Mediating Role of Family Caregivers Attitudes in the Relationship between Knowledge and Effective Healthcare-Seeking Behaviours: A Case of Parirenyatwa Mental Health Hospital.

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DOI: https://dx.doi.org/10.47772/IJRISS.2025.90400332

Received: 09 April 2025; Accepted: 12 April 2025; Published: 13 May 2025

ABSTRACT

Timely and effective healthcare-seeking behaviours (HSB) are essential for managing mental disorders with psychotic features. Family caregivers often play a pivotal role in facilitating access to care and supporting individuals before, during, and after hospitalization. Their decisions and actions significantly impact patient outcomes and overall quality of life. However, the link between caregivers' knowledge, their attitudes toward psychosis, and their subsequent healthcare-seeking behaviours remains underexplored. The study aimed to investigate whether caregivers' attitudes mediate the relationship between their knowledge of psychosis management and their HSB. A quantitative cross-sectional survey was conducted at Parirenyatwa Mental Health Hospital in Harare, Zimbabwe. Fifty conveniently selected family caregivers participated in the study by completing a validated self-administered Knowledge, Attitudes, and Healthcare-Seeking Behaviours (KAH) questionnaire. Data were analysed using the Statistical Package for the Social Sciences (SPSS) version 27 and Hayes' PROCESS Model 4 for mediation analysis. Results revealed a significant indirect effect of knowledge on HSB through attitudes. While the direct effect of knowledge on HSB was limited, the total effect including attitudes was substantially stronger, highlighting the mediating role of attitudes in shaping healthcare-seeking behaviours. These findings suggest that knowledge alone is not sufficient; positive attitudes are essential in translating knowledge into effective action. The study shows the importance of targeted educational interventions that not only enhance knowledge but also foster supportive attitudes among family caregivers. Such initiatives could improve timely access to mental healthcare and contribute to better health outcomes for individuals with psychotic disorders. Further research is recommended to explore additional mediating factors and to develop comprehensive strategies for strengthening HSB among caregivers.

INTRODUCTION

Background of the Study

Over 970 million people worldwide are estimated to be mentally ill, yet few primary family caregivers seek for formal medical and psychological help with considerable delay on behalf of their loved ones (World Health Organisation (WHO), 2022). Ineffective Healthcare-Seeking Behaviours (HSB) reduce patient quality of life (Gabra et al., 2020). One of the main goals of psychological research is to explain human behaviour and increase patients' quality of life (American Psychological Association, 2017). Thus, two variables that have been associated with explaining and predicting behaviour in the context of HSB for Effective Psychosis Management (EPM) are knowledge and attitudes.

Family caregivers EPM knowledge and effective HSB is crucial in severe mental disorders that present with psychotic characteristics such as schizophrenia, dementia and manic bipolar. Severe psychosis represents a significant global health concern, affecting 24 million people worldwide (Global Burden of Disease, 2023). Psychosis is associated with marked impairment in cognitive, emotional, and behavioural functioning, leading to a diminished quality of life due to difficulties in areas such as executive functioning, emotional regulation, and socialization (Sadock & Sadock, 2015; WHO, 2022). Thus, Abi et al. (2019) found knowledge and effective HSB of the mental illness to be critical to reduce such difficulties.

The prevalence of psychotic illnesses in Zimbabwe, such as schizophrenia, bipolar, and other mental disorders with psychotic characteristics, has been noted to increase in recent years (WHO, 2019). However, given the limited data available, the true prevalence of these disorders in Zimbabwe may be underestimated, as many people with psychotic illnesses may go undiagnosed or untreated due to lack of knowledge of psychosis treatment and pessimistic disposition of psychosis by their caregivers and unorthodox HSB (Chibanda, 2019; Khombo et al., 2023; Letters to Strangers, 2021).

Mathew and Vijayan (2021) note that 41% of psychosis patients relapse post-discharge under family care due to lack of knowledge of managing the condition effectively. Khombo et al. (2023) has also attributed this to family caregivers' limited knowledge of EPM, leading to poor HSB. These poor HSB have been noted as one of the top causes of pre-mature death among people experiencing psychosis (WHO, 2022). Multiple relapses due to non-drug adherence monitoring, delayed specialist consultations and not seeking for formal professional medical help by family caregivers in managing patients presenting with psychosis predispose the patients to premature death (Mathew & Vijayan, 2021; Peritogiannis et al., 2022).

