HEALTH SERVICE UTILIZATION BY PATIENTS WITH COMMON MENTAL DISORDER IDENTIFIED BY THE SRQ-20 IN A PRIMARY CARE SETTING IN ZOMBA, MALAWI; (A DESCRIPTIVE STUDY)

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DECLARATION

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ABSTRACT

Background: Health service utilization by people with mental health problems seem to be a large public health issue, especially in low-income countries. In Malawi, the situation is not different from other developing countries in Sub-Saharan Africa as far as access to services for people with mental health problems is concerned. Non specialized health care workers provide mental health services in the primary care settings in Malawi and, given the workload at primary health care (PHC) setting level, little time is available to screen for mental disorders, hence these may go unrecognized. Therefore, there is a possibility that a significant proportion of patients attending primary care in Malawi may have common mental disorders (CMD) and may be deprived of routine screening. Consequently, the possibility of misdiagnosis may lead to higher service utilization by people with common mental health problems. However, no study has been carried out to assess the health service utilization by people with common mental disorders in Malawi.

Aim: The aim of the study was to evaluate health services utilization patterns of patients with CMDs in primary care clinics.

Methods: This was a quantitative study employing a cross-sectional descriptive design. The study was conducted in two primary health care clinics in one of the 28 districts in Malawi. The study included all consecutive patients aged 18 years and older who attended the primary health care clinics for any reason. Face-to-face interviews using the Self-Reporting Questionnaires (SRQ-20) were conducted in a sample of 323 primary health care attendees.

Findings: The prevalence of probable CMD was 20.1%. People with CMD had a higher average number of health facility visits in the previous three months compared to those

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without probable CMD thus 1.6 vs. 1.19 (p-value 0.02). There was no significant difference in the average number of traditional healer visits in the previous three months between those with probable CMD and those without thus 0.05 vs. 0.08 (p-value = 0.565). The total average number of both health facility and traditional healer visits was 1.68 vs. 1.24 (p-value 0. 019), people with probable CMD having a higher average compared to those without a probable CMD. It was found that people who have visited the health care facility repeatedly in the past 3 months were likely to be suffering from CMD. The odds of probable CMD increased with each visit to a health facility by 1.2 (p-value=0.024). Almost all those who had probable CMD had no treatment prescribed for CMD by PHC clinicians.

Conclusion: The study reveals high utilization of health services for people with CMD, as well as a treatment gap of mental health care in primary care settings. PHC workers are misdiagnosing patients with CMDs leading to high utilization of PHC services. There is need for PHC workers to improve skills in diagnosing patients with CMD to make PHC services more effective by reducing re-attendances and improving patient outcomes. There is also need to direct effort towards creating awareness about mental health and encourage patient disclosure of psychological or mental health problems.

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OPSOMMING

Agtergrond: Dit blyk dat veral in lae-inkomste lande, die gebruik van gesondheidsdienste onder mense met geestesgesondheidsprobleme `n kwellende gesondheidskwessie te wees. Malawi, soos ander ontwikkelende lande in Sub-Sahara Afrika, ervaar die probleem van toegang tot gesondheidsdienste vir mense met geestesgesondheidsprobleme. In die primêre gesondheidsdienste in Malawi, word pasiënte met geestesgesondheidsprobleme behandel, deur algemene gesondheidswerkers wat nie gespesialiseerd is in geestesgsondheid. Verder veroorsaak die arbeidslas in primêre gesondheidsorg dat daar nie altyd tyd is om pasiënte voldoende vir geestesgversteurings te ondersoek nie. Dit is daarom moontlik dat `n merkwaardige aantal pasiënte wat gebruik maak van primêre gesondheidsorg in Malawi aan algemene geestesversteurings lei, maar hulle word nie voldoende ondersoek nie en gevolglik word hulle of nie gediagnoseer nie of verkeerdelik gediagnoseer. Dit kan daartoe lei dat `n groter aantal pasiënte, met algemene geestesversteurings, gebruik maak van primêre gesondheidsdienste. Die probleem is dat daar nog geen navorsing in Malawi gedoen is, oor die gebruik van gesondheidsdienste onder mense met algemene geestesversteurings.

Doelwit: Die doel van die studie is om pasiënte, met algemene geestesversteurings, se gebruik van primêre gesondheidsorg klinieke te ondersoek.

Metodes: `n Dwarssnee kwantitatiewe beskrywende studie-ontwerp was gebruik. Data-insameling het by twee primêre gesondheidsorg klinieke, in een van die 28 distrikte in Malawi, plaasgevind. Pasiënte, 18-jaar en ouer, wat die primêre gesondheidsklinieke vir enige rede besoek het, was ingesluit in die studie. Die steekproef het bestaan uit 323 pasiënte wat gebruik gemaak het van primêre gesondheidsorg klinieke. Onderhoude was

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met pasiënte gevoer deur middel van `n self-relaas vraelys (ook verwys na as 'Self-Reporting Questionnaires').

Bevindinge: Daar was `n voorkomssyfer van 20.1% pasiënte wat waarskynlik aan algemene geestesversteurings gelei het. Mense wat waarskynlik aan algemene geestesversteurings gelei het, het in `n tydperk van drie maande gemiddeld meer gebruik gemaak van gesondheidsdienste, in vergelyking met diegene wat waarskynlik nie aan algemene geestesversteurings gelei het nie, dus 1.6 teenoor 1.19 (p-waarde van 0.02). In die gegewe drie maande was daar geen betekenisvolle verskil in die gemiddelde aantal besoeke afgelê aan tradisionele geneeshere deur pasiënte wat waarskynlik aan algemene geestesversteurings gelei het, in vergelyking met diegene wat waarskynlik nie aan geestesversteurings gelei het nie, dus 0.05 teenoor 0.08 (p-waarde= 0.565). In totaal het diegene met geestesversteuring ook gemiddeld meer besoeke, 1.68 teenoor 1.24 (p-waarde 0.019), aan beide gesondheidsorg en traditionele geneeshere afgelê het, as diegene wat waarskynlik nie aan geestesversteurings gelei het nie. Die bevindinge dui daarop dat mense wat in die afgelope drie maande herhaaldelik gebruik gemaak het van gesondheidsdienste, waarskynlik aan algemene geestesversteurings gelei het. Die moontlikheid dat `n pasiënt aan `n algemene geestesversteuring gelei het, het met 1.2 (p-waarde=0.024) verhoog met elke besoek aan die gesondheidsdienste. Byna al die pasiënte wat waarskynlik aan `n algemene geestesversteuring gelei het, het nie behandeling ontvang nie.

Gevolgtrekking: Daar is bevind dat mense met algemene geestesversteurings geredelik gebruik maak van gesondheidsdienste en dat daar `n gaping is in die voorsiening van geestesgesondheidsdienste in primêre gesondheidsfasiliteite. Primêre gesondheidsorg

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personeel se hantering van pasiënte lei daartoe dat pasiënte met algemene geestesversteurings meer geredelik gebruik maak van primêre gesondheidsorg. Daar is `n behoefte aan die verbetering van primêre gesondheidsorg personeel se vaardighede en vermoë om pasiënte met geestesversteuring te diagnoseer en sodoende ook herhaaldelike besoeke te verminder en die gesondheidsuitkomste van pasiente te verbeter. Daar is `n behoefte aan groter bewusmaking van geestesgesondheid en om pasiënte aan te moedig om hulle sielkundige en geestesgesondheidsprobleme aan personeel te openbaar.

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DEDICATION

This study is dedicated to my soulmate Madalitso for the love and moral support rendered to me, and to my boys Mphatso, Wamaka and Atupele who missed my attention during my study.

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LIST OF ABBREVIATIONS

CMD	Common Mental Disorders
CME	Continuing Medical Education
DHO	District Health Officer
PHC	Primary Health Care
OPD	Out-Patient Department
SRQ	Self-Reporting Questionnaire
W.H.O	World Health Organization
SCID	Structured Clinical Interview for DSM-IV Axis I disorders
GHQ	General Health Questionnaire
GP	General Practitioner
ICD-10	International Classification of Diseases (Number 10)

Operational Definitions

Common mental disorders: Depressive (depression) and anxiety disorders that are classified in ICD-10 as "neurotic, stress-related and somatoform disorders" and "mood disorders" (Patel & Kleinman, 2003).

Somatization: This refers to "a tendency to experience and communicate somatic distress in response to psychosocial stress and to seek medical help for it"(Lipowski, 1988).

Primary Health Care Clinics: In this study this refers to the first level of the Malawi health care delivery system (including health centres and health posts).

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Primary Health Care Workers: In this study this refers to Medical Assistants and Clinical Technicians working in primary care clinics.

Medical Assistants undergo two years of medical training, comprising one year of theory and one year of clinical attachments, and graduate with a certificate in clinical medicine.

Clinical Technicians undergo three years of training, comprising two years of theory teaching and one year of clinical teaching, and graduate with a diploma in clinical medicine. They also undergo a one-year internship.

General Health Questionnaire (GHQ) was designed by Goldberg to study psychological disturbances in primary care and community settings (Abiodun, 1993).

Self-Reporting Questionnaire (SRQ-20) was designed by the World Health Organization as a screening tool for common mental disorders (Stewart, et al., 2009).

Probable Common Mental Disorders cases are those cases that screen positive on the Self Reporting Questionnaire (SRQ-20).

District Health Management Teams: These teams consist of senior managers (District Health Officer, District Nursing Officer, District Medical Officer, District Environmental Health Officer, District Health Service Administrator and Accountant) who oversee the management of health facilities and health programmes, and prepare and implement plans in the districts.

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CHAPTER 1 INTRODUCTION

Common mental disorders (CMD) are "depressive (depression) and anxiety disorders that are classified in ICD-10 as neurotic, stress-related and somatoform disorders and mood disorders" (Patel & Kleinman, 2003, p.609). Common mental disorders seem to be a public mental health problem worldwide. Previous studies show that mental health problems are at least as common in developing countries as in established market economies with prevalence rates of common mental disorders around 20% in clinic attendees worldwide (Jablensky, et al., 2001).

Common mental disorders, according to the World Health Organization, are among the leading cause of disability in low income countries like Malawi (WHO, 2008a). In Malawi the situation is not different from other developing countries in Sub-Saharan Africa as far as access to services for people with mental health problems is concerned. Mental health care services in Malawi are lagging behind as far as integration to primary health services is concerned, and they are still largely centralized at the three psychiatric units in the country, with only a small proportion of patients (mostly with severe mental illnesses) accessing the services (Kauye, et al., 2011). Furthermore, in Malawi, non-specialized health care workers provide mental health services in the primary care settings, and given the workload at primary health care (PHC) setting level, little time is available to screen for mental disorders. Therefore, the patients with mental disorders may go unrecognized.

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Evidence indicates that common mental disorders often go undetected in primary care (Licht-Strunk, Beekman, de Haan, & van Marwijk, 2009). Therefore, there is a possibility that a significant proportion of patients attending primary care services in Malawi may have common mental disorders and may be deprived of routine screening.

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CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

This chapter gives an overview of relevant scholarly literature and data based on studies that have been conducted in relation to common mental disorders and health service utilization. The literature review examines the association between health service utilization and common mental disorders in primary care. The search was a structured one from which studies on common mental disorders were selected. MEDLINE (PubMed), Science Direct and HINARI databases were searched, using Medical Subject Heading (MeSH) terms for published journal articles. The terms used to capture articles relating to common mental disorders in primary care were "mental disorders", "mental health problems", "prevalence", "health service utilization", "detection", "screening", "socio-demographic factors" and all terms included in MESH as sub-headings of common mental disorders. The search was conducted for studies published in the English language between January 1987 and July 2012. The period was selected to accommodate as many studies as possible related to CMD and utilization conducted in developing countries, as much of the literature in this field has developed over the past 25 years. The search also looked at the reference sections of key articles to identify possible further journal articles relevant to the study, to be reviewed. This search thus captured some of the studies that were conducted in developing countries earlier but were not captured in the database search period of 1987 to 2012.

Types of studies:

All studies reporting epidemiological data on health service utilization and common mental disorders and their relationship among adults were included for review.

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Types of common mental disorders measures:

All studies that had measures to assess common mental disorders or depression or anxiety, such as the Self-Reporting Questionnaire (SRQ-20) (Araya, Wynn, & Lewis, 1992; WHO, 1994) or the General Health Questionnaire (GHQ) (Boardman, 1987; Goldberg, et al., 1997), were included for review.

The literature review comprised studies from low or middle-income countries (LMIC) and high-income countries (HIC). The review excluded psychosis, dementias, child mental disorders, personality disorders, substance use disorders, epilepsy, etc., unless CMD in adults was also part of the study.

2.2 Burden of common mental disorders

Common mental disorders (CMD) are a public health problem worldwide. It is argued that mental and behavioural disorders are among the most important causes of morbidity and considerable disability in primary care settings (Patel & Kleinman, 2003). Data from community surveys indicate the prevalence of mental disorders ranging from 10% to 25% in the general population (Cohen, 2001). However, data from the clinical area indicate up to 40 % of patients in general medical and surgical wards being depressed, suggesting that common mental disorders are more common in clinical than in community settings (Ndetei, et al., 2009). Evidence indicates that mood disorders are among the most common problems that bring patients to doctors. Almost 20% of adults will have a mood disorder requiring treatment during their lifetime, and about 8% of adults will have a major depressive disorder during their lives (Remick, 2002).

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Some studies have estimated the rates of diagnosable psychiatric illness in primary care patients to be between 11% and 35% (Reifler, Kessler, Bernhard, Leon, & Martin, 1996) and between 15% and 30%, with another study reaching as high as 45% (Cohen, 2001). A study of psychological distress in general practice settings conducted in fifteen countries found an average of 24% for prevalence of mental disorders (Goldberg & Gater, 1996). A UK based study found a prevalence of 37% for common mental disorders with 73% of these recognized as cases by the general practitioners (Maginn, et al., 2004). In a Qatari population attending primary health care settings, the overall prevalence of mental disorders was 36.6% (Ghuloum, Bener, & Abou-Saleh, 2011). Different study settings have shown differences in representation of common mental disorders. In a Spanish-based cross sectional study of 5473 participants attending a general medical practice, 22.5% were suffering from depression, and 14.8% from generalized anxiety disorder (Fernandez, et al., 2006). In an Israeli study, depression at 20.6% was most prevalent, followed by generalized anxiety disorder at 11.2%, with panic disorder at 7.2% being the least common (Cwikel, Zilber, Feinson, & Lerner, 2008). In India, 33.9% of the primary care attendees presented with common mental disorders with 83.8% of attendees presenting with depression (Pothen, Kuruvilla, Philip, Joseph, & Jacob, 2003), while in the United States of America, depression was as prevalent as panic disorder with a 39.8% prevalence of depression and a 36.8% prevalence of panic disorder (Means-Christensen, Sherbourne, Roy-Byrne, Craske, & Stein, 2006). A review of studies show that mental health problems are common in developing countries where the prevalence rates of common mental disorders ranges from 20% to 30% (Patel & Kleinman, 2003). Another

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review of studies indicates positive associations between a variety of poverty measures and CMD among the 79% of studies from the LMIC (Lund, et al., 2010).

Various studies from Africa estimate the prevalence of common mental disorders at different rates. In an Ethiopian primary care setting, the rate of CMD was 33.3%, with depression highly prevalent followed by generalized anxiety disorder (Hanlon, et al., 2008). Twenty-four percent of primary care clinic attendees in Tanzania (Ngoma, Prince, & Mann, 2003) had CMD. Two studies in Zimbabwe found the prevalence of common mental disorders at 25% and 26% respectively in primary care settings (Patel, 1998; Reeler, Williams, & Todd, 1993a). In South Africa, it was found that half to three quarters of the general population attendees at primary care from peri-urban townships and rural areas had a symptom level above the threshold value on the SRQ-20 suggestive of common mental disorders (Havenaar, Geerlings, Vivian, Collinson, & Robertson, 2008). A Kenyan study in the two centres using the Self Reporting Questionnaire (SRQ) and the Standard Psychiatric Interview (SPI) found an average rate of psychiatric morbidity to be 29% (Dhadphale, Ellison, & Griffin, 1983). See Table 1 on p.21 for the summarized prevalence rates.

