang, P. S., Aguilar-Gaxiola, S., Alonso, J., Angermeyer, M. C., Borges, G., Bromet, E. J., ... & Wells, J. E. (2007). Use of mental health services for anxiety, mood, and substance disorders in 17 countries in the WHO world mental health surveys. *The Lancet*, *370*(9590), 841-850.

Weger, M., & Sandi, C. (2018). High anxiety trait: a vulnerable phenotype for stress-induced depression. *Neuroscience & Biobehavioral Reviews*, *87*, 27-37.

Weinstock, L. M. & Miller, I. W. (2010). Psychosocial predictors of mood symptoms one year following acute-phase treatment of bipolar I disorder. *Compr. Psychiatry, 51*(5), 497-503.

WHO (2009). *Global Burden of Disease: Death and DALY estimates for 2004 by cause for WHO member states. Geneva:* WHO Department of Measurement and Health Information.

Wilson, A., Yendork, J. S., & Somhlaba, N. Z. (2017). Psychometric properties of multidimensional scale of perceived social support among Ghanaian adolescents. *Child Indicators Research, 10*(1), 101-115

Wirth, M. M., Scherer, S. M., Hoks, R. M., & Abercrombie, H. C. (2011). The effect of cortisol on emotional responses depends on order of cortisol and placebo administration in a within-subject design. *Psychoneuroendocrinol ogy*, *36*(7), 945–954.

Wittig, U., Lindert, J., Merbach, M., & Brähler, E. (2008). Mental health of patients from different cultures in Germany. *European Psychiatry*, *23*(S1), s28-s35.

World Health Organization (WHO). (2017). *Mental health atlas*. Geneva: WHO.

World Health Organization (WHO). (2019). Mental disorders. Retrieved from https://www.who.int/news-room/fact-sheets/detail/mental-disorderson 03/08/2021

Wong, D. F. K., He, X., Leung, G., Lau, Y., & Chang, Y. (2008). Mental health of migrant workers in China: prevalence and correlates. *Social psychiatry and psychiatric epidemiology*, *43*(6), 483-489.

Wozniak, J., Biederman, J., Martelon, M. K., Hernandez, M., Woodworth, K. Y., & Faraone, S. V. (2013). Does sex moderate the clinical correlates of pediatric bipolar-I disorder? Results from a large controlled family-genetic study. *Journal of affective disorders*, *149*(1-3), 269-276.

Xuan, R., Li, X., Qiao, Y., Guo, Q., Liu, X., Deng, W., ... & Zhang, L. (2020). Mindfulness-based cognitive therapy for bipolar disorder: A systematic review and meta-analysis. *Psychiatry research*, *290*, 113116.

Yang, T., Xu, X., Li, M., Rockett, I. R., Zhu, W., & Ellison-Barnes, A. (2012). Mental health status and related characteristics of Chinese male rural–urban migrant workers. *Community mental health journal*, *48*(3), 342-351.

Yatham, L. N., Kennedy, S. H., Parikh, S. V., Schaffer, A., Bond, D. J., Frey, B. N., ... & Berk, M. (2018). Canadian Network for Mood and Anxiety Treatments (CANMAT) and International Society for Bipolar Disorders (ISBD) 2018 guidelines for the management of patients with bipolar disorder. *Bipolar disorders*, *20*(2), 97-170.

Yonkers, K. A., Bruce, S. E., Dyck, I. R., Keller, M. B. (2003). Chronicity, relapse and illness, course of panic disorder, social phobia and generalized anxiety disorder: Findings in men and women from 8 years of follow-up. *Depress & Anxiety*, *17*, 173-179.

Yu, H., Bi, W., Liu, C., Zhao, Y., Zhang, D., & Yue, W. (2014). A hypothesis-driven pathway analysis reveals myelin-related pathways that contribute to the risk of schizophrenia and bipolar disorder. *Progress in Neuro-Psychopharmacology and Biological Psychiatry*, *51*, 140-145.

Zhong, B. L., Liu, T. B., Chiu, H. F., Chan, S. S., Hu, C. Y., Hu, X. F., ... & Caine, E. D. (2013). Prevalence of psychological symptoms in contemporary Chinese rural-to-urban migrant workers: an exploratory meta-analysis of observational studies using the SCL-90-R. *Social psychiatry and psychiatric epidemiology*, *48*(10), 1569-1581.