In addition, HSB is a task that requires comprehensive knowledge of the condition's causality, maintaining factors and formal management methods (Calabrese & Khalili, 2023; Sadock & Sadock, 2015). In Africa, specifically in Zimbabwe, understanding of psychosis is often rooted in spiritual, demonic, and African Traditional Religion assumptions rather than medical knowledge of aetiology linked to too much or little dopamine level in the dopaminergic region of the brain (Letters to Strangers, 2021; Sadock & Sadock, 2015). Thus, inadequente knowledge of evidence based treatments such as resperidone and cognitive behaviour therapy for psychosis leads family caregivers to resort to traditional healers, spiritual apostles, and herbal remedies, therefore the acts worsen the symptoms of psychosis (Letters to Strangers, 2021). Amidst the process, a range of feelings, emotions and behaviours are developed (Gabra et al., 2020). Thus, their knowledge of EPM can influence their HSB but through other variables effects.

The intricate relationship between knowledge and HSB has been a subject of debate among scholars (Gabra et al., 2020; Li et al., 2021). Link and Pescosolido (2009) note Hallucinations, delusions, and disorganized speech or behaviour, which are common symptoms/features of psychosis, have historically been misunderstood with hopelessness, negativism, and a pessimistic outlook. These misperceptions may contribute to negative attitudes, which in turn affect HSB. Thus, attitudes have been included to explain the process by which knowledge directly and indirectly influence behaviour as an intermediary variable rather than changing the characteristics, strength and direction of the relationship (Ma et al., 2021).

In addition, Kutcher et al. (2016) indicate that different literature has demonstrated that more knowledge results in safer and effective HSB. On the other hand, other investigations have discovered that knowledgeable family caregivers do not exhibit safer and effective HSB as shown by studies in Australia and China (Jorm et al., 1997; Wei et al., 2015). Gabra et al. (2020) note that most studies have focused on socioeconomic factors and cultural background as moderators between knowledge and behaviour but mediators' roles. While some studies have identified a relationship between the attitudes of caregivers in general and their behaviours, others have not, indicating the need for more research to fully understand the indirect effects of knowledge on HSB through family caregivers' attitudes in the context of EPM (Ahmad et al., 2020; Ma et al., 2021).

On all free sites accessible during the study, no research of this context was published hence, an observational study at Parirenyatwa Mental Health Hospital (PMHH) in Zimbabwe became a necessity. Thus, it is against the background the research sought to investigate the mediating role of family caregivers' attitudes in the relationship between their knowledge of EPM and their HSB for effective psychosis management at PMHH in Zimbabwe.

Statement of the Problem

Previous research has predominantly focused on HSB of patients with psychosis, while overlooking family caregivers' part (Arciniegas, 2015; Gabra et al., 2020). Despite their crucial role, caregivers often lack the necessary EPM knowledge, which indirectly affects the quality of HSB through negative attitudes they hold. The relationship between knowledge and behaviour has been inconsistent and under-researched due to the

unexplored mediating effects of attitudes (Abi et al., 2019). Despite the importance of caregivers' knowledge, attitudes, and HSB for EPM, there is a significant gap in understanding the relationship between these factors, particularly in Zimbabwe (Chibanda, 2019; Khombo et al., 2023). Limited research has investigated the mediating role of attitudes between knowledge and HSB for EPM in Africa, and there is a pressing need for greater awareness of mental health among primary caregivers given patients premature mortality, multiple relapses, unstable relationships, loss of employment in Zimbabwe (Chibanda, 2019). The situation presents a critical barrier to improving the quality of life for people living with psychosis and their families given Zimbabwe objective of improving quality of life of those suffering with chronic illness of any kind.

Justification

The research directly aligns with the Education 5.0 model by bridging academic knowledge with practical solutions to national health and wellbeing objectives outlined in National Development Strategy One (NDS1). Gabra et al. (2020) recommended research on the mediating role of family caregivers' attitudes in influencing their HSB. Prior research on the knowledge-behaviour link in HSB has yielded inconclusive results, suggesting the need to explore alternative explanations like knowledge and attitude interactions (Patel et al., 2014). By examining the mediating functions of attitudes, the study aimed to illuminate the mechanisms through which knowledge translates into specific HSB patterns through attitudes. The findings might contribute to the existing research and equip mental health professionals with psycho-educational tools to empower family caregivers with effective HSB strategies. Ultimately, effective HSB has the potential to reduce relapse rates, decrease mortality, and enhance the quality of life for individuals with psychosis, directly aligning with NDS1 goals.