2.3 Socio-demographic correlates of common mental disorders

Literature shows varied associations of the socio-demographic variables such as age, sex, religion, education level, employment status and marital status to common mental disorders. Evidence indicates that men tend to report lower rates of common mental disorders than women (Cohen, 2001; Cwikel, et al., 2008; Havenaar, et al., 2008; Lu, et al., 2008; Sawyer, Pfeiffer, & Spence, 2009). Two community surveys in Pakistan

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showed the potential vulnerability of women, with wide-ranging rates of between 45% to 66%, and men having rates from 15% up to 25% (Cohen, 2001). These findings are related to several factors. For instance, one study in Uganda found that women in polygamous marriages are more likely to be distressed than their male partners for whom the existence of more than one partner was protective (Abbo, et al., 2008). Similarly, a study in Finland found that a lack of partner in males increases the risk for depression (Huurre, Eerola, Rahkonen, & Aro, 2007). In a South African study, women were more likely to have mood and anxiety disorder, whereas men showed an elevated risk for substance abuse (Williams, et al., 2008). On the other hand, a study from India found no association between gender and rates of common mental disorders (Pothen, et al., 2003). Several factors related to gender have been found to be associated with psychiatric morbidity in primary care patients. These factors include worries over employment and finances in men, while in women the worries are more likely to be about troubled family relationships and infertility (Cohen, 2001; Hall & Williams, 1987; Reeler, Williams, & Todd, 1993b).

One study has suggested that there is a need to pay particular attention to the people who have low social economic status because they are prone to common mental disorders (Huurre, et al., 2007). Some studies document a relationship between unemployment, poverty, poor housing and losses to common mental disorders (Havenaar, et al., 2008; Lund, et al., 2010; Patel, 1998; Roy-Byrne, et al., 2006). Conversely it has been found that people living in poverty, or who experience social disruptions, may regard depression and anxiety as normal given the situation, and may not report symptoms

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(Stein & Gureje, 2004). However other studies in China, Hong Kong, Finland and Tanzania show an association between being employed and educated and higher rates of mental illness (Huurre, et al., 2007; Kaaya, Lee, Mbwambo, Smith-Fawzi, & Leshabari, 2008; Lee, Ng, & Tsang, 2009; Lu, et al., 2008). The Chinese and Hong Kong studies attribute this finding to industrialization and rapid economic growth, which could have affected the more educated population. This finding is similar to a Chilean study which found that distress associated with living in emerging economies despite being employed tends to lead to mental ill-health (Araya, Rojas, Fritsch, Acuna, & Lewis, 2001). On the other hand, in Tanzania, the few women who are more educated face social isolation and experience discrepancies between their level of education and the actual jobs which they are permitted to do because of economic discrimination. This discrepancy increases the potential for psychological distress (Kaaya, et al., 2008). Conversely, literature suggests that lack of education or poor education is a risk factor for common mental disorders in low- and middle-income countries (Patel & Kleinman, 2003). The possible explanation is that lack of education or poor education is linked to unemployment, low paying jobs and poverty, which are consequently associated with common mental disorders. For instance, a study in Finland shows higher rates of depression among manual workers than in non-manual workers (Huurre, et al., 2007). The authors suggest that economic deprivation reduces social support since individual resources are absent, and the consequent lack of social support predicts common mental disorders. As an illustration of this, a survey of women in Harare identified poverty, low levels of education and poor living conditions as risk factors for depression and anxiety (Abas & Broadhead, 1997). In the same vein, Brazilian studies found poor education and low income to be independently associated

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with the prevalence of common mental disorders (Ludermir & Lewis, 2001; Marin-Leon, Oliveira, Barros, Dalgalarrondo, & Botega, 2007). However, in the case of a Chilean study, income was not associated with the prevalence of common mental disorders, after adjusting for other socioeconomic variables such as education, occupational status and quality of housing (Araya, Lewis, Rojas, & Fritsch, 2003).

A number of earlier studies have shown the influence of age on common mental disorders. A study in Kuwait found that depression was more prevalent in younger participants of 21 to 44 years than older participants of 45 years and above (Al-Otaibi, et al., 2007). Literature shows that inconsistent care-giving, family conflict, academic failure, transition such as urbanization and community disorganization are some of the risk factors among others for developing mental disorders among the young people aged 12 to 24 years (Patel, Flisher, Hetrick, & McGorry, 2007). Similarly the pressure of living in emerging economies has been shown to increase risk of common mental disorders in the younger age group (Araya, et al., 2001). In adolescents, research shows a correlation between poor social support at home and at school as predictors for common mental disorders and poor relationship with the parent of the same gender (Huurre, et al., 2007). In South Africa, it was found that younger people are more likely than older people to report a common mental disorder (Williams, et al., 2008). However, a study in Uganda found that younger people are less likely to report mental illness (Ovuga, Boardman, & Wasserman, 2005). On the other hand, several studies show that common mental disorders are more prevalent in older age groups. In this regard, studies involving primary care patients found that older age groups are significantly more likely to present

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with psychiatric morbidity (Abiodun, 1993; Ingham & Miller, 1986; Zung, Broadhead, & Roth, 1993). The possible explanation to this trend could be psychosocial stressors associated with growing up and aging, plus numerous responsibilities which adults have in comparison to the younger age group.

2.4 Use of health service

Literature shows that African communities, like other communities, use both modern and traditional healing systems. The use of traditional healing systems could affect service utilisation of health care facilities and vice versa for people having CMD. For instance, a Zimbabwean study asserts that traditional medical practitioners make an important contribution to primary mental health care (Patel, Simunyu, Gwanzura, Lewis, & Mann, 1997). In this regard a Zimbabwean study reported a prevalence of CMD to be 40% among those attending traditional healers compared to the rate of 25% in primary care clinic attendees (Patel, 1998). Similarly, one study in Uganda using SRQ-20 found the prevalence of psychological distress in connection with attendance at the traditional healers' shrines was 65.1% (Abbo, et al., 2008). Furthermore, a study in Tanzania found the prevalence of common mental disorders among traditional healer centre (THC) patients (48%) was double that of primary health care clinic (PHC) patients (24%), (Ngoma, et al., 2003). A South African study using the World Health Organization Composite International Diagnostic Interview (CIDI) found that 29% and 20% of participants with a lifetime DSM-IV diagnosis obtained treatment from Western or alternative practitioners respectively (Sorsdahl, et al., 2009). In the same vein, one study in Ghana indicates that there is a possibility that fewer patients with mental health

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problems in urban areas present to traditional healers compared to those in rural areas (Appiah-Poku, Laugharne, Mensah, Osei, & Burns, 2004).

2.5 Reason for consultation

Evidence has shown that most primary care consultations are for physical complaints; however it has been noted that the presence of psychiatric disorder increases the likelihood of consultation (Kramer & Garralda, 2000). Goldberg & Huxley (1992) indicate that the probability of consultation with a general practitioner doubles when the GHQ scores are higher and that mental disorders contribute to 20% of GP consultations (Tansella & Thornicroft, 2005). A study in Canada found that 9.5% of consultations in the primary care setting were for mental health reasons (Vasiliadis, Lesage, Adair, & Boyer, 2005). Literature suggests that there is a relationship between increased health care utilization and a current diagnosis of mental disorder (Jacobi, Klose, & Wittchen, 2004). This is consistent with a study that found a twelve-month prevalence rate for respondents with high health service use to be 25.1 % for affective disorders, 29.3 % for anxiety disorders and 22.2 % for somatoform disorders in contrast with 10.2 % for affective disorders, 11.9 % for anxiety disorders and 8.9 % for somatoform disorders for normal health service use (Schmitz & Kruse, 2002). Similarly a study of 304 randomly selected primary care out-patients indicates the prevalence of mood disorders to be markedly higher (29%) in high utilizers of primary care service (Lefevre, et al., 1999). A similar study noted that presence of mental health conditions were associated with increased use primary care visits (Fogarty, Sharma, Chetty, & Culpepper, 2008).

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Comorbidity, which is the occurrence of more than one disorder at the same time (Maj, 2005), also accounts for a proportion of consultations in primary care. Evidence shows that comorbidity between physical and mental disorder plays an important role in consultation (Sartorius, 2007). Literature suggests that people with comorbidity are more distressed and have more consultations for mental health problems than those with only one disorder (Andrews, Slade, & Issakidis, 2002). However, the relationship between mental and physical illness is not clearly understood (Sartorius, 2007). It has been noted that having a physical illness is one of the strongest risk factors for depression (Wilhelm, Mitchell, Slade, Brownhill, & Andrews, 2003). For example, if someone has malaria one will expect some psychological symptoms, and treating the physical illness may address the psychological symptoms (Dugbartey, Dugbartey, & Apedo, 1998). On the other hand, depression is also a risk factor for physical illness (Wulsin, Vaillant, & Wells, 1999). In the same vein, research has demonstrated that the most common psychiatric comorbidities in patients with functional dyspepsia are anxiety disorders, depressive disorders and somatoform disorders (Barry & Dinan, 2006). This is consistent with a study which found that there is high prevalence of common mental disorders among patients with functional dyspepsia (Sattar, Salih, & Jafri, 2010). Conversely, research has also shown that somatization and health anxiety are high in people presenting with functional dyspepsia (Van Oudenhove, et al., 2011). Understanding the complexity of comorbidity and its management requires consideration of both the mental and the physical illness (Clarke & Currie, 2009).

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Somatization, which is defined as "medically unexplained somatic symptoms coupled with psychological distress and help-seeking behaviour" (Prince, et al., 2007, p.862), leads to overuse of ambulatory medical services. Evidence indicates that somatizers make more visits to clinics than nonsomatizers (Miranda, Perez-Stable, Munoz, Hargreaves, & Henke, 1991). A study on somatization reported that somatizing patients have approximately twice the medical care utilization than non-somatizing patients (Barsky, Orav, & Bates, 2005). According to the literature, at least a third of all somatic symptoms remain medically unexplained, both in the general population and in general medical care settings with about 15% of patients in primary care presenting with somatic symptoms (Prince, et al., 2007). The common medically unexplained symptoms, according to Prince and colleagues, include pain, fatigue, and dizziness (Prince, et al., 2007). This is supported by the results of one study which indicates that depression and anxiety are significantly linked to increasing levels of neck pain (Blozik, et al., 2009).

2.5.1 Perception and attitude of participants towards mental health and health service use

Research suggests that health care utilization patterns are related to several factors. A previous study has established a relationship between perception and attitudes towards mental health service use, especially on help-seeking (Mackenzie, Gekoski, & Knox, 2006). For instance, in a study related to utilization of health services, age and gender was noted to influence intentions to seek professional psychological help (Mackenzie, et al., 2006). In this study the women had more favourable intentions to seek help from mental health professionals than men (Mackenzie, et al., 2006). In the same study it was also noted that older adults had more favourable intentions to seek help from primary

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care physicians than younger adults (Mackenzie, et al., 2006, p.574). Therefore the results from that study suggest that women have a positive attitude concerning psychological openness which is likely to contribute to more favourable mental health service utilization, while negative attitudes related to psychological openness are likely to contribute to men's underutilization of mental health services (Mackenzie, et al., 2006, p.574).

As has been shown, people with mental health problems are more frequent users of health services than are those without such problems. Frequent health care utilization may negatively affect the health care service. One study found that 17% of frequent attendees had two medically unexplained consultations, with a higher number of referrals and a greater likelihood of going through particular investigations (Reid, Wessely, Crayford, & Hotopf, 2002). This underscores the importance of screening, early recognition and management.

It has to be appreciated that most of the studies reviewed used self-reported health care utilization of primary care provision. Although the self-report is often used to estimate health care utilization, the accuracy of such data may be questioned, as there can be over or under reporting. One review examined 42 studies that evaluated the accuracy of self-report utilization data. The review revealed that factors like recall time frame, questionnaire design and mode of data collection all affected accuracy (Bhandari & Wagner, 2006).

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2.6 Detection and management of common mental disorders in primary care

Despite the high frequency and magnitude of common mental disorders in community and primary care, people with common mental disorders face problems with access to services. Recognition and management of common mental disorders in primary care faces a variety of challenges. Evidence indicates that common mental disorders commonly go undetected and undertreated in primary care (Avasthi, et al., 2008; Badamgarav, et al., 2003; Licht-Strunk, et al., 2009). Several reasons are proposed for this and these include clinician related factors, patient related factors and clinic factors. The clinician related factors range from failure to detect cases (Badamgarav, et al., 2003; Licht-Strunk, et al., 2009), lack of priority and training in the recognition of common mental disorders (Pothen, et al., 2003), and wrong attitudes to depression and other mental disorders by clinicians (Kapungwe, et al., 2011; Qin, et al., 2008). Patient related factors include patients' unwillingness to access treatment (Elhai, Voorhees, Ford, Min, & Frueh, 2009). The most common patient related factor which contributes significantly to a lack of detection in a number of studies, is symptom presentation (Avasthi, et al., 2008; Qin, et al., 2008). The clinic related factors include patient load (Avasthi, et al., 2008).

Research suggests that many people who experience common mental health problems consult their doctors at one point in time, however their problem may not be recognized (Maginn, et al., 2004). In this regard it has to be appreciated that rates of detection vary considerably according to the pattern of service utilization (Lefevre, et al., 1999). Access to mental health services is a challenge to many people in LMIC, which affects detection

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of common mental disorders. Evidence also suggest that physicians' negative attitudes to psychiatry may compromise recognition of depression and anxiety in the patients attending general medical settings (Eisenberg, 1992). On the other hand WHO indicates that common mental disorders are often missed or misdiagnosed in primary care, because such presentations or related symptoms are mistaken for a physical illness (WHO, 1990). This can be attributed to the tendency of depressive and anxiety disorders occurring together with physical illness, a situation that further complicates the detection process (Gelder, Mayou, & Geddes, 2005). Similarly, medical complaints with a psychosocial dimension makes them prone to non-detection (Abbo, et al., 2008). These attributions support Verhaak and colleagues who concluded that general practitioners appear to have difficulties in differentiating patients with a psychiatric morbidity from others when the patients themselves do not disclose their conditions (Verhaak, Schellevis, Nuijen, & Volkers, 2006). However, even when these conditions are detected, the detection rates by general practitioners are very low given the high prevalence of psychiatric morbidity in medical settings (Ndetei, et al., 2009). This may result in multiple attendances at the primary care clinics (PHC) by the patient, or in patients seeking alternative care.

Unrecognized mental health problems may negatively affect one's health and functioning (Halverson & Chan, 2004). This problem, however, can be prevented by screening since early effective treatment leads to better outcomes (Pignone, et al., 2002; Wittchen, Holsboer, & Jacobi, 2001). In South Africa, retraining of general nurses in primary care helped in detection of common mental disorders (WHO, 2008b). On the other hand there is also evidence that the number of GP contacts increase the chances of psychological diagnosis (Verhaak, et al., 2006). The detection rates of mental disorders however vary

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widely. For instance, a study in a Nigerian primary care setting, the physician detection rate was 13. 8% (Abiodun, 1993) while in a Brazilian study the physician detection rate was 36% (Goncalves, Fortes, Tofoli, Campos, & Mari Jde, 2011). A World Health Organization study of psychological distress in general practice carried out in fifteen countries found an average detection rate of mental disorders at 48.9% (Goldberg & Gater, 1996). Therefore, considering the increased suffering, decreased function, and higher medical and social costs associated with common mental disorders, routine detection and adequate treatment makes a strong case (Means-Christensen, et al., 2006). See Table 1 on p.21 for the detection rates reported in a number of studies.

2.7 Screening for common mental disorders

Evidence has shown that instruments with key questions targeting common mental disorders in general medical settings can make detection easier and lessen the burden (Halverson & Chan, 2004; Means-Christensen, et al., 2006) of undiagnosed conditions. However it has to be noted that screening by itself is not the only answer and no single screening test can make a definitive diagnosis (Halverson & Chan, 2004). Literature indicates that screening has possible benefits and risks. The possible benefits of screening include reducing morbidity, mortality, overall health costs and increasing quality of life (Halverson & Chan, 2004). On the other hand, risks of screening include getting false positives, extra diagnostic workup and potential for labelling (Halverson & Chan, 2004). Some studies have shown that targeted inquiry in primary health care settings regarding suicide history in the family and experiences of stressful life events helped in detecting cases of depression (Horesh, Klomek, & Apter, 2008; Torzsa, et al., 2009).

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Research shows that where studies used standard screening tests, rates of detection increased by 47% (Pignone, et al., 2002). In one study, SRQ-20 and GHQ-12 showed high discriminating ability results in screening for common mental disorders in India in comparison with the Primary Health Questionnaire (PHQ, nine items); the Kessler Psychological Distress Scale (K10, 10 items), and the Revised Clinical Interview Schedule (CIS-R), (Patel, et al., 2008). Another study done in the United States of America on 801 primary care patients, using screening questionnaires for common mental disorders, showed a sensitivity of 0.92 to 0.96 and specificity of 0.57 to 0.82 in selecting panic disorder, posttraumatic stress disorder, social phobia, generalized anxiety disorder, and major depression (Means-Christensen, et al., 2006).