Zubin, J., & Spring, B. (1977). Vulnerability: A new view of schizophrenia. *Journal of Abnormal Psychology*, *86*(2), 103–126

Zubin, J., & Spring, B. (1997). Vulnerability- A new view of schizophrenia. *Journal of Abnormal Psychology*, *86*, 103-126.

APPENDICES

APPENDIX A: QUESTIONNAIRE

UNIVERSITY OF CAPE COAST

FACULTY OF EDUCATIONAL FOUNDATIONS

COLLEGE OF EDUCATION STUDIES

DEPARTMENT OF EDUCATION AND PSYCHOLOGY

QUESTIONNAIRE FOR PATIENTS

The goal of this study is to obtain information on the psychosocial predictors of recurrence of bipolar disorder. I, therefore, solicit your cooperation and consent to participate in this study. The confidentiality of your responses is guaranteed. There is no right or wrong responses.

Directions

Please indicate your choice by ticking (√) or writing your response where necessary.

SOCIODEMOGRAPHIC CHARACTERISTICS

Sex

1. Female [ ]
2. Male [ ]

Age

1. 18-25 [ ]
2. 26-35 [ ]
1. 36- 45 [ ]
3. 46-55 [ ]

Marital Status

1. Single [ ]
2. Married [ ]
3. Divorced [ ]

Education

1. No formal education [ ]
2. Primary / Junior high school education [ ]
3. High school education / O LEVEL / A LEVEL [ ]
4. Tertiary education [ ]
5. Other _____

Occupation

1. Employed [ ]
2. Unemployed [ ]

Difficulties In Emotion Regulation Scale (Ders-16)

Please indicate how often the following statements apply to you by writing the appropriate number from the scale by the corresponding statement.

"1" Almost never (0-10) %, "2" Sometimes (11-35) %, "3" About half the time (36-65) % "4" Most of the time (66-90) %, "5" Almost always (91-100) %

	Almost never 1	Sometimes 2	About half the time 3	Most of the time 4	Almost always 5
1. I have difficulty making sense out of my feelings.					
2. I am confused about how I feel.					
3. When I'm upset, I have difficulty getting work done.					
4. When I'm upset, I become out of control.					
5. When I'm upset I					

believe that I will remain that way for a long time.					
6. When I'm upset, I believe that I I'll end up feeling very depressed.					
7. When I'm upset, I have difficulty focusing on other things.					
8. When I'm upset, I feel out of control.					
9. When I'm upset, I feel ashamed with myself for feeling that way.					
10. When I'm upset, I feel like I'm weak.					
11. When I'm upset, I have difficulty controlling my behaviors.					
12. When I'm upset, I feel that there is nothing I can do to make myself feel better.					
13. When I'm upset, I become irritated with myself for feeling that way.					
14. When I'm upset, i start to feel very bad about myself.					
15. When I'm upset, I have difficulty thinking about anything else.					
16. When I'm upset, my emotions feel overwhelming.					

INTERPERSONAL COMMUNICATION SKILLS INVENTORY

To complete this inventory, read each statement carefully and honestly assess how often the particular statement applies to you. For instance, in Section I - question number 1, if you sometimes find it difficult to talk to other people, you would place a check mark in the "Sometimes" column for question number 1. And for question 2, if others often tend to finish sentences for you when you are trying to explain something; you would check the "Usually" column and so on until you have completed all questions in all four sections of the inventory.

SECTION I

	Usually	**Sometimes**	**Seldom**
1. Is it difficult for you to talk to other people?			
2. When you are trying to explain something, do others tend to put words in your mouth, or finish your sentences for you?			
3. In conversation, do your words usually come out the way you would like?			
4. Do you find it difficult to express your ideas when they differ from the ideas of people around you?			
5. Do you assume that the other person knows what you are trying to say, and leave it to him/her to ask you questions?			
6. Do others seem interested and attentive when you are talking to them?			
7. When speaking, is it easy for you to recognize how others are reacting to what you are saying?			
8. Do you ask the other person to tell you how she/he feels about the point you are trying to make?			
9. Are you aware of how your tone of voice may affect others?			
10. In conversation, do you look to talk about things of interest to both you and the other person?			