Aim

The aim of the research was to examine family caregivers' attitudes mediating role in the relationship between their knowledge of EPM and their HSB for effective psychosis management and the mechanisms behind the direct and indirect effects, in order to gather information to provide interventions aimed at improving patients' quality of life.

Objectives

- To determine the influence of family caregivers' knowledge of effective psychosis management on their healthcare-seeking behaviours for effective psychosis management.

- To establish the relationship between family caregivers' attitudes and their knowledge of effective psychosis management.

- To assess whether family caregivers' attitudes indirectly influence their HSB for effective psychosis management.

- To determine the total effect size of attitudes and knowledge on healthcare-seeking behaviour for effective psychosis management among family caregivers.

Research Hypotheses

H_1 There is a significant direct relationship between knowledge of effective psychosis management and healthcare-seeking behaviours for effective psychosis management among family caregivers.

H_2 There is a significant positive relationship between family caregivers' attitudes and knowledge of effective psychosis management.

H_3 Family caregivers' attitudes has a significant indirect effect on their healthcare-seeking behaviour for effective psychosis management.

H_4 The indirect effect size of caregivers' attitudes on healthcare-seeking behaviours is greater than the direct effect size of the caregivers' knowledge of effective psychosis management on healthcare-seeking behaviours.

Definition of Key Terms

The following terms are defined in the context of the study.

Psychosis

Psychosis is defined conceptually as a feature/symptom of psychotic disorders found in the *Diagnostic and Statistical Manual of Mental Disorder, Fifth Edition, Text Revised* (DSM-5-TR) and *International Classification of Diseases, Eleventh* Edition (ICD-11) which includes Hallucinations, disorganized thinking (speech), delusions, gross disorganized or abnormal motor behaviour (Catatonia), diminished emotional expression and avolition.

Knowledge

Knowledge of effective psychosis management is defined as the understanding, awareness, and application of evidence-based information, strategies, and skills that contribute to the identification of psychotic symptoms, prevention, and treatment of psychosis.

Attitude

Attitude is the "degree to which a person has a favourable or unfavourable opinion or appraisal of given behaviour" (Eagly & Chaiken, 1993, p.1). It is a person's propensity to react. Emotions can be expressed through attitude. Rather than referring to the binary attitude of positive or negative, attitude in the context of this study refers to the degree to which a family caregiver assessed HSB on a five-point Likert scale showing if they strongly agree or disagree to the measured feelings and emotions.

Healthcare-Seeking behaviours

The acts or actions taken by family caregivers of patients with psychosis to seek formal medical and psychological help for managing psychosis into remission, such as consulting formal mental health specialist and medication adherence monitoring.

Caregiver

Caregiver(s) shall be defined as any carer(s) representing as a primary family member or guardian of the patient specifically as an outpatient and above 18 years old.

Organisation of the Study

The dissertation comprises five chapters. Chapter 1 introduces the research by providing background information, the research problem, Study justification, the aim, four objectives, research hypotheses, and definitions of key terms. In Chapter 2, the literature review presents an in-depth exploration of existing knowledge on Knowledge Attitudes Behaviour model and conceptual frameworks. Chapter 3 contains the "Research Methodology," describing the research design, target population, sampling methods, chosen instruments, data analysis procedures, and adopted ethical considerations. Chapter 4 presents and interprets the results. Finally, Chapter 5 gives a discussion, concludes the study and gives recommendations.

LITERATURE REVIEW

Introduction

The current chapter presents an in-depth review of relevant literature regarding Knowledge Attitude Behaviour

(KAB) and its application in understanding mental healthcare-seeking behaviours. The exploration aligns with the objectives outlined in chapter one and provides a strong theoretical foundation for the research question by presenting and elaborating on the KAB model in tandem with a simple mediation model. The chapter then conceptualise the study within the existing academic discourse, highlighting its significance within the larger body of knowledge. The chapter serves as a critical bridge between the introduction of the research problem and the presentation of the study's methodology, results, and discussion.