Western oriented instruments that are not culturally sensitive to illness behaviour in non-western settings may have compromised accuracy in detecting disorders in such settings. For instance lack of a specific word for depression as an illness or disorder in some cultures makes it more necessary to have adapted instruments that help in clarifying the characterization of mood (Ovuga, et al., 2005). A study in Tanzania shows that adding local idioms to the instrument helped to capture culturally specific manifestations of the illness (Kaaya, et al., 2008). A similar study in Zimbabwe developing the 14-item Shona Symptom Questionnaire **(**SSQ), was designed for use in primary care settings with Shona-speaking patients (Patel, et al., 1997). This has the potential to assist detection of mental disorders as, with training, a health care worker can master the questionnaire because the common language is used. As such, a simple screening instrument for

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identifying mental disorders in developing countries is a valuable tool for assessment in primary care (Becker, 2004). In a previous study, it was observed that instruments based on local concepts and idioms used by patients and providers are more useful and valid in detection of CMD (Patel, et al., 1997). On the other hand, literature suggests that due to the limitations of screening instruments such as the SRQ, which is based on diagnostic categories, it is important to combine scales to give more realistic data (Havenaar, et al., 2008). See Table 1 on p.21 below for some of the instruments used.

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Table 1: Studies of Psychiatric Morbidity in the General and Primary Health care Settings

Authors	**Place**	**Sample size**	**Setting**	**Instruments**	**Prevalence rate (%)**	**Physician recognition rate (%)**
(Abiodun, 1993)	Nigeria	272	Primary Health Centre	GHQ, PSE	21. 3	13. 8
(Gureje, Obikoya, & Ikuesan, 1992)	Nigeria	787	Primary Health Centre	GHQ, CIDI	27. 8	N/A
(Ansseau, et al., 2004)	Belgium	2316	General Practice	PRIME MD	42. 5	N/A
(Avasthi, et al., 2008)	India	500	General Practice	PRIME MD-PHQ	42	30. 4
(Ghuloum, et al., 2011)	Qatari	1660	Primary Health Centre	Self-designed screening instrument	36. 6	N/A
(Al-Jaddou & Malkawi, 1997)	Jordan	794	Primary Health Centre	GHQ-28	61	24
(Goncalves, et al., 2011)	Brazil	714	Primary Health Centre	GHQ-12	56	36
(Maginn, et al., 2004)	UK	994	General Practice	GHQ-12	37	N/A
(Liu, Mann, Cheng, Tjung, & Hwang, 2004)	Taiwan	990	Primary Health Centre	CIS-R	34. 3	14
(Pothen, et al., 2003)	India	327	Primary Health Centre	CIS-R	33. 9	N/A
(Ngoma, et al., 2003)	Tanzania	178	Primary Health Centre	CIS-R	24	N/A
(Patel, et al., 1998)	India	303	Primary Health Centre	CIS-R	46. 5	N/A
(Roca, et al., 2009)	Spain	7936	Primary Health Centre	PRIME MD	53. 6	N/A
(Kauye, et al., 2011)	Malawi	806	Primary Health Centre	SRQ, SCID	28. 8	
(Dhadphale, et al., 1983)	Kenya	388	Primary Health Centre	SRQ, SPI	29	N/A

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GHQ-General Health Questionnaire; CIDI-Composite International Diagnostic Interview; CIS-R-Revised Clinical Interview Schedule; PSE-Present State Examination; SRQ-Self-Reporting Questionnaire; SPI-Standard Psychiatric Interview; PRIME-MD-Primary Care Evaluation of Mental Disorders; PHQ-Patient Health Questionnaire; SCID-Structured Clinical Interview for DSM-IV Axis I disorders

2.8 The case of Malawi

Common mental disorders according to World Health Organization (WHO) are among the leading cause of disability in low income countries like Malawi (WHO, 2008a). In Malawi, the WHO in 2002 estimated that depression was the fourth leading cause of disability (Bowie, 2006). The published data in Malawi shows that the prevalence was at 29.9% for maternal common mental disorders (Stewart, et al., 2008) and at 28. 8% for common mental disorders of people attending primary care (Kauye, et al., 2011). Other studies in Malawi indicate the prevalence rate of psychological distress to be 14.4% in people attending Antiretroviral Therapy Clinics in Mzuzu (Mwale, Stewart, & Mathanga, 2007) and prevalence rates of 12.4% for postnatal depression among mothers in Mzuzu (Chilale & Tugumisirize, 2002).

Besides mental health problems contributing a significant percentage of the disease burden in Malawi, there is a general paucity of research in the area of mental health and, in particular, a lack of data regarding the common mental disorders in community, primary care and health service utilization. This therefore demonstrates evidence of an unquestionable absence of studies to inform the work of health care practitioners and policy makers.

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2.9 Summary of literature review

In summary, this chapter has described the relevant studies and literature which highlight the prevalence of common mental disorders in community settings and primary care settings, detection and management of CMD by primary health care clinicians. In respect of the above-mentioned studies, it has been noted that the burden of CMD is high in primary care settings. It has also been observed that detection of CMD in primary care settings is challenging. It follows that detection of CMD is of fundamental importance in reducing healthcare costs. As a way of detecting common mental disorders, the use of screening tools in primary care has been seen as one of the most viable ways of achieving this. Considering the increasing morbidity and disability associated with CMD as revealed in the literature review, it is evident that health service utilization studies are vital for developing countries to facilitate programme planning, policy formulation and implementation in the area of integrated mental health care.

2.10 Concluding remarks

The literature review has covered a corpus of knowledge on the subject of mental health in primary care worldwide. Despite this volume of data worldwide, there is a paucity of studies exploring health services utilization by people with common mental disorders in Malawi and other developing countries. Consequently, there is no published literature of studies done in Malawi on health service utilization of patients with common mental disorders in primary care clinics. This demonstrates a gap that necessitates a study to be conducted so that the findings of the study form the basis for literature on the service utilization concerning rates of symptoms of CMD among attendees of PHC clinics and

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related factors in Malawi. The study contributes to understanding the magnitude of the mental health problem in primary care, and findings can be used in further research for the improvement of management of people with mental health problems in primary care.

2.11 Rationale/justification of the research project

Despite an increasing amount of research forming a body of knowledge on the subject of mental health in primary care worldwide, there is little published information on common mental disorders in Malawi. Furthermore, there is a lack of research on health service utilization of people with common mental disorders attending primary care in Malawi and other developing countries. The purpose of this study was therefore to determine the rate of common mental disorders amongst a population of primary health care service users in Zomba, Malawi, and to determine their patterns of health service utilization.

The findings of this study will provide preliminary information on service utilization and symptoms of CMD amongst PHC users in Malawi, and related factors. This study contributes to our understanding the magnitude of the problem, and may assist the District Health Management Teams in priority setting, funding and policy change as regards to mental health problems in primary care settings during their planning. The results may help PHC health care workers to appreciate the utility of routine screening for common mental disorders. The findings may help health training institutions to give priority to skills training in detecting CMD. They may also justify the need for Continuing Medical Education (CME) in primary health care clinics, and on how to screen for CMD. They may also assist in clinical practice, especially regarding improving detection and management of CMD in primary care.

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In summary, a study exploring CMD amongst users of PHC services in Malawi may be a useful first step in gaining new information, and in suggesting ways to improve PHC and health practitioner training.

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CHAPTER 3 METHODOLOGY

3.1 Aim

The aim of the study was to evaluate health services utilization patterns of patients with common mental disorders in primary care clinics.

3.2 Hypotheses

It was hypothesized that:

a) Patients meeting the research tool indication of probable common mental disorders will have a higher average number of consultations at primary care clinics than patients not meeting the research tool indication of probable common mental disorders.
b) According to the literature, at least 20% of primary care clinic attendees will meet the SRQ-20 cut-off of 7/8.
c) The recognition rates of common mental disorders are low in primary care clinics.

3.3 Broad Objectives

To determine the relationship between the presence of probable common mental disorder and health care utilization among primary care clinic attendees.

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3.4 Specific Objectives

a) To determine the proportion of PHC attendees with probable common mental disorders.

b) To compare the average number of consultations in the preceding three months for patients with probable common mental disorders against the average number of consultations for patients without probable common mental disorders.

c) To determine the number (percentage) of patients with probable common mental disorders who were diagnosed and treated for probable common mental disorders in the preceding three months.

d) To investigate the detection rate of probable common mental disorders by primary care clinicians.

e) To determine the factors (demographic and symptom subcategories) associated with the average number of consultations.

3.5 Study design

This was a quantitative study employing a cross-sectional descriptive design. It involved the prospective collection of primary data from patients using a structured questionnaire. This study design was chosen because it measures exposure and effect at the same time and it is also easy and inexpensive in investigating exposures that are fixed characteristics of individuals (Bonita, Beaglehole, & Kjellström, 2006). The other advantage of the design is that cross-sectional studies are helpful in assessing the health care needs of

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populations (Bonita, et al., 2006). Considering the mentioned advantages, the design was chosen for this study.

3.6 Study area

The study was done in Zomba district, which is one of the 28 districts of Malawi. The next sections discuss Malawi in general and then Zomba district.

3.7 Malawi

Malawi is a country in Sub-Saharan Africa with an approximate area of 118 484 km^2, of which 94,276 km^2 is landlocked. It shares boundaries with Zambia in the west, Mozambique in the east, south and southwest, and Tanzania in the north (refer to figure 1). The country is divided into 3 administrative regions, namely northern, central and southern regions which are further divided into 28 districts. The districts are further divided into traditional authorities ruled by chiefs. Politically, each district is further divided into constituencies that are represented by members of parliament. Its population is estimated at 14. 4 million with almost half of the population under the age of 15 years. The literacy rate is estimated at 62% and is higher among men (69%) than women (59%) (National Statistical Office (NSO), 2009).

The average household income in Malawi is about MK50, 000 equivalent of $153.64[1] (National Statistical Office (NSO), 2005). The primary health care clinic is the first level of the Malawi health care delivery system. Medical assistants and nurses, and at times

[1] Exchange rate of $1 = MWK 325. 442 on 21-11-2012

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clinical technicians or clinical officers usually operate the health centres. The problems which cannot be treated at the health centre are referred to the district hospitals, which are at secondary care level.

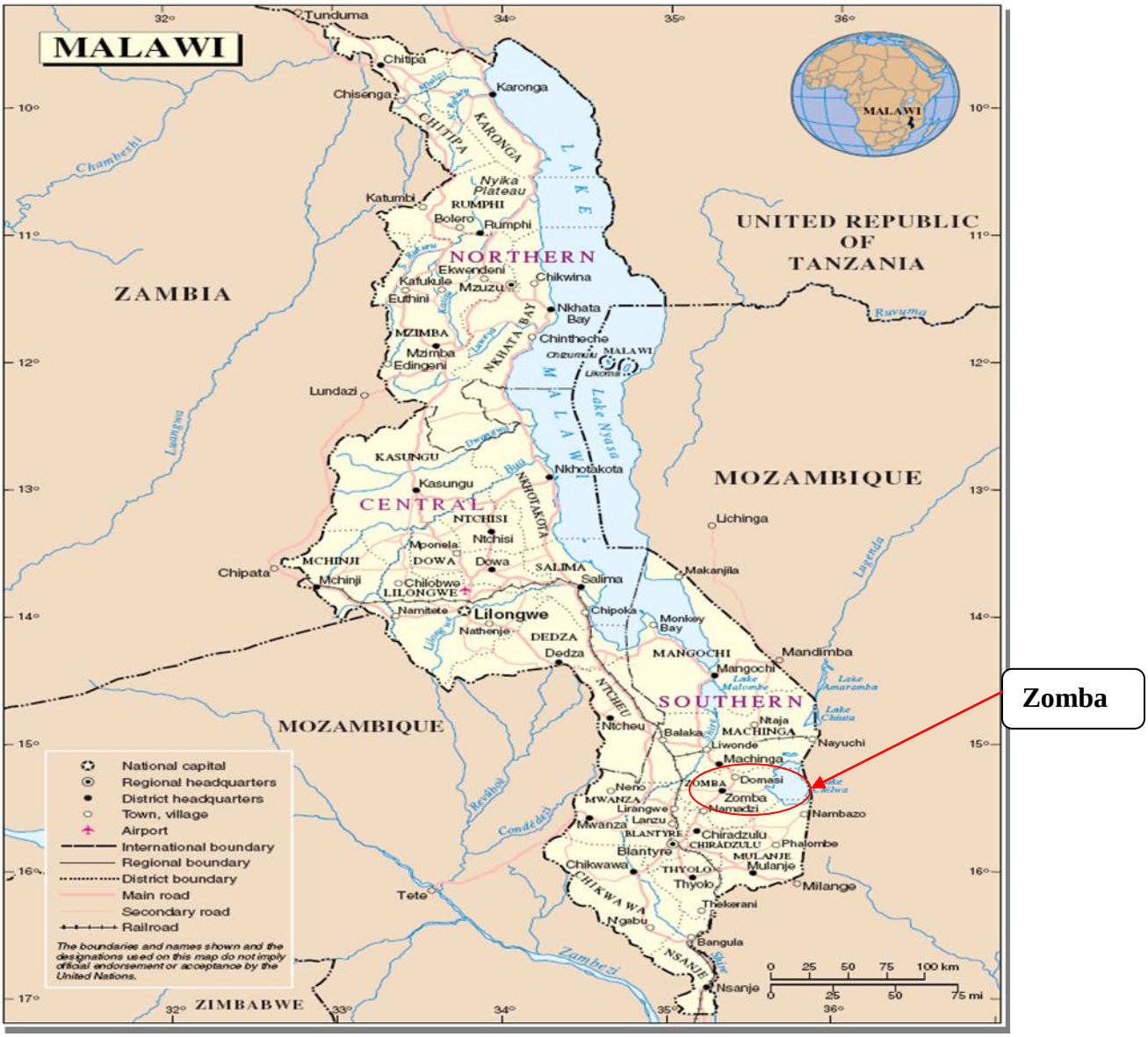

Figure 1. Map of Malawi showing Zomba District

3.8 Zomba district

Zomba district is located in the populous southern part of Malawi. It borders with Machinga district in the north, Chiradzulu and Phalombe in the south, Blantyre district in

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the west and People's Republic of Mozambique in the east. The district covers an area of 2,580 square kilometres. The district has an estimated total population of 614,268 (National Statistical Office (NSO), 2009), the mid-year projected population. Zomba is divided into two areas, rural and city. Zomba rural has an annual population growth of 0.6 percent and an inter-censal growth rate of 6 %. On the other hand, Zomba City has an annual growth rate of 3.0% and an inter-censal growth rate of 34%. Malawi has an annual population growth of 2.8% and an inter-censal growth rate of 31. 6% (National Statistical Office (NSO), 2009). The sex ratio of males per 100 females in Malawi is at 94.7%, meaning there are more females than males. The sex ratio for Zomba rural is at 91.3%, while that of Zomba city is at 102.7% (National Statistical Office (NSO), 2009).

The literacy rate for the Southern region (where Zomba is situated) is estimated at 62%, (males 68% and females 56%). The average household income in Malawi is about MK50, 000.00 ($153. 64[2]) while for Zomba rural it is about K32, 359.70 ($99. 43) and that of Zomba city is K71, 711. 50 ($220. 35) (National Statistical Office (NSO), 2005).

In the case of health service delivery, the district has 36 health facilities of which 13 facilities are under the control of the Ministry of Health (Zomba District Health Office) while the rest are Private and Faith Based facilities. Unlike other districts in Malawi, Zomba District Health Office has no district hospital, as a result patients are being managed in health centres headed by either clinical technicians/officers or medical assistants. Zomba District Health Office is headed by a District Health Officer and has the following cadres of health care workers; 1 District Medical Officer, 44 Medical

[2] Exchange rate of $1 = MWK 325. 442 on 21-11-2012

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Clinicians (Clinical Technicians/Officers and Medical Assistants), 101 Nurses, 2 Laboratory Technicians, 5 Dental Therapists, 2 Pharmacy Technicians and 670 Health Surveillance Assistants distributed among the 13 government health facilities.

3.9 Study setting and population

The study was conducted in two of the 13 Government primary health care clinics in Zomba. The clinics are Matawale Health Centre and Domasi Health Centre. These are the two biggest and busiest Health Centres under Zomba District Health Office. The two PHC centres were purposively selected in order to include both rural and urban populations. Thus, Matawale is an urban clinic and Domasi is a rural clinic. The distance between the clinics was also convenient for data collection since they are 24 kilometres apart. Domasi clinic caters for an estimated catchment population of 22,773 while Matawale clinic caters for 36, 819. Matawale clinic had 92,220 OPD attendances for the financial year 2010/2011, thus approximately an average of 400 patients per day for the 5 working days (Matawale Health Centre OPD Register-2011). Domasi clinic had 7800 OPD attendances per month, translating to an average of 292 patients per day for 5 working days (Domasi Health Centre OPD Register-2011). The study included all consecutive patients aged 18 years and older who attended the primary health care clinic for any complaint. The study excluded the following: (i) non-consenting patients, (ii) those in an emergency condition needing urgent medical care or admission, and (iii) those below 18 years.