	Usually	Sometimes	Seldom
11. In conversation, do you tend to do more talking than the other person does?			
12. In conversation, do you ask the other person questions when you don't understand what they've said?			
13. In conversation, do you often try to figure out what the other person is going to say before they've finished talking?			
14. Do you find yourself not paying attention while in conversation with others?			
15. In conversation, can you easily tell the difference between what the person is saying and how he/she may be feeling?			
16. After the other person is done speaking, do you clarify what you heard them say before you offer a response?			
17. In conversation, do you tend to finish sentences or supply words for the other person?			
18. In conversation, do you find yourself paying most attention to facts and details, and frequently missing the emotional tone of the speakers' voice?			
19. In conversation, do you let the other person finish talking before reacting to what she/he says?			
20. Is it difficult for you to see things from the other person's point of view?			
21. Is it difficult to hear or accept constructive criticism from the other person?			
22. Do you refrain from saying something that you think will upset someone or make matters worse?			
23. When someone hurts your feelings, do you discuss this with him/her?			
24. In conversation, do you try to put yourself in the other person's shoes?			
25. Do you become uneasy when someone pays you a compliment?			
26. Do you find it difficult to disagree with others because you are afraid they will get angry?			

27. Do you find it difficult to compliment or praise others?			
28. Do others remark that you always seem to think you are right?			
29. Do you find that others seem to get defensive when you disagree with their point of view?			
30. Do you help others to understand you by saying how you feel?			

31. Do you have a tendency to change the subject when the other person's feelings enter into the discussion?			
32. Does it upset you a great deal when someone disagrees with you?			
33. Do you find it difficult to think clearly when you are angry with someone?			
34. When a problem arises between you and another person, can you discuss it without getting angry?			
35. Are you satisfied with the way you handle differences with others?			
36. Do you sulk for a long time when someone upsets you?			
37. Do you apologize to someone whose feelings you may have hurt?			
38. Do you admit that you're wrong when you know that you are/were wrong about something?			
39. Do you avoid or change the topic if someone is expressing his or her feelings in a conversation?			
40. When someone becomes upset, do you find it difficult to continue the conversation?			

PERCEIVED STRESS SCALE (PSS)

The questions in this scale ask you about your feelings and thoughts during the last month. In each case, you will be asked to indicate by circling how often you felt or thought a certain way. For each of the questions below, circle the response that best characterizes how you feel about the statement. Circle "0" for **Never**, Circle "1" for **Almost Never,** Circle "2" for **Sometimes** Circle "3" for **Fairly Often,** Circle "4" for **Very Often**

	Never	**Almost Never**	**Some times**	**Fairly Often**	**Very Often**
1. In the last month, how often have you been upset because of something that happened unexpectedly?	0	1	2	3	4
2. In the last month, how often have you felt that you were unable to control the important things in your life?	0	1	2	3	4
3. In the last month, how often have you felt nervous and "stressed"?	0	1	2	3	4
4. In the last month, how often have you felt confident about your ability to handle your personal problems?	0	1	2	3	4
5. In the last month, how often have you felt that things we're going your way?	0	1	2	3	4
6. In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4

6. In the last month, how often have you found that you could not cope with all the things that you had to do?	0	1	2	3	4
7. In the last month, how often have you been able to control irritations in your life?	0	1	2	3	4
8. In the last month, how often have you felt that you were on top of things?	0	1	2	3	4
9. In the last month, how often have you been angered because of things that were outside of your control?	0	1	2	3	4
10. In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	0	1	2	3	4

MULTIDIMENSIONAL SCALE OF PEREIVED SOCIAL SUPPORT (MSPSS)

For each of the questions below, circle the response that best characterizes how you feel about the statement. Circle "1" if you **Very Strongly Disagree, Circle** "2" if you **Strongly Disagree** Circle "3" if you **Mildly Disagree,** Circle "4" if you are **Neutral,** Circle "5" if you **Mildly Agree,** Circle "6" if you **Strongly Agree,** Circle "7" if you **Very Strongly Agree**

	Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
1. There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2. There is a special person with whom I can share joys and sorrows.	1	2	3	4	5	6	7
3. My family really tries to help me.	1	2	3	4	5	6	7
4. I get the emotional help & support I need from my family.	1	2	3	4	5	6	7
5. I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
6. My friends really try to help me.	1	2	3	4	5	6	7
7. I can count on my friends when things go wrong.	1	2	3	4	5	6	7
8. I can talk about	1	2	3	4	5	6	7

my problems with my family.							
9. I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
10. There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
11. My family is willing to help me make decisions.	1	2	3	4	5	6	7
12. I can talk about my problems with my friends.	1	2	3	4	5	6	7