Clinical Phenomena and Pathway to Healthcare Seeking Behaviours

Gabra et al. (2020) classifies Healthcare Seeking Behaviours (HSB) as observed variables, which are directly measurable actions taken by family caregivers on behalf of their ill family members (National Health Services (NHS), 2019). The understanding of these behaviours among caregivers of individuals with psychosis involves more than just knowledge of the clinical symptoms such as hallucinations, delusions, disorganized speech and behaviour, and reduced emotional expression (Allan et al., 2023). Thus, to understand caregivers' HSB, Gabra et al. (2020) brings in attitudes as critical in promoting positive outcomes, such as remission, which refers to a reduction or disappearance of symptoms. For instance, social cognitive theorist might argue that if a caregiver believes that psychotic symptoms are a sign of possession or weakness, they may be less likely to seek medical and psychological help, hence no medication to monitor but if they believe that the symptoms indicate bioneurological deficits they will seek for medical and psychological help (Bouchrika, 2023; Wolf & Maio, 2020).

Psychosis is heterogeneous, its severity has prognostic value as it guides treatment (Arciniegas, 2015). This heterogeneity highlights the importance of evidence based and tailored treatment approaches. To achieve such, knowledge of the condition, its causes and maintaining factors should be known (Stoyanov, 2023). Psychosis indicates cognitive and neurobiological deficits; therefore, the individual suffering will not be in a stable condition to notice they require such treatment, that's when family members rope in as caregivers (Shinde et al., 2014). Equipped with knowledge and favourable evaluation of the condition, the caregivers make sure that the individual take their medication as prescribed and attended medical and psychological reviews (Arciniegas, 2015).

A study by Garrett (2019) found that parents, adult siblings, partners, and spouses commonly take care of the patients before and after hospitalisation. They observe their loved ones disrupted thought content and perception, as the individual would not be able to distinguish what is real and what makes sense (Welch, 2022). Not only does psychosis impair ones cognitive, emotional regulation and behaviour but induce difficulties in day-to-day functions and reduce one's quality of life (APA, 2022; WHO, 2020).

Furthermore, these experiences can influence how they respond. Empathetic and understanding attitudes foster open communication, encouraging the individual to seek help, while fear or frustration can lead to dismissive behaviours that hinder disclosure (Arciniegas, 2015). Caregiver knowledge about psychosis is critical for navigating the pathway to HSB. Understanding the illness, treatment options, and potential relapses equips them with the tools to provide effective support (Berglund et al., 2013). However, attitudes serve as an important intervening construct; Attitude as a latent construct represents caregivers underlying feelings, emotions, and evaluations of HSB (Eagly & Chaiken, 1993).

Knowledge, Attitude, Healthcare-Seeking Behaviours

Knowledge, and its Influence on Healthcare-Seeking Behaviour

Knowledge, which comprises facts, information, skills, and descriptions, is acquired through the processes of perception, discovery, and learning (Gilanie, 2022). Knowledge regarding mental illness treatments is gained through cultural socialization, formal education, and awareness campaigns in the mass media (Stahl, 2013). Knowledge cannot be directly observed or measured, but can be inferred based on observable indicators such as standardized test scores, educational attainment, and responses to questionnaires (Gilanie, 2022).

Furthermore, Hermanns and Mastel-Smith (2012) indicate that the introduction of antipsychotic medications

combined with evidence-based psychotherapies in the mid-20th century marked a revolutionary shift in HSB, significantly improving symptoms and reducing hospitalisation rates. In developed countries, these advancements were swiftly embraced given various channels, such as billboards, radio, and television were used to educate the mass and promoting HSB (Khombo et al., 2023). In the 21st century the focus of the campaigns shifted towards family-based care rehabilitation, now promoting effective HSB (Lehman et al., 2005; Sadock & Sadock, 2015).

Furthermore, the effectiveness of these interventions garnered significant attention from social behavioural researchers and specialists, seeking empirical evidence to support the notion that knowledge influences behaviour, particularly in the context of healthcare for loved ones (Chen et al., 2023; Saa et al., 2021). Quantitative research by Shinde et al. (2014) established a positive correlation between knowledge and behaviour, while Baba-Nalikant et al. (2023) found a significant positive correlation, $\beta = 0.550$, $p < 0.01$ between knowledge and HSB practices among caregivers. Family caregivers equipped with a deeper understanding of psychosis, for instance, exhibited a heightened capacity to recognize symptoms and promptly seek medical intervention.