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3.10 Sample size and sampling procedure

Prevalence of common mental disorders reported from previous studies in Malawi ranged from 28.8% for people attending primary care (Kauye, et al., 2011) to 29.9% for common mental disorder in maternal mothers (Stewart, et al., 2008). Goldberg and Huxley (1992) indicate that higher scores on the GHQ double the chance of a GP consultation (Tansella & Thornicroft, 2005). In the current study, the sample size was calculated based on the estimates from previous studies. Therefore, the ratio of SRQ cases to non-SRQ cases as 30:70 was assumed among primary health care setting attendees. An estimate of error of 5%, and a confidence level of 95% using the power of 80% was used. The sample size was calculated using the formula for calculating cross sectional survey's sample size (Lwanga & Lameshow, 1991).

$$\text{Estimated sample size} = \frac{(Z)^2 PQ}{d^2}$$

The confidence interval was set at 95%. The level of significance was set at 5% and as such, Z was set at 1.96; P was the anticipated proportion with probable common mental disorders while Q was the proportion without probable common mental disorders (1-p). Then d was absolute precision required on both sides of the anticipated proportion and was set at 0.05. Thus,

$$n = \frac{(Z)^2 PQ}{d^2} = \frac{(1.96)^2 \times 0.30 \times 0.70}{0.05 \times 0.05} = \frac{0.8067}{0.0025} = \mathbf{323}$$

The calculated sample size for the study was **323**. The sample size of 323 was large enough for the study to show statistically reliable results.

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3.11 Procedure

Consecutive patients aged 18 years and above attending routine primary care clinics were approached and asked to take part in the study following informed consent. They were asked to complete the 20-item Self Reporting Questionnaire (SRQ-20) and to supply some demographic data. The exclusion criteria included the following: (i) non-consenting patients, (ii) those in an emergency condition needing urgent medical care or admission, and (iii) those below 18 years. The participants were given the SRQ-20 by the research assistant who orally administered it, to ensure high and standard responses, due to low literacy of the study participants. This data was collected before the patient met the health care worker. The first research assistant administered the demographic and self-reporting questionnaires to the client. Then the patient met the PHC clinician who provided the care. For each individual completing the SRQ-20, the PHC clinician completed a PHC Encounter Form. After the consultation with the patient, the PHC clinician filled the PHC patient encounter form. The PHC clinician was blinded to the patients' responses to the SRQ and its score. Upon exiting the room, the client met the second research assistant who administered the health service utilization questionnaire to elicit the self-perception of mental health and utilization patterns of health services. The second research assistant was blinded to the SRQ-20 score. A diagrammatic representation of the process is shown below in Figure 2.

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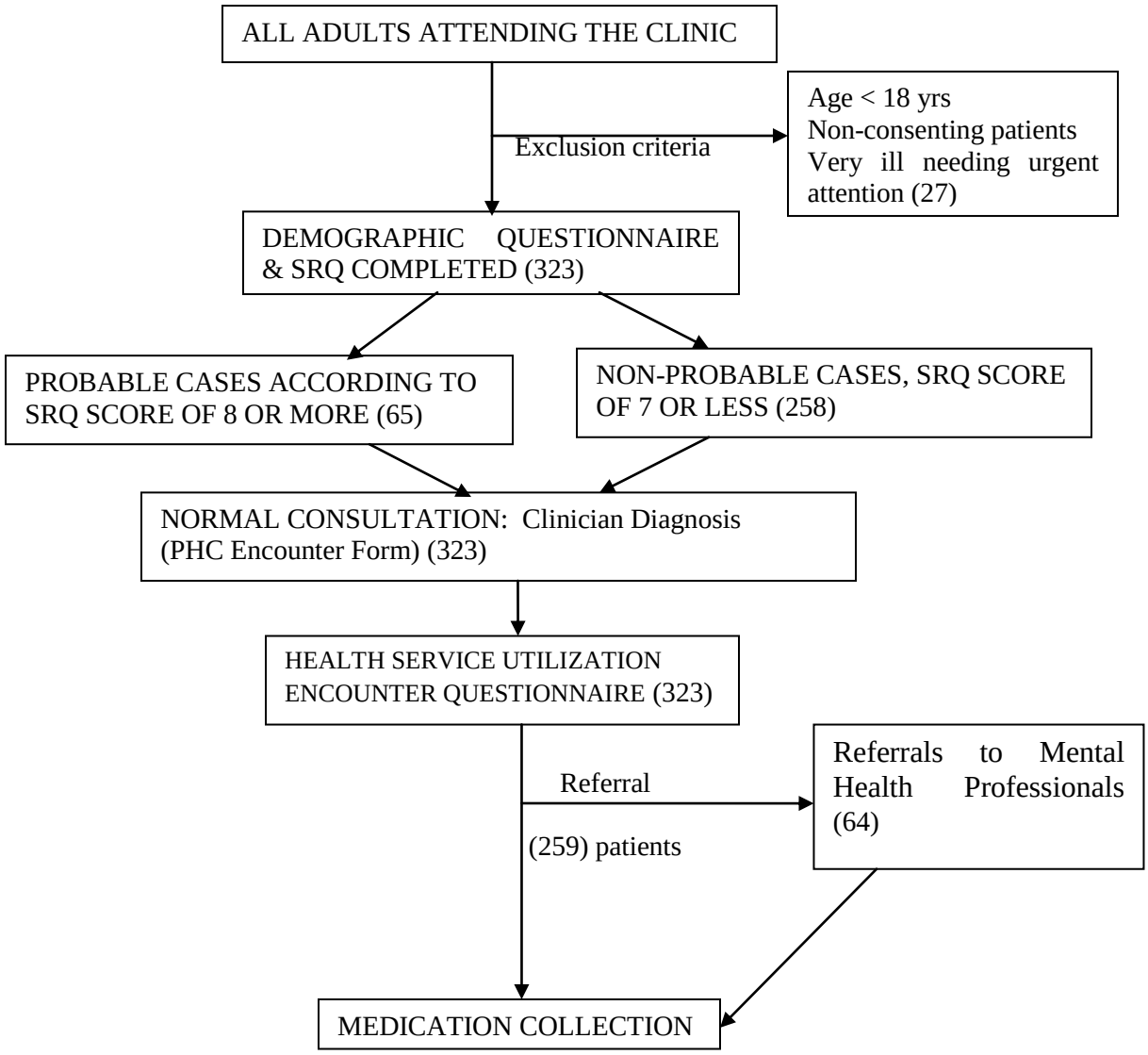

Figure 2. Flow diagram of study procedure at clinic level

3.12 Data collection

The two research assistants (Mental Health Clinician and Assistant Environmental Health Officer) collected quantitative data from the two primary care clinics. The research assistants had a one-day training in the study methodology, especially on the data

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collection procedure and the ethical aspects of the study. The investigator supervised data collection. The data were collected on the socio-demographic characteristics of the participants, on self-perception of mental health and utilization patterns of health services. The data collection involved screening of probable common mental disorders among the participants using a research tool. It also involved rating of the patient's level of psychiatric disturbance by the PHC worker to assess the detection rate.

3.12.1 Practical implications of the study

The study prolonged the participants' consultation time by taking an additional 10 to 20 minutes of the regular time. However, the time factor was mitigated by conducting the interviews while patients were waiting for their PHC consultation. The participants who were identified with probable CMD symptoms on the SRQ-20 but were not identified by the treating clinician were informed of their problem and were referred to mental health professionals for further management by the first research assistant. A qualified mental health clinician was the research assistant who administered the SRQ-20. The code numbers of the participants with high SRQ scores suggestive of CMD were noted for possible referral if not managed as anticipated. All participants with high SRQ scores suggestive of CMD were advised soon after the scoring that they should come back to meet the first research assistant after both the consultation and second interview. At this meeting their SRQ diagnosis would be checked, they would be informed of their SRQ results, and they would be referred (with a referral note) if they had not been identified previously.

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3.13 Measures and instruments

The interview schedule comprised a number of instruments:

a. The **Self-Reporting Questionnaire (SRQ-20)** was used to identify the number of probable cases in the PHC attendees. This is a 20-item questionnaire that was developed by the WHO to screen for common mental health problems, particularly symptoms of anxiety and depression, at primary health care and community levels in developing countries, and has since then been successfully translated to Chichewa and validated (Stewart, et al., 2009). The SRQ-20 has inherent limitations based on diagnostic categories (Havenaar, et al., 2008), since it is a screening tool that suggests the likelihood of mental disorder but cannot give a diagnosis. Therefore, the study was not assessing diagnosable mental disorder, but it was just assessing symptoms which were suggestive of possible mental disorder. See **Appendix F**.

b. The **Health Service utilization encounter questionnaire** was used. This questionnaire on service utilisation patterns was adapted and modified from the Canadian Community Health Survey (CCHS 1. 2) (Vasiliadis, et al., 2005). The 14-item Health Service utilization encounter questionnaire was divided into two parts. The first part, Part A with 4 items, was used to elicit the self-perception of mental health, and the second part, Part B with 10 items, was used to measure for utilization pattern of health services. **See Appendix G**.

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c. A **socio-demographic questionnaire** is an 8 item questionnaire which was used in this study to collect socio-demographic variables. The questionnaire has items on socio-demographic variables such as age, level of education, employment status and marital status and was administered before SRQ administration. See **Appendix E**.

d. A **PHC Encounter Form**, used to determine clinicians' detection ability, was also adapted. It has since been used in a number of previous studies and is similar to the GP Encounter Form (Maginn, et al., 2004). The form requires the PHC clinician to rate the patient's level of psychiatric disturbance on a likert scale of 0 to 5. The form comprises sections on the reason for the consultation and immediate management plan. Each PHC clinician was briefed on the use of the scale. See **Appendix H**.

3.14 Reliability and validity of the instruments

3.14.1 The Self Reporting Questionnaire (SRQ-20)

The Self-Reporting Questionnaire (SRQ-20) was designed by the World Health Organization as a screening tool for common mental disorders (Stewart, et al., 2009). SRQ-20 is a brief measure of psychiatric symptomatology and comprises of 20 questions exploring symptoms of depression, anxiety, and somatic complaints (Stewart, et al., 2009). The SRQ-20 was validated in Malawi using the SCID and the cut-off point of 7/8 showed an acceptable level to detect mental disorders (Stewart, et al., 2009). In this case, at a cut-off point of 7/8 the SRQ detected current major or minor depressive episode with sensitivity 59%, specificity 85%, and positive predictive value 64% (Stewart, et al., 2009).

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The validation found that the area under the ROC curve (AUROC) for detection of current major depressive disorder was 0.856 (95% CI 0.813 to 0.900) and for current major or minor depressive disorder was 0.826 (95% CI 0.783 to 0.869) with a high internal consistency of the SRQ (Cronbach's alpha 0.85) (Stewart, et al., 2009). A good cut-off point of the screening questionnaire is described as the one that gives a good balance between sensitivity, specificity and positive predictive value. Therefore this study used the "7/8" cut-off point. This meant that the participants scoring 8 or above were considered as having "probable common mental disorder" and those scoring 7 or less as having "non-probable common mental disorder".

3.14.2 The Health Service Utilization Encounter Questionnaire

Since the health service utilization encounter questionnaire was adapted, it has undergone translation and back translation. The study used a similar procedure to Brislin's back translation (Brislin, 1970). The health service utilization encounter questionnaire was translated into Chichewa language and back translated to English to check whether meaning was preserved. The process of translation was done by two mental health clinicians. Since the data collection instrument on service utilization was translated into Chichewa from the original English version, a pre-test to the Chichewa questionnaire was done on twelve people. The pretest helped to assess whether the questions would make sense and whether respondents understood the questions and could answer the questions. After the pre-test the necessary changes were made for clear meaning and understanding in the Chichewa version.

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3.14.3 The PHC Encounter Form

The PHC Encounter Form (GP Encounter Form) has been used in a number of previous studies (Boardman, 1987; Liu, et al., 2004; Maginn, et al., 2004; Üstün & Sartorius, 1995). It has proved to have a good ability to detect clinicians' detection rates. Although it was adapted, translation was not necessary as it was being completed by PHC clinicians fluent in English. It was pretested with trainee clinical officers and no problems were found with its completion and use.

3.14.4 The Socio-demographic questionnaire

The socio-demographic questionnaire is an 8 item questionnaire which was designed by the author for use in this study. The questionnaire underwent translation and back translation using Brislin's procedure (Brislin, 1970).

3.15 Ethical aspects

Ethical approval for this research was sought from both the Health Research Ethics Committee at Stellenbosch University, South Africa (reference number S12/05/131) and the College of Medicine Research and Ethics Committee, University of Malawi, Malawi (reference number P06/12/1238). After ethical approval, permission to conduct the study was sought from the District Health Officer of Zomba District Health Office (DHO) (see **Appendix M**) and the Health Centre In-charge of Matawale and Domasi in order to conduct the study at the institutions. All the participants gave consent to participation.

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3.15.1 Voluntary participation

Participation was voluntary and participants were free to withdraw from the study at anytime without giving reasons for doing so. No financial reimbursement was given, however they were thanked for their participation.

3.15.2 Consent

Informed consent was obtained from the study participants before commencement of administering the questionnaire. Participants were given adequate information regarding the aims and benefit of the study and then each was free to give an informed consent before answering the questionnaire. Information sheets were provided to the participants and these were available in both English and Chichewa, depending on the participant's preference. If the participant was illiterate, he or she could use the thumbprint to mark his or her consent. In the same vein for illiterate participants, they had the information sheet and the consent form read out to them. A research assistant or the person going over the informed consent also signed.

3.15.3 Confidentiality

Confidentiality of the respondents was maintained as the responses were treated with confidentiality. Anonymity was also maintained through writing code numbers on the questionnaires. Questionnaires were administered in private rooms at the health facilities. The filled questionnaires were kept in a safe place accessible to the researcher only.

3.15.4 Risks to participants

The study was integrated within the health centres' consultation schedules to minimize long waiting time. The study did not involve any invasive procedures, participants being

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interviewed about their mental health. The participants were told of their right to refuse to answer without giving reasons if they felt uncomfortable with any question.

3.16 Data management

The completed data collection forms were checked for completeness, accuracy, and consistency on a daily basis, and they were kept in a secure place. The checked data was then entered into a computer and was coded. To ensure privacy and protection of the data documents were archived in a password-protected file.

3.17 Data analysis

The data were first sorted and quality checks were carried out. Data entry on the Statistical Package for Social Sciences (SPSS) version 16 was carried out. Individual patient data was entered on the template and, using this template, a quantitative analysis of data was carried out. These included: descriptive statistics (means, standard deviations and frequency analysis); inferential statistics, including the paired-samples t test, independent-samples t test and Chi-Square test. Chi square statistics were used to test for association and the odds ratio was used to check for the direction of association.

After scoring the common mental disorders according to the SRQ cut off scoring criteria, the variables were dichotomized for presence or absence. To assess for an association between common mental disorders and health service utilization, binary variables of self-reported health care utilization over the preceding three months were created for the following services: primary health care visit and traditional healer visit. Bivariate analysis using Chi square statistic was used to assess the relationship between socio-demographic

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variables and common mental disorders diagnosis and each health care utilization binary variable. To test the relationship between common mental disorders diagnosis and each health care service in this dataset, logistic model with SRQ cut-off 7/8 was used. Logistic equation modeled the odds of common mental disorders as exponential coefficient of number of visits to a health care facility or traditional healer.

As in previous studies, the PHC clinician-rated mental health status was recoded at three levels during analyses. The three levels included none to subclinical; mild; and moderate to severe in which the rating of 2 or more on the 5 point scale provided by the PHC clinician was regarded as indicating that a common mental disorder has been detected (Liu, et al., 2004; Maginn, et al., 2004). The rating of perceived reasons for consultation was also used for the analyses of detection of probable common mental disorders. The clinician detection analysis called Identification Index was carried out. This methodology was borrowed from a recommended procedure described by Maginn and colleagues (Maginn, et al., 2004). Identification Index is a measure of the clinician's ability to identify symptomatic patients as common mental disorders cases (Maginn, et al., 2004). The Identification Index gives a 'positive' rate for the PHC clinician's detection of probable common mental disorders and was used as the main measure of detection (Maginn, et al., 2004). The two ratings obtained from the SRQ and PHC clinician scales were used to compute the Identification Index. In this study for the calculation of the identification index, a sensitivity of 59 for the SRQ-20 (Stewart, et al., 2009) was used.

$$\text{Identification Index} = \frac{\text{Number of patients identified as ill by PHC clinician and SRQ}}{\text{Number of high scorers (SRQ) x sensitivity of the SRQ}}$$

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CHAPTER 4 RESULTS

4.1 Introduction

This chapter describes the findings regarding health service utilization by patients with common mental disorders based on the analysis of the data. The description centres on the characteristics of the study participants, the prevalence for probable common mental disorders, the associated social demographic factors and the health service utilization by people with probable common mental disorders. The findings are presented using text, tables and figures.

4.2 Sample description

The study sample included all participants aged 18 years and above who attended the Matawale Urban Health Centre and Domasi Rural Health Centre for any medical reason. A total number of 323 participants who met the inclusion criteria participated in the study. The response rate was 100% as no participant declined to participate and all had complete data sets.

4.3 Socio-demographic characteristics of the participants

Table 2 below shows the socio-demographic characteristics of the study participants. The majority of participants in the study were females as compared to males. The female participants were 237, representing 73.6%, while 86 were male participants representing 26.4% of the sample. The ages of the participants ranged from 18 to 96. The age was categorized into a six-class variable: 18–31, 32–45, 46–59, 60-73, 74-87 and 88-96 years.

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The study had 41.8% (135) participants in the 18-31 year category with only 0.3 % in the 88-96 year category. The majority of the participants were married thus 65.3% (211); while 11.1% (36) were single, 10.5% (34) were widowed and 13.0% (42) were either separated or divorced. In terms of the participants' level of education, 70 (21.7%) had no education at all. Slightly above half the participants, thus 174 (53. 9%), had attended primary education, while 72 (22. 3%) of the participants attained secondary education and only 7 (2. 2%) had attained tertiary education.

The results indicated that the majority of participants were unemployed 178 (55. 1%); 93 (28.8%) were self-employed (either running small-scale businesses or commercial farming); 25 (7.7%) were employed, 5 (1. 5%) were retired personnel, and only 22 (6. 8%) were students. The results further showed that the majority of participants were Christians (216, or 66.9%), while 107 (33.1%) were Moslems. The participants' household income status analysis indicated that the majority of the participants had below average household income status, thus 171 (52.9%) while 107 (33.1%) had above average household income status and only 45 (13.9%) had an average household income status (K50, 000. 00 equivalent of $153. 64).

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Table 2 *Socio-demographic Characteristics of Participants*

	Total (n=323)		Men (n=86)		Women (n=237)	
Variable	N	%	N	%	N	%
Age						
18-31 years	135	41. 8	30	34. 9	105	44. 3
32-45 years	114	35. 8	33	38. 4	81	34. 2
46-59years	37	11. 5	12	14. 0	25	10. 5
60-73 years	29	9. 0	8	9. 3	21	8. 9
74-87 years	7	2. 2	2	2. 3	5	2. 1
88-96 years	1	0. 3	1	1. 2	0	0
Education						
No education	70	21. 7	12	14. 0	58	24. 5
Primary school	174	53. 9	44	51. 2	130	54. 9
Secondary	72	22. 3	27	31. 4	45	19. 0
Tertiary	7	2. 2	3	3. 5	4	1. 7
Marital status						
Married	211	65. 4	59	68. 6	152	64. 1
Single	36	11. 1	16	18. 6	20	8. 4
Widowed	34	10. 5	4	4,7	30	12. 7
Separated/divorced	42	13. 0	7	8. 1	35	14. 8
Employment Status						
Unemployed	178	55. 1	30	34. 9	148	62. 4
Student	22	6. 8	10	11. 6	12	5. 1
Employed	25	7. 8	12	14. 0	13	5. 5
Retired	5	1. 5	4	4. 7	1	0. 4
Self employed	93	28. 8	30	34. 9	63	26. 6
Religious affiliation						
Christian	216	66. 9	56	65. 1	168	67. 5
Moslem	107	33. 1	30	34. 9	77	32. 5

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	Total (n=323)		Men (n=86)		Women (n=237)	
Variable	N	%	N	%	N	%
Economic Status						
Above average	107	33. 1	41	47. 7	66	27. 8
Average	45	14. 0	8	9. 3	37	15. 6
Below Average	171	52. 9	37	43. 0	134	56. 5

4.4 Description of study findings

This section describes the findings of the study concerning the prevalence of common mental disorders as well as associated socio-demographic factors and the SRQ-20 symptoms.

4.4.1 Prevalence of "probable" common mental disorders among primary health care attendees as identified by the SRQ-20

The optimum cut-off score for SRQ-20 detection of probable common mental disorders cases was 8 and over. If lower cut-off points were used, the prevalence of probable common mental disorders cases would increase by 1.3 times at each lower score, while if higher cut-off points were used, the prevalence of probable common mental disorders cases would decrease by 0.7 times at each higher score. In accordance with the study cut-off point of 7/8, 65 cases of probable common mental disorders were identified, giving a prevalence of 20.1% for the total sample. The prevalence of "probable" common mental disorders was 20.7% (49) in women and 18.6% (16) in men. (Refer to Table 3 below)

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Table 3. *Prevalence of Probable Common Mental Disorders Among Primary Health Care Attendees as Identified by SRQ-20*

Gender	SRQ at cut-off point 8		Total
	No probable common mental disorders	Probable common mental disorders	
Female	188 (79.3%)	49 (20.7%)	237 (100.0%)
Male	70 (81.4%)	16 (18.6%)	86 (100.0%)
Total	258 (79.9%)	65 (20. 1%)	323 (100.0%)

4.4.2 Socio-demographic characteristics of the participants associated with probable common mental disorder

For establishing the association between socio-demographic characteristics and probable common mental disorders, some variables had to be recoded. Chi-square test was used for this analysis. (See Table 4 below)

The probable common mental disorders group had 65 patients and out of these 24.6% were males and 75.4% were females, while the non-probable common mental disorders group had 258 patients of which 27.1% were males and 72.1% were females and the difference as far as gender was concerned was not significant.

There was no statistical significant association between marital status and common mental disorders among the study participants. . In the same vein, there was no statistical significant association between age and common mental disorders within the age groups.

The study further showed that there was no statistical significant association between one's educational level and presence of common mental disorders among participants. With regard to

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the employment status, the probable common mental disorders group had 49.2% unemployed participants while the non-probable common mental disorders group had 56.6%. The study found that there was no statistical significant association between the presence of probable common mental disorders and employment status of the participants. The study found that 47.7% participants in the common mental disorders group and 54.2% in the non-probable common mental disorders group had an average annual household income (K50, 000. 00 equivalent of $153. 64). However, the study did not find statistical significant association between common mental disorders and annual household economic status.

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Table 4 *Comparison of Socio-Demographic Characteristics between the Patients with Probable Common Mental Disorders and those without Probable Common Mental Disorders*

Variable levels	Probable CMD % (n=65)	No probable CMD % (n=258)	p value
Age			0. 226
18-31 years	30. 8	44. 6	
32-45 years	38. 5	34. 5	
46-59years	12. 3	11. 2	
60-73 years	15. 4	7. 4	
74-87 years	3. 1	1. 9	
88-96years	0	. 4	
Gender			0. 682
Female	75. 4	72. 9	
Male	24. 6	27. 1	
Education			0. 456
No education	27. 7	20. 2	
Primary school	46. 2	55. 8	
Secondary	24. 6	21. 7	
Tertiary	1. 5	2. 3	
Marital status			0. 655
Married	69. 2	64. 3	
Single	7. 7	12. 0	
Widowed	12. 3	10. 1	
Separated/divorced	10. 8	13. 6	
Employment Status			0. 642
Unemployed	49. 2	56. 6	
Student	6. 2	7. 0	
Employed	7. 7	7. 8	
Retired	3. 1	1. 2	
Self employed	33. 8	27. 5	

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Variable levels		Probable CMD % (n=65)		No probable CMD % (n=258)	p value
Religious affiliation					0. 455
Christian	70. 8		65. 9		
Moslem	29. 2		34. 1		
Economic Status					0. 570
Above average	38. 5		31. 8		
Average	13. 8		14. 0		
Below Average	47. 7		54. 2		

4.4.3 Common presenting features among people with probable common mental disorders

Table 5 shows the frequency of reporting for each SRQ-20 symptom using the cut-off score of 7/8. The most frequently endorsed SRQ-20 symptoms in the probable cases were somatic, anxiety and depressive symptoms. The following eight symptoms were among the most prominent items out of the twenty items; poor sleep (66.2%), frequent headaches (83.1%), nervous or worried (72.3%), uncomfortable feelings in stomach (75.4%), trouble thinking (72.3%), tired all the time (73.8%), easily tired (76.9%) and feeling unhappy (83.1%). It was also found that 23.1 % of those participants who scored 8 and above had thought of ending their life.

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Table 5. *Frequency of Reporting for each SRQ-20 Symptom for Probable common Mental Disorders Cases and Non-probable Common Mental Disorders Cases*

SRQ-20 item	Probable CMD cases				Non probable CMD cases			
	No		Yes		No		Yes	
	n	%	n	%	n	%	n	%
1. Frequent headaches	11	16. 9	54	83. 1	143	55. 4	115	44. 6
2. Poor appetite	43	66. 2	22	33. 8	209	81. 0	49	19. 0
3. Sleeping badly	22	33. 8	43	66. 2	200	77. 5	58	22. 5
4. Hands shake	46	70. 8	19	29. 2	239	92. 6	19	7. 4
5. Nervous, tense or worried	18	27. 5	47	72. 3	195	75. 6	63	24. 4
6. Easily frightened	30	46. 2	53	53. 8	212	82. 2	46	17. 8
7. Digestion poor	40	63. 1	24	36. 9	237	91. 9	21	8. 1
8. Trouble thinking clearly	18	27. 7	47	72. 3	213	82. 6	45	17. 4
9. Unhappy	11	16. 9	54	83. 1	199	77. 1	59	22. 9
10. Crying more than usual	33	50. 8	32	49. 2	242	93. 8	16	6. 2
11. Difficulty enjoying daily activities	24	36. 9	41	63. 1	227	88. 0	31	12. 0
12. Difficulty making decisions	26	40. 0	39	60. 0	223	86. 4	35	13. 6
13. Daily work suffering	39	60. 0	26	40. 0	238	92. 2	20	7. 8
14. Unable to play useful part in life	40	61. 5	25	38. 5	235	91. 1	23	8. 9
15. Lost interest in things	46	70. 8	19	29. 2	245	95. 0	13	5. 0
16. Worthless person	43	66. 2	22	33. 8	252	97. 7	6	2. 3
17. Thought of ending life	50	76. 9	15	23. 1	255	98. 8	3	1. 2
18. Tired all the time	17	26. 2	48	73. 8	227	88. 0	31	12. 0
19. Uncomfortable feelings in stomach	16	24. 6	49	75. 4	150	58. 1	108	41. 9
20. Easily tired	15	23. 1	50	76. 9	217	84. 1	41	15. 9

4.4.4 SRQ Characteristics among men and women with probable common mental disorders

Figure 3 shows the frequency of SRQ-20 symptoms among men and women. Men and women had differences in the SRQ-20 symptoms, in some cases men having more symptoms, and in

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other cases women having more. In this study the men had some higher prominence SRQ-20 symptoms than women, such as sleeping badly, having trouble thinking, poor digestion, difficult to make decisions, and daily work suffering. On the other hand women had other higher prominence symptoms than men, for instance, easily frightened, feeling unhappy, crying more than usual, feeling tired all the time, being easily tired, and worried. However, in men, crying more than usual (25%) was the most uncommon symptom. The SRQ-20 symptoms that were similarly prominent in both men and women were headache (81% and 84%), poor appetite (38% and 33%) and thought of ending life (25% and 22 %).

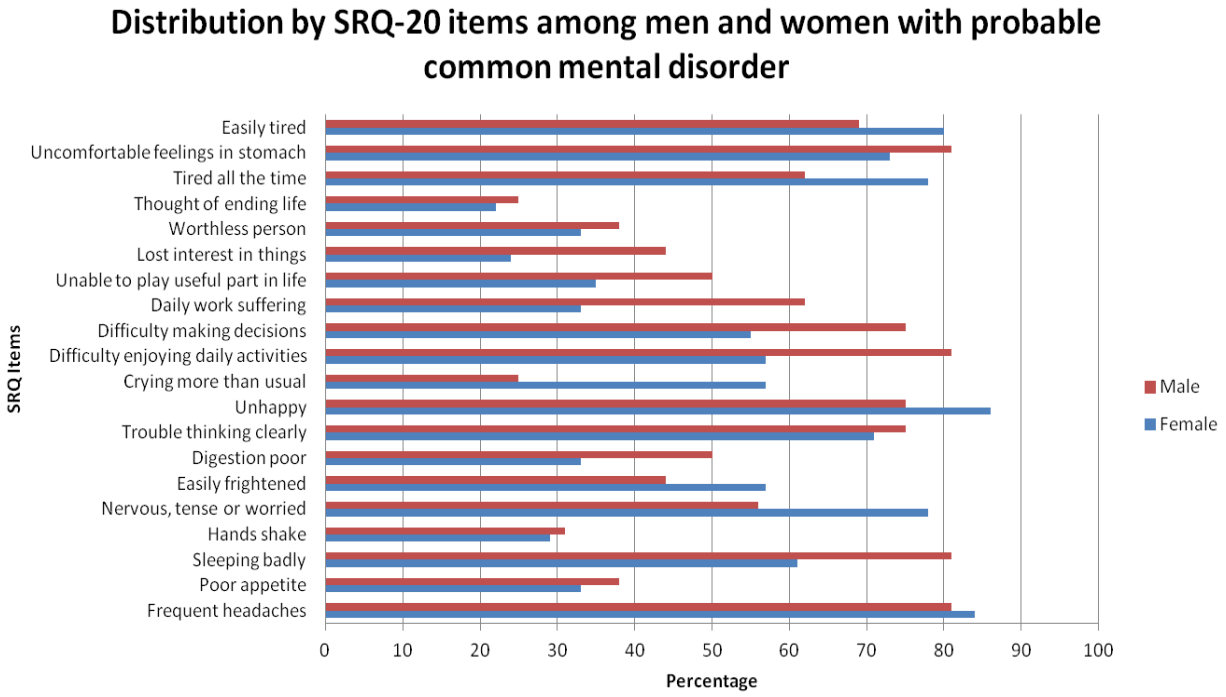

Figure 3. Distribution by SRQ-20 items among men and women with probable common mental disorders.

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4.5 Detection rate of common mental disorders

This section describes the findings in the study concerning the recognition and management of common mental disorders in the participants.