A cross-sectional study conducted by Gabra et al. (2020) at Assiut University Hospital added support to the relationship between knowledge and behaviour in family caregivers. Their findings revealed a statistically significant direct relationship between these two factors. Family caregivers lacking knowledge and attributing symptoms to non-medical explanations were found to be less likely to seek help from qualified professionals (16.4%), compared to caregivers with prior exposure to psychosis, of whom 80.2% sought professional assistance.

The Nature of the Relationship. The nature of the relationship either positive or negative still posit to the claim that there is a significant relationship (Wu et al., 2022). Shinde et al. (2014) found this association while validating and modifying Johnson and colleagues' (2003) Knowledge Attitude Behaviour Questionnaire for use among family caregivers. Asurakkody and Kim's (2020) research demonstrated a positive and significant association, $r = 0.61$, $p < .001$ between knowledge of treatment efficacy and self-leadership, a crucial factor in driving positive health behaviours. Their work highlights the predictive power of both tacit and explicit knowledge on constructive initiative HSB practices, $F\ (1.198) = 42.57$, $p < .001$. These findings collectively underscore the positive influence that knowledge can exert on promoting effective HSB and how other factors can mediate the relationship.

A lack of understanding regarding evidence-based treatments can lead individuals to pursue alternative therapies with unproven efficacy (Scambler, 2004). Misconceptions about treatments can further exacerbate the issue, fostering fear and resistance that ultimately hinders HSB (Clement et al., 2015). This is particularly concerning in regions with limited access to knowledge of mental healthcare. Makombe et al. (2017) highlight the case of Zimbabwe, where lack of knowledge about evidence-based treatment options for psychosis often leads parents or spouses to prioritize traditional healers and church prophets as the first point of contact. Research across various health conditions and populations supports this argument (Letters to Strangers, 2021). Pratiwi et al. (2023) found a weak but positive correlation $r_s = 0.140$ between knowledge and HSB implementation among caregivers. While the direction of the relationship suggests that increased knowledge leads to better health practices, the weak correlation underscores the need for additional factors to be considered when examining the influence of knowledge on HSB.

It is crucial to acknowledge, however, the presence of a counter-narrative within academic discourse. The relationship between knowledge and behaviour is not invariably linear (Jessri et al., 2017; Wandersman et al., 2012). Some scholars posit that possessing knowledge about a particular subject or phenomenon doesn't necessarily translate into behaviour that aligns with this knowledge (Jessri et al., 2017). For instance, a study conducted in a German public hospital by Schnyder et al. (2017) revealed that 75% of the parents and adult children of psychiatric inpatients lacked knowledge about psychosis or its effective treatment. Despite this knowledge gap, they were still able to consult specialist without delay, even with a migrant background from developing countries where literature indicate there is lack of knowledge. This alternative perspective underscores the multifaceted nature of the knowledge-behaviour relationship giving room for interplay of other variables.

Extending beyond psychosis, the knowledge-HSB relationship transcends various fields and professions. A study on anemia by Soindemi et al. (2022) revealed that professionals and family caregivers with a deeper understanding of the condition are more likely to promote effective HSB. Similarly, Effiong et al. (2018) found that pharmacists with a stronger knowledge base regarding hypertension were more likely to encourage early detection and treatment-seeking behaviours among their patients. These findings collectively underscore the notion that knowledge empowers family caregivers to take an active role in effective HSB.

Family Caregivers Attitudes and Knowledge of Effective Psychosis Management

Knowledge shapes behaviour, but attitudes help explain how and why. Eagly and Chaiken (1993) highlight knowledge as a key driver of attitudes. This is particularly relevant in healthcare seeking behaviours by caregivers. Robinson et al. (2017) outline the multifaceted role caregivers play, including daily living assistance, medication monitoring, financial aid, and emotional support. The caregiving experience is inherently emotional, their knowledge about the illness presentation directly impacts their emotional responses (Harvey et al., 2013; Moon & Heeyoung, 2020). Caregivers with a deeper understanding of psychosis are more likely to develop positive attitudes, fostering resilience and favourable HSB (Harvey et al., 2013). Conversely, a lack of knowledge can lead to negative experiences, frustration, and ineffective HSB (Wolf et al., 2020).