4.5.1 Proportion of SRQ positives recognized by clinicians

At the end of the consultation, as in previous studies, PHC clinicians were requested to make a blind assessment of each patient's current mental health status, as well as the level of the condition, using a 5-point grading scale. Using the 5-point scale 0 meant no disturbance detected, 1 meant sub clinically ill, 2 meant clinically significant illness to mild severity, 3 meant moderate severity, and 4 meant marked and severe (Liu, et al., 2004; Maginn, et al., 2004). As in previous studies, the study adopted the PHC clinician-rated mental health status recoding. In this case, three levels were recoded for the purpose of analysis and these included none to subclinical, mild, and moderate to severe. The rating of 2 or more on the scale of mental health status provided by the PHC clinician was regarded as indicating that a mental health problem had been recognized (Liu, et al., 2004; Maginn, et al., 2004). During the study period, primary health care clinicians recognized only 6.2% of the patients as "sub-clinically ill" who were detected as having "probable" common mental disorders by the SRQ questionnaire. There was no rating of 2 or more on the patients detected as having probable common mental disorders by the SRQ. The identification index was 0.017. The PHC clinicians did not recognize the mental health problem in almost all the participants. (Refer to Table 6)

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Table 6. *Proportion of SRQ Positives Recognized by Clinicians*

		SRQ at cut-off point 8	
		No probable CMD (258)	Probable CMD (65)
Psychiatric Disturbance	No disturbance detected	258 (100%)	61 (93. 8%)
	Sub-clinically ill	0 (0%)	4 (6. 2 %)

4.5.2 Clinician diagnosis for participants who had screened positive for probable common mental disorders

The results revealed that almost all the participants who were identified for probable common mental disorders except one were diagnosed and treated for physical conditions by the primary health care clinicians. (Refer to Figure 7 below)

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Table 7. *Clinician Diagnosis for Participants who Screened Positive for Probable Common Mental Disorders*

CLINICIAN'S DIAGNOSIS	**N (%)**
Malaria	10 (15. 4%)
Hypertension	4 (6. 2%)
Respiratory Tract Infection	11 (16. 9%)
Musculoskeletal Pain	12 (18. 5%)
Bilharzia	1 (1. 5%)
Peripheral Neuropathy	2 (3. 1%)
Urinary Tract Infection	3 (4. 6%)
Dermatitis	1 (1. 5%)
Dyspepsia	9 (13. 8%)
Sexually Transmitted Infection	4 (6. 2%)
Varicella Zoster	1 (1. 5%)
Constipation	1 (1. 5%)
Wound	1 (1. 5%)
Sepsis	1 (1. 5%)
Epilepsy	1 (1. 5%)
Anaemia	1 (1. 5%)
ART Initiation	1 (1. 5%)
Acute Stress*	1 (1. 5%)

* Rated as sub-clinically ill on the likert scale

4.5.3 Management of common mental disorders by primary health care clinicians

Upon assessing the diagnoses made by the primary health care (PHC) clinicians during the study, using SRQ for all the participants who had probable mental health problems, it was found that the PHC clinician made only one diagnosis of probable common mental disorders. A large number of patients were diagnosed as having physical conditions and treated as such. For instance, the proportion of patients with probable common mental disorders as identified by SRQ and treated

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for clinically diagnosed malaria was 15. 4%. Similarly, the proportion of patients with probable common mental disorders as identified by SRQ and treated for respiratory tract infection was 16.9%, while the proportion of patients with probable common mental disorders as identified by SRQ and treated for musculoskeletal pains was 18.5%. Dyspepsia was also a prominent diagnosis in the participants, thus 13.8% of the 65 participants identified with probable common mental disorders by SRQ had this diagnosis. (See Table 7 above)

4.5.4 Reason for the consultation

On analyzing the reason for consultation from the PHC encounter form it was found that for only 0.9% (3) of the study participants' a mental health factor was the reason for consultation. (See Table 8 below)

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Table 8. *Reasons for Consultation at the Primary Health Care Clinic*

Reason for consultation	Non-probable CMD	Probable CMD	Total	P-Value
no mental health factors	256 (99. 2%)	64 (98. 5%)	320 (99. 1%)	0. 566
mental health factors	2 (. 8%)	1 (1. 5%)	3 (. 9%)	

4.5.5 Perception and attitude of participants towards mental health

Of the perception variables, individuals who had poor self-perceived mental health (compared to those who reported good, very good, or excellent health) were more likely to meet the criteria for probable common mental disorders. On seeking professional help for mental health problems, most participants indicated their willingness to seek professional help and comfort talking about their problem to a professional. (Refer to Table 9 below)

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Table 9. *Participants' Perception and Attitude towards Mental Health*

Variable	Non-probable CMD (%)	Probable CMD (%)	P-Value
Self-perceived Mental Health			
• Excellent	36. 0	23. 1	0. 000
• Very Good	24. 8	24. 6	
• Good	12. 8	7. 7	
• Fair	21. 3	15. 4	
• Poor	5. 0	29. 2	
Professional mental health help-seeking			
• probably go	12. 4	13. 8	0. 652
• probably not go	2. 7	1. 5	
• definitely not go	1. 2	3. 1	
• definitely go	83. 4	81. 5	
Comfortable talking to mental health professionals			
• very comfortable	61. 6	61. 5	0. 459
• somewhat	26. 0	30. 8	
• not very comfortable	8. 5	3. 1	
• not at all comfortable	3. 9	4. 6	
Embarrassed with getting mental health help			
• very embarrassed	6. 6	4. 6	0. 133
• somewhat	9. 7	20. 0	
• not very	33. 3	32. 3	
• not at all embarrassed	50. 4	43. 1	

4.6 Common mental disorder and health service utilization

Table 10 shows the pattern of use of health services for participants with probable and non-probable common mental disorders. Those with probable common mental disorders on average

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tended to use health centres more than those without common mental disorders did, the difference being statistically significant (average visit of 1.6 vs. 1.19). Very few people sought health care at the traditional healers. Among those who used traditional healers the average number of visits was 0.05 for those with probable common mental disorders and 0.08 for those without, but the difference was not statistically significant. On the other hand, the average number of visits for those with probable common mental disorders who visited both health centres and traditional healers was higher than those without common mental disorders. The difference was statistically significant (1. 68 vs. 1. 24).

Table 10. *Pattern of Use of Health Service among Participants with Probable Common Mental Disorders and Non-probable Common Mental Disorders*

Average number of visits in past three months	Probable CMD	Non-probable CMD	P value
Average number of visits to health facility in past three months	1.6	1.19	0.02
Average number of visits to traditional healer in past three months	.05	.08	0.565
Total average number of visits to health facility and traditional healer in the past three months	1.68	1.24	0.019

4.6.1 Association between probable common mental disorders and utilization of health service

Table 11 shows a model on number of times for different health service visit associated to probable common mental disorders. In the logistic model for the probable common mental

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disorders sample, the odds of probable common mental disorders increased with each visit to a health facility by 1.2 and this was significant. At the same time, the odds of probable common mental disorders increased with 1.13 on each visit to a traditional healer, but this was not significant at any level.

Table 11. *Model of Number of Visits to a Health Facility or Traditional Healer Associated with Probable Common Mental Disorders*

Variable	Probable CMD			
Step 1[a]	B	Wald	OR [Exp(B)]	Sig.
Number of times for Health Facility visit	.239	5.077	1. 270	. 024
Number of times for Traditional Healers visit	.130	.085	1. 138	. 770
Constant	-1.718	65.857	.179	.000

a. Variable(s) entered on step 1: HF: Health facility, TH: Traditional healer

4.6.2 Pattern of use of health facility by socio-demographic groups

The pattern of use of health facility varied among the socio-demographic groups in relation to number of visits. Table 13 compares different socio-demographic backgrounds across CMD and Non-CMD populations. Socio-demographic background like married, not attended school, attended primary school, unemployment and Moslem, as socio-demographic variables that are associated with increases in average of number of visits in CMD compared to average number of health facility visits in CMD population, in general. Old age increases number of visits to health facility in both CMD and Non-CMD populations.

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Table 12. *Pattern of Health Facility use by Socio-demographic Groups for Probable Common Mental Disorders and Non-probable Common Mental Disorders Cases*

Socio-demographics		Average number of times visited Health Facility	Average number of times visited Health Facility
		Probable CMD	Non-probable CMD
sex of patient	Female	1.61	1.17
	Male	1.56	1.23
marital status	Married	1.69	1.05
	Single	1.60	1.42
	Widowed	1.50	1.77
	divorced/separated	1.14	1.17
education level	not attended school	1.78	.92
	attended primary level	1.70	1.23
	attended secondary level	1.31	1.37
	attended tertiary level	.00	.67
employment status	Unemployed	1.78	1.13
	Student	1.25	1.33
	Employed	1.00	1.20
	Retired	2.00	2.33
	self employed	1.50	1.21
religion	Christian	1.43	1.32
	Moslem	2.00	.93
household income	above average	1.64	1.10
	Average	1.22	1.28
	below average	1.68	1.21
age range	18-31	.95	1.28
	32-45	1.68	1.02
	46-59	2.25	.83
	60-73	2.20	1.53
	74-87	1.50	2.60
	88-96	.	2.00

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CHAPTER 5 DISCUSSION

5.1 Introduction

This chapter discusses in detail the study findings and highlights the implications in terms of policy, research, and practice. The chapter also discusses the limitations of the study findings.

5.2 Summary of the main findings

The prevalence rate of common mental disorders was found to be 20.1% and most patients who met the research tool diagnosis of common mental disorders were diagnosed with musculoskeletal pain (18.5%), malaria (15.4%), respiratory tract infection (16. 9%) and dyspepsia (13.8%). These findings suggest that the majority of consultations are for physical complaints. It was found that people with probable common mental disorders had a higher average number of health facility visits in the previous three months compared to those without probable common mental disorders, thus 1.6 vs. 1.19. It was also found that people who have visited the health care facility repeatedly in the past 3 months were likely to be suffering from common mental disorders. The odds of probable common mental disorders increased with each visit to a health facility by 1.2. The study revealed high utilization of health services for people with mental health problems in primary care. Furthermore, almost all of the patients with probable common mental disorders went unrecognized and untreated in the two PHC clinics, thus exposing them to complex mental health problems.

5.3 Health service utilization among patients with common mental disorders

This section looks at the main study objective.

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5.3.1 Average number of consultations by patients with probable common mental disorders

A number of studies have established a relationship between frequent visits to primary health care to common mental disorders (Jacobi, et al., 2004; Kramer & Garralda, 2000; Tansella & Thornicroft, 2005). The study found that people with probable common mental disorders had a higher average number of health facility visits in the previous three months compared to those without probable common mental disorders, thus 1.6 vs. 1.19. However, there was no significant difference in the average number of traditional healer visits in the previous three months between those with probable common mental disorders and those without, thus 0.05 vs. 0.08. The total average number of both health facility and traditional healer visits were 1.68 vs. 1.24, with people with probable common mental disorders having a higher average compared to those without a probable common mental disorders. The study also observed that re-visiting health facilities increases the odds of common mental disorders by 1.27. Therefore, people who had visited the health care facility repeatedly in the past 3 months were more likely to be suffering from probable common mental disorders. The finding of the study suggests that the patient who had CMD that was being missed by health workers, was not getting better and that his or her problems were not being addressed. Consequently, the patient kept returning to the clinic which in return increased the burden on the health services. This study is comparable to previous studies concerning service utilisation of people suffering from probable common mental disorders (Ford, Trestman, Tennen, & Allen, 2005; Lefevre, et al., 1999; Miranda, et al., 1991).

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Therefore, the study revealed that patients meeting the research tool indication of probable common mental disorders had a higher average number of consultations to primary care clinics than patients not meeting the research tool indication of probable common mental disorders.

5.3.2 Use of health service by patients with common mental disorders

The current study found that the majority of the participants with probable common mental disorders presented to health care facilities, while few presented to traditional healers centres. The study, of course, could not assess the number of people who used traditional healers but did not use health care facilities. Nevertheless, the findings of this study are similar to another study on the use of health services among people with common mental disorders where fewer patients with mental health problems presented to traditional healers (Appiah-Poku, et al., 2004). It should however be noted that because of long-standing perceptions of antipathy between formal and traditional health care, there may have been under-reporting of visits to traditional healers. In the same vein, the use of health services among those with mental health problems was similar to another study in which the main interest was in physical illnesses (Giang & Allebeck, 2003). The similarity of these findings could be attributed to the fact that people with mental health problems visited health care facilities due to “physical” symptoms rather than due to “psychological” symptoms. The study found that socio-demographic factors [female gender, married status, lack of schooling, unemployed status, being Moslem, non-average income, and middle-older age (46-73 yrs)] impact negatively on service utilization only in those with probable CMD. In this case it could be suggested that those with CMD are particularly vulnerable to poor socioeconomic factors, however no causal link can be established but this is an area which can be researched further in the future. It was also found that the odds of common mental disorders increases with each visit to a health facility by 1.27. The finding in this study is similar to that reported in

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previous studies where the presence of most of the mental health conditions was associated with some increase in primary care visits (Fogarty, et al., 2008). This finding indicates the possibility that people with a common mental disorder may not get the necessary attention in the primary care setting. This finding underscores the need to consider the primary health care setting when planning integration of mental health services.

5.4 The burden of common mental disorders in primary care

5.4.1 Prevalence rate of common mental disorders

In this study, the prevalence of common mental disorders was found to be 20.1%. Many studies have been conducted in both developed and developing countries to estimate the prevalence of common mental disorders. The prevalence of common mental disorders found in this study is similar to other findings from developing countries where the prevalence rate of mental common mental disorders ranges from 20 to 30% (Patel & Kleinman, 2003).

5.4.2 Common mental disorders in association with socio-demographic factors

The current study had 237 (73.6%) females and 86 (26.4%) males, and found that 20.7% (n=49) of the females had probable common mental disorders while for males it was 18.6% (n=16). From the results, gender was not significantly associated with common mental disorders. The findings support previous research on common mental disorders where gender was not commonly associated with common mental disorders (Gureje, Lasebikan, Kola, & Makanjuola, 2006; Pothen, et al., 2003). On the other hand, the findings differ from some published studies

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where females have been found to be more affected (Cwikel, et al., 2008; Havenaar, et al., 2008; Lu, et al., 2008; Sawyer, et al., 2009).

In this study, poor household income was not significantly associated with common mental disorders. This finding is consistent with previous studies on household income among those who reported the presence of common mental disorders (Giang, Dzung, Kullgren, & Allebeck, 2010). However, it is in contrast with one previous study where lack of sufficient income was found to be a risk for developing common mental disorders (Cwikel, et al., 2008). The finding in that study suggests that economic deprivation reduces social support and consequently lack of social support predicts common mental disorders. One may argue that it is possible that the already low socio-economic status among the general population could not show a significant association to common mental disorders in the current study participants.

5.4.3 Detection of common mental disorders

In the study, we counted "detection" of a mental health problem whenever clinicians reported, in a PHC encounter form, that they thought the patient had a mental health problem. A rating of 2 or more on the degree of mental health status given by a PHC clinician was taken as an indicator that a mental health problem had been recognized. The identification index was found to be 0.017. Like other studies, the study found that the PHC clinicians did not recognize the mental health problem in almost all the participants (Avasthi, et al., 2008; Badamgarav, et al., 2003; Licht-Strunk, et al., 2009; Ndetei, et al., 2009). This therefore indicates poor detection rates among the PHC clinicians and consequently means that patients with probable common mental disorders go unrecognized and untreated in the two PHC clinics, thus exposing them to complex mental health problems. This could be attributed to both patient and clinician factors. From the

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PHC Encounter Form it can be noted that in less than 1% of the PHC attendees' mental health factors played a role in consultation. In this case, the finding can be attributed to low rates of seeking care for psychological problems by the PHC attendees. Comorbidity between physical and mental disorder could be another factor that could have affected the detection of patients with probable common mental disorders. For instance in this study, diagnosis of malaria and dyspepsia among others were prominent among those who had probable common mental disorders. This finding is similar to a Kenyan study which found that 46% of the primary care attendees with common mental disorders were unrecognised and misdiagnosed as having malaria, typhoid, amoebiasis and other diagnoses (Jenkins, et al., 2010). In the same vein, the finding of dyspepsia in this study is similar to a previous study by Mujakovic and colleagues. This study found that primary care patients consulting with dyspepsia had higher levels of depression and somatization (Mujakovic, et al., 2009). In the present study, it is not clear whether dyspepsia is proxy for expressing common mental disorders or a vague feeling of indigestion that would suggest somatization. A similar argument may be made for pain symptoms which were also common. In terms of the clinician factor, the failure by the clinician to recognize symptoms could be as a result of lack of practice or knowledge, or poor attitude (Eisenberg, 1992). The analysis of the PHC encounter form indicated that a diagnosis of malaria was based on the clinical assessment and not on confirmed malaria rapid diagnostic tests or malaria microscopy results. This practice or attitude could have led to misdiagnosis. This observation is similar to findings in Kenya which showed that only 10% of patients who had been clinically diagnosed with malaria actually had the condition (Jenkins, et al., 2010; Zurovac, Midia, Ochola, English, & Snow, 2006). Another reason that could have affected detection could be influx of patients in the primary care clinics leading to increased workload.

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5.4.4 Management of the probable common mental disorders cases by primary health care clinicians

As in other studies, the study found that almost all of the participants seen by the PHC clinicians in the two clinics were not diagnosed as having a common mental disorder (Avasthi, et al., 2008; Badamgarav, et al., 2003; Licht-Strunk, et al., 2009). The findings suggest that interventions were essentially nonexistent as primary care health workers either missed the diagnosis or misdiagnosed patients with common mental disorders leading to high utilization of services by those patients. Consequently, a large number of patients were diagnosed as having physical conditions and treated as such despite having probable common mental disorders. This finding could however be attributed to comorbidity of mental and physical conditions, which indicates the need for clinicians to be aware of the complex treatment and management requirements for this. The lack of recognition of the presence of mental disorder among the primary care attendees leads to a treatment gap for people with common mental disorders. There is a need for primary health care workers to improve their detection skills to improve patient outcomes and reduce re-attendance.

5.4.5 Frequently reported symptoms among people with probable common mental disorders

Understanding the frequently reported symptoms of a common mental disorder can lead to the development of more sensitive and specific screening tools and can improve rates of detection and treatment. In this study, the most frequently reported symptom of common mental disorders were loss of sleep (66.2%), frequent headaches (83.1%), nervous or worried (72.3%), uncomfortable feelings in stomach (75.4%), trouble thinking (72.3%), tired all the time (73.8%), easily tired (76.9%) and feeling unhappy (83.1%). Suicidal ideation was reported in 23.1% of the

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participants who scored 8 and above. The finding is similar to a previous study where patients reporting mental distress reported all types of physical symptoms more often than did patients without mental distress (de Waal, Arnold, Spinhoven, Eekhof, & van Hemert, 2005). It is also consistent with another study where it was found that people with mental distress had more health care consultations for "somatic" symptoms than "emotional and feeling" symptoms (Giang, et al., 2010, para.21). In this study, the possible explanation to this finding could be that physical complaint was the reason for consultation in most patients.

5.4.6 Reason for the consultation

Unlike in a previous study where 9.5% consulted for mental health reasons in Canada (Vasiliadis, et al., 2005), in the current study it was found that only 0.9% of the study participants' mental health factors constituted the reason for consultation. The possible explanation could be that the participants did not take their problems as emotional problems, but rather as a physical problem or as normal experiences therefore did not consult for mental health reasons. This is consistent with a previous study which indicated that members of the public cannot recognise specific disorders or different types of psychological distress and suggested that mental health literacy can influence mental health care seeking (Jorm, 2000).

5.4.7 Perception and attitude of participants towards mental health

Previous study has established a relationship between perception and attitude towards mental health to health service utilization (Mackenzie, et al., 2006). In the current study, the findings suggest that the participants had good perception and attitude towards mental health. On the question of seeking professional help for mental health problems, most participants indicated their willingness to seek professional help. Similarly, on the question of comfort in talking about

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the problem, most of the participants indicated their psychological openness to talk about their problem to a health professional. However, these findings could not tally well with the reasons for consultation as most of them presented with somatic and physical symptoms. This was similar with the findings in another study (Mackenzie, et al., 2006). One reason may be that the problem related to psychological openness might be due to a lack of mental health awareness or of the possible psychological basis for symptoms. These findings suggest the need for mental health education to improve help seeking attitudes and to enhance patients' willingness to seek care for mental health problems.

5.5 Recommendations for future research

This study can act as a platform from which further research may be conducted in these areas:

- There is a need to conduct research to determine the nature and prevalence of common mental disorders in the community and in attendees of traditional healers, given the findings of the present study.
- There is a need to conduct qualitative research to explore the help-seeking behaviour of patients with mental health problems in the community.
- There is a need to conduct a study to explore the awareness of mental health and health service use in the community, in order to come up with evidence-based mental health strategies.
- There is a need to conduct research to determine the prevalence rates of common mental disorders among those patients attending traditional healers' clinics.
- There is a need to conduct a qualitative study to explore whether dyspepsia or musculoskeletal pain may constitute proxies for expressing common mental disorders, or may be indicative of somatization. As part of this study, diagnostic practices of clinicians

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could also be explored, examining whether clinicians use these categories to avoid diagnosing stigmatised common mental disorders.

5.6 Recommendations for policy and practice

- There is a need for primary health care workers to periodically revise the identification and treatment of common mental health disorders by way of a continuing professional development programme (CPD).
- There is a need to direct efforts towards creating awareness about mental health and encourage patient disclosure of psychological or mental health issues.
- There is a need for considering the primary health care setting when planning integration of mental health services.

5.7 Study Strengths and Limitations

The strengths of the study were the use of validated measures for probable common mental disorders and conducting the study in a primary care setting which allowed us to examine the prevalence of the probable common mental disorders and the utilization of health services. Since the study design was a cross-sectional one it is difficult to draw causal inferences from the findings. The findings of this study could be generalized in all health centres that have the same clinic characteristics as those in Zomba. On the other hand, the findings reflect areas for further research. The use of self-reported data for health care utilization in the preceding three months was prone to recall bias; however, this was considered by limiting it to three months and minimizing the length of the utilization instrument.

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CHAPTER 6 CONCLUSION

This study has revealed the magnitude of common mental disorders prevalent in the primary health care centres that go unrecognized and untreated. The high utilization of health services suggests that there may be a large treatment gap in terms of mental health care in the primary care setting. The study also showed that the screening questionnaire for mental disorders could identify primary care patients who are at risk for common mental disorders and higher utilization. It can therefore be concluded that there may be a high incidence of unmet need of mental health services in the primary care setting. These findings suggest that despite the fact that common mental disorders is prevalent among primary care attendees, the majority of them may not be aware that psychological factors contribute to their symptoms. Considering the fact that participants involved in this study did not mainly seek help at the health centre for mental health problems, but for general medical conditions, there is a need to ask screening questions about common mental disorders of those patients with medically unexplained symptoms and increased number of visits in order to assist in making diagnoses. It is therefore recommended that primary health care workers should improve their skills in diagnosing common mental disorders.

The study has confirmed that patients meeting the research tool indication of probable common mental disorders had a higher average number of consultations to primary care clinics than patients not meeting the research tool indication of probable common mental disorders.

The study has also confirmed the magnitude of common mental disorders that is prevalent in primary health care clinics. The study affirms that the recognition rates of common mental disorders are very low in primary care clinics.

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The study has therefore provided additional understanding about health services utilization of patients with common mental disorders in primary care clinics in Malawi.

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APPENDICES

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Appendix A: Clearance letter to the DHO

Zomba Mental Hospital

P. O. Box 38

Zomba

3rd July 2012

Cell: 0881613541

Email: mphatsoudedi@yahoo.co.uk

The District Health Officer

Zomba District Health Office

P/Bag 18

Zomba

Dear Sir,

APPLICATION FOR PERMISSION TO CONDUCT A RESEARCH STUDY

I write to request permission to allow me to conduct a study in the health facilities under your jurisdiction. The aim of the study is to evaluate health services utilization patterns of patients with common mental disorders in primary care clinics. The Health centres in question are Matawale Health Centre and Domasi Health Centre.

I am a Master of Philosophy in Public Mental Health Student at Stellenbosch University in South Africa. In partial fulfilment of the course, I am required to conduct a research study in any mental health related issue.

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The participation in the study will entirely be voluntary, the study will abide by all ethical principles and participants will give consent.

I am looking forward to your favourable response.

Yours faithfully,

Michael M. M. Udedi

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Appendix B: Clearance letter to the In-Charge of Matawale H/C

Zomba Mental Hospital

P. O. Box 38

Zomba

3rd July 2012

Cell: 0881613541

Email: mphatsoudedi@yahoo.co.uk

The In-charge

Matawale Health Centre

C/o Private Bag 18

Zomba

Dear Sir,

REQUEST FOR PERMISSION TO INTERVIEW OUT PATIENTS

I am Michael Udedi working at Zomba Mental Hospital. I am writing to request your permission to allow me to interview patients attending Out Patient Department at your institution. The aim of the study is to evaluate health services utilization patterns of patients with common mental disorders in primary care clinics. This study is in partial fulfilment of a Master of Philosophy in Public Mental Health course, I am pursuing at Stellenbosch University in South Africa.

I will be required to conduct interviews with randomly selected clients. The participation in the study will entirely be voluntary, the study will abide by all ethical principles and participants will

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give consent. I will also require a room for interviewing patients within your department to enhance privacy.

I am looking forward to your favourable consideration.

Yours faithfully,

Michael M. M. Udedi

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Appendix C: Clearance letter to the In-Charge of Domasi H/C

Zomba Mental Hospital

P. O. Box 38

Zomba

3rd July 2012

Cell: 0881613541

Email: mphatsoudedi@yahoo.co.uk

The In-charge

Domasi Health Centre

C/o Private Bag 18

Zomba

Dear Sir,

REQUEST FOR PERMISSION TO INTERVIEW OUT PATIENTS

I am Michael Udedi working at Zomba Mental Hospital. I am writing to request your permission to allow me to interview patients attending Out Patient Department at your institution. The aim of the study is to evaluate health services utilization patterns of patients with common mental disorders in primary care clinics. This study is in partial fulfilment of a Master of Philosophy in Public Mental Health course, I am pursuing at Stellenbosch University in South Africa.

I will be required to conduct interviews with randomly selected clients. The participation in the study will entirely be voluntary, the study will abide by all ethical principles and participants will

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give consent. I will also require a room for interviewing patients within your department to enhance privacy.

I am looking forward to your favourable consideration.

Yours faithfully,

Michael M. M. Udedi

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Appendix D: Participant Information Leaflet and Consent Form (English Version)

Title of Study: Health service utilization by patients in primary care setting in Zomba, Malawi

Reference Numbers: S12/05/131 and P06/12/1238

Principal Investigator: ***Michael Udedi***

Address:

Zomba Mental Hospital

Po Box 38

Zomba

Malawi

Contact Number: ***(00265) 0881613541***

You are being invited to take part in a research project. Please take some time to read the information presented here, which will explain the details of this project. Please ask the study staff or doctor any questions about any part of this project that you do not fully understand. It is very important that you are fully satisfied that you clearly understand what this research entails and how you could be involved. In addition, your participation is **voluntary** and you are free to decline to participate. If you say no, this will not affect you negatively in any way whatsoever. You are also free to withdraw from the study at any point, even if you do agree to take part.

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This study has been approved by the Health Research Ethics Committee at Stellenbosch University and the College of Medicine Research & Ethics Committee (Malawi)**. The study will be conducted according to the ethical guidelines and principles of the international Declaration of Helsinki, South African Guidelines for Good Clinical Practice and the Medical Research Council (MRC) Ethical Guidelines for Research.**

What is this research study all about?

- **Study Places:** The study will be conducted at Matawale and Domasi Health Centres.
- **Aim:** The aim of the study is to evaluate health services utilization patterns of patients with common mental disorders in primary care clinics. We will use the results of the study to improve health services for people attending the primary health care clinics.
- **Selection:** All patients attending the Matawale Health Centre and Domasi Health Centre will be included in the study provided they are within the desired age (18 years and above) and are capable of giving consent. The required sample size is 323. You have been invited to attend to this study because you are one of the patients attending this clinic.
- **Responsibility**: Your responsibility will be to provide information to the questions that you will be asked.
- **Confidentiality**: Your responses will be confidential and only used for the study by the investigators. Research and Ethics committee members might also have access to the records for inspection. Your name will not be written on the questionnaire.
- **Risks:** There is no risk in the study, apart from your consultation period taking longer, approximately 10-20 minutes more.

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- **Benefits:** If you are identified with mental health problem symptoms during the course of the interview but not identified by the treating health care worker, you will be informed of your problem and will be referred to mental health professionals for further management. The findings could be beneficial to future patients.
- **Procedure**: After your consent, you will be required to answer a questionnaire that has three sections; you will be asked some questions pertaining to your feelings and thoughts. Then after that, you will see the clinician, there after you will also be required to answer some questions before you go.
- **Participation**: Participation is voluntary and you are at liberty to withdraw at any time without giving any reasons for doing that. Your refusal or withdrawal to take part in the study will not affect your care in any way.
- **Cost**: There will be no costs involved for you, if you do take part.

Is there anything else that you should know or do?

- You can contact ***Michael Udedi*** at telephone ***0881613541*** if you have any further queries or encounter any problems.
- You can contact the Health Research Ethics Committee at (+27) 021-938 9207 if you have any concerns or complaints that have not been adequately addressed by your study clinician.
- You can contact the College of Medicine Research & Ethics Committee at (+265) 01 877 245 if you have any concerns or complaints that have not been adequately addressed by your study clinician.
- You will receive a copy of this information and consent form for your own records.

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Declaration by participant

By signing below, I ……. . ……. agree to take part in a research study entitled *(Health service utilization by patients in primary care setting)*.

I declare that:

- I have read or had read to me this information and consent form and it is written in a language with which I am fluent and comfortable.
- I have had a chance to ask questions and all my questions have been adequately answered.
- I understand that taking part in this study is **voluntary** and I have not been pressurized to take part.
- I may choose to leave the study at any time and will not be penalised or prejudiced in any way.
- I may be asked to leave the study before it has finished, if the study doctor or researcher feels it is in my best interests, or if I do not follow the study plan, as agreed to.

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Signed at (*place*) . . . . . …. . . . . …… on (*date*) …. . . . ……. . 2012.

…… ……

Signature of participant or Thumb print (if illiterate) Signature of witness

Declaration by investigator

I *(name)* ……. . …… declare that:

- I explained the information in this document to……. .
- I encouraged him/her to ask questions and took adequate time to answer them.
- I am satisfied that he/she adequately understands all aspects of the research, as discussed above.
- I did/did not use an interpreter. (*If an interpreter is used then the interpreter must sign the declaration below.*)

Signed at (*place*) . . . . . …. . . . . …… on (*date*) ……. . . . ……. . 2012.

…… ……

Signature of investigator Signature of witness

Declaration by interpreter

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I *(name)* ……. . …… declare that:

- I assisted the investigator (*name*) ……. to explain the information in this document to (*name of participant*) ……. . ……. . using the language medium of Chichewa.
- We encouraged him/her to ask questions and took adequate time to answer them.
- I conveyed a factually correct version of what was related to me.
- I am satisfied that the participant fully understands the content of this informed consent document and has had all his/her question satisfactorily answered.

Signed at (*place*). . . . . ….. . . . . …… on (*date*) ……. . . . ……2012.

…… ……

Signature of interpreter Signature of witness

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Appendix E: Socio-demographic Characteristics Questionnaire

Code Number……

Date of data collection: ……

Time of data collection: ……

SECTION A: Research Questions on Socio-Demographic data

(*Please tick in the box that corresponds with the response*)

1. Age ☐
2. Tribe ☐
3. Gender
    1. Male ☐
    2. Female ☐
4. Marital Status ☐
    1. Married ☐
    2. Single
    3. Widowed ☐
    4. Divorced/Separated ☐
5. Employment status ☐
    1. Unemployed

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2. Student ☐
3. Employed ☐
4. Retired ☐
5. Self Employed ☐

6. Education level
   1. Not attended school ☐
   2. Attended-Primary level ☐
   3. Attended-Secondary level ☐
   4. Attended-Tertiary level ☐

7. Religion
   1. Christian ☐
   2. Moslem ☐
   3. Other ☐
   4. None ☐

8. Annual Household income
   1. Above Average ☐
   2. Average (MWK50,000) ☐
   3. Below Average ☐

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Appendix F: Self Reporting Questionnaire-20 (SRQ-20) English Version

Code Number……

1. Do you often have headaches? yes/no

2. Is your appetite poor? yes/no

3. Do you sleep badly? yes/no

4. Are you easily frightened? yes/no

5. Do your hands shake? yes/no

6. Do you feel nervous, tense or worried? yes/no

7. Is your digestion poor? yes/no

8. Do you have trouble thinking clearly? yes/no

9. Do you feel unhappy? yes/no

10. Do you cry more than usual? yes/no

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11. Do you find it difficult to enjoy your daily activities? yes/no

12. Do you find it difficult to make decisions? yes/no

13. Is your daily work suffering? yes/no

14. Are you unable to play a useful part in life? yes/no

15. Have you lost interest in things? yes/no

16. Do you feel that you are a worthless person? yes/no

17. Has the thought of ending your life been on your mind? yes/no

18. Do you feel tired all the time? yes/no

19. Do you have uncomfortable feelings in your stomach? yes/no

20. Are you easily tired? yes/no

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Appendix G: Health Service Utilization Encounter Questionnaire - English Version

Code Number……

A. **Self-perception of mental health and attitudes questionnaire**

1. Generally speaking, comparing yourself with people your own age, would you say your mental health is:
   a. excellent,
   b. very good,
   c. good,
   d. fairly good
   e. poor
2. If you had a mental health problem, would you definitely go for professional help;
   a. probably go,
   b. probably not go for professional help
   c. definitely not go for professional help
   d. definitely go for professional help
3. How comfortable would you feel talking about personal problems with a professional?
   a. very comfortable
   b. somewhat
   c. not very comfortable
   d. not at all comfortable

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4. How embarrassed would you be if your friends knew you were getting help for a mental health problem?

a. very embarrassed

b. somewhat

c. not very

d. not at all embarrassed

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B. **Utilization of services for mental health problem questionnaire**

1. How many times have you visited a health worker or a health facility in the past three months?

   …….

2. If you have visited a health facility more than once, was it for the same problem?

   a. Yes
   b. No

3. If you have visited a health facility more than once, was this because you were told to come back or because you were not getting better?

   a. Told to come back (scheduled visit)
   b. Not getting better

4. How many times have you visited a traditional healer in the past three months?

   ……. .

5. If you have visited a traditional healer more than once, was it for the same problem?

   a. Yes
   b. No

6. If you have visited a traditional healer more than once, was this because you were told to come back or because you were not getting better?

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a. Told to come back (scheduled visit)

b. Not getting better

7. If you have visited both a health facility and a traditional healer, was it for the same problem?

   a. Yes

   b. No

8. Have you ever consulted a health care worker or other service specifically for a mental health problem? (i.e. an emotional, nervous or substance-related problem)

   a. Yes

   b. No

   If yes, who was seen?

   a. Traditional Healer

   b. Primary health care worker

9. How long ago had this occurred?

   a. in the past three months

   b. more than three months ago

10. Have you ever been told / diagnosed with a mental health problem after visiting a health facility or traditional healer?