A study by Mendoza (2001) found a strong positive correlation, $r(453) = 0.656$, $p < 0.000$ between family caregiver knowledge and attitudes towards mental illness. When processing information (ceteris paribus) caregivers integrate new healthcare knowledge with their existing core schemas and experiences (Haddock & Wolf, 2020). This can create entirely new attitudes or strengthen existing ones (Haddock & Maio, 2017). For instance, learning about early intervention benefits for psychosis can lead to a more positive view of treatment. However, confirmation bias plays a role (Camacho et al., 2021; Whitson et al., 2016). Caregivers may prioritize information confirming their existing core schemas, disregarding new, potentially more accurate information (Stoyanov, 2023). This selective processing can lead to knowledge reinforcing pre-existing attitudes, hindering the adoption of valuable new perspectives for HSB.

The concept of motivated reasoning posits that individuals are more receptive to information that reinforces their existing emotions, feelings and motivations (Eagly & Chaiken, 1993). Harvey et al. (2013) explored this concept through a Canadian study examining the experiences of family caregivers of individuals with schizophrenia. Those with a stronger understanding of the illness reported more positive outlooks, while those with limited knowledge expressed feelings of frustration.

In a study by Fabrigar et al. (2006) the regression model yielded a statistically significant knowledge effect on attitudes, $F(1, 542) = 312.80$, $p < .01$. To further explore this overall effect, they employed a simple regression analysis with knowledge as the predictor and attitudes as the outcome variable. This analysis revealed a substantial positive impact of knowledge on attitudes, with an unstandardized regression coefficient $B = .62$, $p < .01$ indicating a strong positive association when participants across all conditions were considered collectively (Fabrigar et al., 2016)

Conversely, family caregivers harbouring negative attitudes towards HSB may exhibit increased criticality or dismissal of information that contradicts their established belief structures (Haddock & Maio, 2017). This creates a scenario where pre-existing biases act as a filter, limiting exposure to novel knowledge that could potentially enhance their management strategies for psychosis (Haddock & Wolf, 2020). Akin to confirmation bias in information processing, family caregivers may interpret new information through the prism of their entrenched attitudes, selectively focusing on elements that validate their existing schemas while disregarding disconfirming evidence (Subandi & Good, 2018). For instance, a caregiver with a negative outlook on antipsychotic medication and psychotherapies might dismiss research highlighting its efficacy, whereas a caregiver with a positive disposition might readily accept the same data hence embark of effective HSB.

Recognizing this relationship is crucial to establish the significant link between knowledge and behaviour (Johnson et al., 2003; Wu et al., 2022). A study based in United States of America by Clement et al. (2015) investigated the impact of educational interventions on family caregivers' attitudes towards illness treatment. Their findings revealed that caregivers who participated in the educational program exhibited more positive

views on medication adherence and a reduction in stigma surrounding the illness ($p<0.000$) (Gabra et al., 2020). Robinson et al. (2017) examined the experiences of family caregivers supporting individuals with schizophrenia. They reported that caregivers with a positive attitude towards their role felt more empowered and capable of managing patients and quickly consulted formal help which reduced relapses in patients. Conversely, caregivers with negative attitudes expressed feelings of helplessness and social isolation.

Family Caregivers Attitudes influence on Health-Seeking Behaviour

The previous studies initiated a certain path informing how knowledge and attitude might influence HSB. Eagly and Chaiken (1993) indicate that attitudes influence behaviours. Social psychology lies in comprehending the circumstances under which attitudes translate into behaviours, decisions, and how we process information (Greenwald et al., 2020). A core principle is that behaviour can be explained by attitudes (Fishbein & Ajzen, 2010). Unfavourable feelings, emotions and opinions can manifest in to harmful behaviours, often unconsciously. For example, a parent with negative views on medication might express skepticism, hindering treatment adherence (Bakshy et al., 2019). Due to limited knowledge on how psychosis manifests and presents, the emotional toll of witnessing a loved one exhibiting psychosis can trigger negative emotions like fear or frustration in caregivers (Webb & Sheeran, 2006).