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c. Yes

d. No

If yes, when was this?

a. In the past three months

b. More than three months ago

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Appendix H: The PHC Patient Encounter Form

Code Number……

1. Please rate the patient's level of psychiatric disturbance on a likert scale of 0 (no disturbance) to 4 (marked/severe disturbance).

   0_no disturbance detected,

   1_subclinically ill,

   2_clinically significant illness– mild severity,

   3_moderate severity,

   4_marked and severe

2. Please provide basic information on the reason for the consultation, diagnosis and your immediate management plan.

   a) Reason: (put a cross on a line indicating the perceived reason)

      i. mental health factors play no part in this consultation for this patient

      ii. mental health factors are the only reasons this patient is seeking consultation now

   b) Your diagnosis:……

   c) Your management plan:…….

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Appendix I: Participant Information Leaflet and Consent Form (Chichewa Version)

Title of Study: Health service utilization by patients in primary care setting in Zomba, Malawi

Reference Numbers: S12/05/131 and P06/12/1238

Principal Investigator: ***Michael Udedi***

Address:

Zomba Mental Hospital

Po Box 38

Zomba

Malawi

Contact Number: ***(00265) 0881613541***

Muli wolandilidwa kutenga nawo mbali mukafukufuku uyu. Chonde tengani nthawi kuti muwerenge uthenga womwe walembedwa pachikalatachi umene ukufotokoza za kafukufukuyu. Muli omasuka kufunsa amene akuyendetsa kafukufukuyu ngati simunamvetse bwino lomwe kuti akulongotselerani mwa tsatanestane zakafukufuku ameneyu musanavomere kutenga nawo mbali. Ndichofunika kwambiri kuti mukhale okhutitsidwa ndi mene kafukufkuyu ayendere komanso m'mene inu mungatele nawo mbali. Dziwani kuti kutenga nawo mbali ndikosakakamizidwa

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ndipo muli ndi ufulu wokana kutenga nawo mbali ndipo palibe vuto lina liri lonse lomwe lingakhuze chithandizo chanu ngati mukana kutenga nawo mbali mu kafukufuku uyu.

Kafukufukuyu wavomerezedwa ndi Health Research Ethics Committee yaku Stellenbosch University komanso College of Medicine Research & Ethics Committee yaku Malawi**. Kafukukuyu azatsatira ndondomeko zonse zoyenera komanso zoloredwa zoyendetsera kafukufuku padziko lonse lapansi komanso m'mayiko aMalawi ndi South Africa.**

Dziwani za kafukufukuyu

- **Malo:** Kafukufukuyu achitikira muzipatala zazing'ono za Matawale ndi Domasi.
- **Zolinga:** Kufufuza uku ndi kwa vuto lamaganizo angwiro amene amapezeka ndi anthu odwala amene amafika kuzipatala zingo'onozingono komanso m'mene adototolo amapezela vutoli mwa odwala. Ndili ndichikhulupiriro kuti zotsatira zakafukufufuku uyu zizathandiza kupitiritsa patsogolo umoyo wa maganizo angwiro.
- **Ndondomeko zake:** Pamene mwavomera kutenga nawo gawo mu kafukufuku uyu mufunsidwa mafunso magawo atatu. Mafunso ena akhala okhuzana ndi maganizo anu.
- **Kutenga nawo gawo:** Aliyense odwala amene ali opitilira zaka 18 zakubadwa ali omasuka kutenaga nawo mbali pokhapokha ngati wavomera. Anthu ofunika ndi 323.
- **Ubwino wa kafukufukuyu:** Ndili ndichikhulupiriro kuti zotsatira zakafukufufuku uyu zizathandiza kupitiritsa patsogolo umoyo wa maganizo angwiro. Komanso ngati inu mwapezeka ndi vuto tizapanga chotheka kuti mulandire chithandizo choyenera.
- **Vuto la kafukufukuyu:** Palibe vuto kwenikweni koma kuti nthawi imene mumaonedwa mukabwera kuchipatala izachulukuirapo pang'ono ndi mphindi khumi kapena makumi awiri.

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- **Chinsinsi:** Zonse zimene mungatiuze zizasungidwa mwachinsinsi, ndipo zizagwiritsidwa mukafukufuku yekhayu. Dzina lanu silidzalembedwa pa chikalata cha mafunso lakafukufuku uyu. Omwe akupangitsa kafukukuyu ndi okhawo ovemerezeka kuona komanso kugwiritsa ntchito zonse zomwe mungatiuze komanso omwe apereka chilolezo cha kafukufukuyu atha kufuna kuona ngati njira imodzi yowunikira ngati kafukufukuyu akusatira ndondomeko.
- **Kulowa mu kafukufuku uyu:** Palibe kukamizidwa kulowa mu kafukufuku uyu. Mutha kusankha kutenga nawo mbali, komanso kusapitiliza kutenga nawo mbali mukafukufukuyu. Palibe vuto lina liri lonse lomwe lingakhuze chithandizo chanu ngati mukana kapena kusiya kutenga nawo mbali mu kafukufuku uyu.

Choti mudziwe

- Ngati muli ndi mafunso ena aliwonse muli omasuka kufunsa mkulu wa kafukufukuyu ***Michael Udedi***, pa nambala iyi ***0881613541***
- Ngati muli ndi mafunso ena aliwonse kapena chidandaulo chokhudza kafukufukuyu muli omasuka kufunsa mkulu wa Health Research Ethics Committee pa nambala iyi **(+27) 021-938 9207** kapena mutha kufunsa mkulu wa College of Medicine Research & Ethics Committee pa nambala iyi **(+265) 01 877245**.
- Muzalandira chikalatachi kuti musunge nokha kuti munalowa mukafukufukuyu.

Mau ovomereza kulowa mukafukufuku:

Ine……

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Ndikuvomereza kuti ndafotokozeredwa momveka bwino ndi kukhutira ndi kafukufukuyu ndipo ndikuvomera kutenga nawo mbali mukafukufukuyu. Ndikumvetsa bwino lomwe zomwe kafukufukuyu akukhudza.

- *Ndikudziwa kuti ngati ndili ndi maganizo ofuna kusapitiliza kutenga nawo mbali mukafukufukuyu, ndingathe kudziwitsa owona zakafukufukuyu ndikuchotsedwa nthawi yomweyo.*
- *Ndikuvomereza kutenga nawo mbali mukafukufukuyu ndikumvetsetsa kuti nkhani zokhudza ine zikasungidwa mwachinsinsi.*

Woyankha mafunso atikitile…… Tsiku…….. .

Chindindo cha chala chakumanja (ngati samatha Kulemba)

Kuvomereza kwa wofunsa mafunso:

Ine……

Ndikutsimikiza kuti ndafotokoza mwatsatanetsatane mmene kafukufukuyu alili, zofuna zake ndi zovuta zina ndi zina kwa olowa mkafukufukuyu.

Wofunsa atikitile……. Tsiku…. . .

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Appendix J: Socio-demographic Characteristics questionnaire (Chichewa)

Code Number……

Tsiku: ……

Nthawi: …….

SECTION A: Research Questions on Socio-Demographic data

(chongani bokosi lomwe likugwirizana ndiyankho)

1) Muli ndi zaka zingati? ☐

2) Mtundu wanu ☐

3) Ndinu:
   1. mamuna ☐
   2. mkazi ☐

4) Ndondomeko ya banja lanu lili bwanji?
   1. ndili pabanja ☐
   2. wosakwatira/wosakwatiwa ☐
   3. Nafedwa ☐
   4. Ukwati unatha/kulekana ☐

5) Kodi mumapanga chani zokhuzana ndi ntchito pamoyo wanu?
   1. Sindili pantchito ☐

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2. ndili pasukulu ☐
3. ndili pantchito yolembedwa ☐
4. wopuma pantchito ☐
5. ndili pantchito yozilemba ndekha ☐

6) Kodi sukulu munafika nayo pati?

1. Sindinapiteko kusukulu ☐
2. Ndinafika ku pulaimale ☐
3. Ndinafika ku sekondale ☐
4. Ndinafika ku koleji ☐

7) Chipembezo chanu

1. Chikhirisitu ☐
2. Chisilamu ☐
3. Zina kupatula 1 ndi 2 ☐
4. Wosapephera ☐

8) Mlingo wa kapezedwe kachuma pakhomo panu pachaka

1. Kochulikirapo ☐
2. Pakatikati (MWK50,000) ☐
3. Kocheperako ☐

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Appendix K: Self Reporting Questionnaire-20 (SRQ-20) Chichewa Version

Tsopano ndikufunsani mafunso okhudzana ndi momwe mumamvera mumtima ndi maganizo omwe mwakhala nawo m'sabata zinayi zomwe zapitazi. Muyankhe "eya" kapena "ayi" ku funso lirilonse. Ngati mukukaikira, yankhani mofanizira ndi momwe mwakhala mukumvera. Ngati simukumvetsa funso, chonde funsani ndipo ndikupatsani chitsanzo chotanthauzira funsolo.

1	M'masabata anayi apitawa, kodi mumamva kupweteka mutu pafupipafupi?	Eya	Ayi
2	M'masabata anayi apitawa, kodi simumakhala ndi chilakolako cha chakudya?	Eya	Ayi
3	M'masabata anayi apitawa, kodi mumavutika kugona usiku?	Eya	Ayi
4	M'masabata anayi apitawa, kodi manja anu amanjenjemera?	Eya	Ayi
5	M'masabata anayi apitawa, kodi mumakhala ndi nkhawa, mantha kapena madandaulo?	Eya	Ayi
6	M'masabata anayi apitawa, kodi simumachedwa kututumutsidwa?	Eya	Ayi
7	M'masabata anayi apitawa, kodi mumadzimbidwadzimbidwa?	Eya	Ayi
8	M'masabata anayi apitawa, kodi mumakhala ndi vuto kuganiza bwinobwino?	Eya	Ayi
9	M'masabata anayi apitawa, kodi mumakhala osasangalala kapena osakondwa?	Eya	Ayi
10	M'masabata anayi apitawa, kodi mumaliralira pafupipafupi ndipo koposera muyeso?	Eya	Ayi
11	M'masabata anayi apitawa, kodi mumaona ngati ndi chinthu chokuvutani kusangalatsidwa ndi zinthu zimene mumapanga tsiku ndi tsiku?	Eya	Ayi
12	M'masabata anayi apitawa, kodi mumakhala ndi vuto kupanga maganizo kapena kumanga mfundo?	Eya	Ayi
13	M'masabata anayi apitawa, kodi ntchito zanu za tsiku ndi tsiku sizimayenda bwino?	Eya	Ayi
14	M'masabata anayi apitawa, kodi mumalephera kupanga zinthu za phindu kapena zofunikira m'moyo wanu?	Eya	Ayi

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15	M'masabata anayi apitawa, kodi munasiya kukhala ndi chidwi mu zinthu zosiyanasiyana?	Eya	Ayi
16	M'masabata anayi apitawa, kodi mumaziona ngati ndinu munthu wopanda ntchito kapena wosafunikira?	Eya	Ayi
17	M'masabata anayi apitawa, kodi maganizo odzipha anayamba akubwereranipo?	Eya	Ayi
18	M'masabata anayi apitawa, kodi mumamva kapena kukhala otopatopa nthawi zonse?	Eya	Ayi
19	M'masabata anayi apitawa, kodi mumakhala ndi vuto losamva bwino m'mimba?	Eya	Ayi
20	M'masabata anayi apitawa, kodi simumachedwa kutopa?	Eya	Ayi

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Appendix L: Health Service Utilization Encounter Questionnaire (Chichewa)

Code Number……

A. Mafunso okhudza m'mene mukuonera umoyo wamaganizo angwiro (momwe mumamvera mumtima ndi maganizo omwe)

1. Kunena mwatchutchu inuyo kusiyanitsa ndi anzanu ofanana nawo zaka kapena msinkhu, munganene kuti moyo wanu wamaganizo angwiro (momwe mumamvera mumtima ndi maganizo omwe) uli bwanji?
    a. Uli bwino kwambiri
    b. Uli bwinoko
    c. Uli bwino
    d. Bolaniko
    e. Wasokonekera

2. Mutakhala kuti muli ndi vuto la umoyo wamaganizo angwiro (momwe mumamvera mumtima ndi maganizo omwe), mungafunitsitse kukalandira chithandizo kuchokera kwa amene anaphunzira zantchitoyi?
    a. Mwina ndingapite
    b. Mwina sindingapite
    c. Sindingayelekeze
    d. Ndingapite

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3. Mungakhale omasuka bwanji kukambirana ndi wogwira ntchito zachipatala zinthu zanu zachinsinsi?
    a. Omasuka kwenikweni
    b. Omasukako
    c. Osamasuka kwenikweni
    d. Omangika

4. Kodi mungachite manyazi motani anzanu atadziwa kuti mukulandira chithandizo chifukwa chavuto la umoyo wamaganizo angwiro (momwe mumamvera mumtima ndi maganizo omwe)?
    a. Manyazi kwambiri
    b. Manyaziko
    c. Osati Manyazi kwambiri
    d. Osachita manyazi konse

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B. Mafunso okhudzana ndi kagwiritsidwe ka ntchito za umoyo mokhudzana ndi mavuto a umoyo wamaganizo angwiro (momwe mumamvera mumtima ndi maganizo omwe)

1. Ndikangati pamiyezi itatu yapitayi mwapitapo kuchipatala kapena mwakaonanapo ndi adotolo? ……
2. Ngati, munapitapo kuchipatala kupyolera kamodzi, kodi linali vuto loyamba lomwelo?
    a. Eya
    b. Ayi

3. Ngati, munapitapo kuchipatala kupyolera kamodzi, kodi munapitanso chifukwa anakuudzani kuti mupitenso kapena chifukwa choti simumapezabe bwino?
    a. Anandiuza kuti ndipitenso
    b. Sindimapezabe bwino

4. Ndikangati pamiyezi itatu yapitayi mwapitapo kwa sing'anga kapena mwakaonanapo ndi a sing'anga?. . . . . .
. . . . . .
5. Ngati, munapitapo kwa sing'anga kupyolera kamodzi, kodi linali vuto lake loyamba lomwelo?
    a. Eya
    b. Ayi

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6. Ngati, munapitapo kwa sing'anga kupyolera kamodzi, kodi munapitanso chifukwa anakuudzani kuti mupitenso kapena chifukwa choti simumapezabe bwino?
    a. Anandiuza kuti ndipitenso
    b. Sindimapezabe bwino

7. Ngati, munapitapo kuchipatala kapenanso kwa sing'anga, kodi vuto lake linali lofanana?
    a. Eya
    b. Ayi

8. Kodi munakaonanapo ndi a dotolo kapena munthu wina aliyense, kapenanso kulandira chithandizo makamaka chifukwa cha nkhani yokhudzana ndi vuto la umoyo wamaganizo angwiro (momwe mumamvera mumtima ndi maganizo omwe)? (kuthuthumira, kapena chifukwa chogwiritsa mankhwala ozuzunguza bongo)
    a. Eya
    b. Ayi

    Ngati ndi eya, munaonanapo ndi yani
    a. Sing'anga
    b. A dotolo a kuchipatala a zaumoyo
9. Kodi izi zachitikapo liti?
    a. Miyezi itatu yapitayo
    b. Kupyolera miyezi itatu yapitayo
10. Kodi munaudzidwapokuti muli ndi vuto lamaganizo a ngwiro (momwe mumamvera mumtima ndi maganizo omwe) pamene munapita kuchipatala kapena kwa sing'anga?

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a. Eya

b. Ayi

Ngati ndi eya, kodi izi zachitikapo liti?

c. Miyezi itatu yapitayo

d. Kupyolera miyezi itatu yapitayo

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Appendix M: Letter of Approval from Zomba District Health Office

Telephone: + 265 01 524 588
Facsimile: + 265 01 524 320
All Communications should be addressed to:
The District Health Officer
zombadho@yahoo.com

Ministry of Health
Private Bag 18
Zomba
Zomba Blantyre Road
Near Zomba Central Hospital
Date: August 24, 2012

Mr. Udedi
Zomba Mental Hospital
PO Box 38
Zomba

Dear Sir,

PERMISSION FOR YOU TO DO A STUDY AT MATAWALE AND DOMASI HEALTH CENTRES

I hereby write in response to your request to conduct a study at Matawale and Domasi Health Centres, outpatient departments, as part of your academic requirement.

I am pleased to inform you that you are granted permission, to do the study at the said Health Centres.

Yours Sincerely,

William Mlotha (Deputy District Health Officer)
FOR THE DISTRICT HEALTH OFFICER.