Societal stigma surrounding mental illness discourages HSB even among supportive families delaying treatment and hindering recovery (Saladrigues & Akwaa-Sekyi, 2020; Svenningsson et al, 2022). To counter this, there’s need to promote positive narratives about psychosis and the benefits of early intervention (Greenwald et al., 2020). Stigma and shame can lead to delays in seeking professional help, especially for men (Chibanda et al., 2019). Clement et al. (2015) also found women are more likely to initiate HSB, highlighting a potential gender bias. Ultimately, delayed care due to stigma can significantly harm the care recipient's health. Siblings, fearing social disapproval, may also be reluctant to initiate contact with healthcare providers, hindering the caregiving process.

Research supports the link between positive attitudes and behaviour (El-Ganzoury et al., 2020). Caregivers with an optimistic outlook are more likely to take proactive steps to benefit the care recipient, such as scheduling appointments, researching treatment options, or joining support groups (Shaheen et al., 2023). This aligns with Chang et al.'s (2014) finding that positive attitudes towards medication and therapy lead to caregivers actively supporting adherence. Improved adherence can lead to better health outcomes and potentially lower relapse risk (Chang et al., 2014). However, negative attitudes can be detrimental. Scambler (2004) highlights how parental concerns about side effects or misinformation can hinder medication adherence, worsening the care recipient's health. Similarly, Sireteanu et al. (2019) suggest negative biases and lack of information can make it difficult for caregivers to identify early warning signs of relapse, potentially delaying intervention and worsening symptoms.

Indirect Influence of Knowledge on Healthcare-Seeking Behaviour

from old past scholars, studies conducted 20 years ago reveal that attitudes grounded in comprehensive knowledge are more predictive of behaviour than those based on limited knowledge (Gabra et al., 2020). The phenomenon can potentially be explained by the concept of knowledge relevance to behavioural goals. Researchers have acknowledged the multifaceted nature of attitudes, comprised of affective (emotional), cognitive (informational), and behavioural components (Eagly & Chaiken, 1993; Rosenberg & Hovland, 1960). Similarly, attitudes can serve various functions, including pragmatic benefits, reflecting personal values, and maintaining social harmony purposes (Eagly & Chaiken, 1993; Katz, 1960). The extent to which an attitude translates into behaviour may depend on the alignment between the relevant knowledge dimension underlying the attitude and the specific goal of the behaviour (Haddock & Maio, 2017; Millar & Tesser, 1989).

Li et al. (2023) employed Preacher and Hayes process approach to investigate the mediating effect of attitudes towards mental illness in the relationship between dementia knowledge and unfriendly behaviours towards people with dementia. The researchers adopted and modified (Wu et al., 2022) KAB validated questionnaire. Their hierarchical regression analyses revealed a significant positive association, $\beta = 0.16$, $p < 0.01$ in the initial model, indicating that higher knowledge corresponded with more positive attitudes. Furthermore, Model

1 demonstrated a significant negative association between knowledge and unfriendly behaviours, $\beta = -0.25$, $p < 0.001$, suggesting that parents with greater knowledge were less likely to exhibit such behaviours. Model 2 also yielded a significant negative association between attitudes and unfriendly behaviours, $\beta = -0.41$, $p < 0.001$. Finally, Model 3 critically demonstrated that both knowledge, $\beta = -0.19$, $p < 0.01$ and attitudes, $\beta = -0.38$, $p < 0.001$ remained significant predictors of unfriendly behaviours, even when considered together. The pattern of findings provides evidence for a partial mediating effect of attitudes, suggesting that knowledge influences behaviour indirectly through its impact on attitudes.

A Zambian study by Munakampe (2020) found a positive relationship, $r = 0.596$, $p < 0.05$ between knowledge level, attitudes and subsequent behaviour among caregivers of individuals with mental illness. Interestingly, despite moderate knowledge and attitudes, caregivers exhibited good medication adherence monitoring behaviour (73.3%). This suggests potential mediating role of attitudes influencing the knowledge-behaviour relationship.

These findings align with Roger's (1963) theory, which posits that behaviour stems from both learning (knowledge acquisition) and internal experiences that is, emotions and feelings (attitudes). Furthermore, a longitudinal study on the Knowledge Attitude Behaviour (KAB) Model, published by the Cambridge Press in 2010, revealed that family caregivers with a good knowledge of the illness and its management were more successful in managing illness effectively than those with limited knowledge (Donovan & Henley, 2010). However, these findings varied across different countries. For example, despite Australia's high ranking (fifth) in terms of its public-private health system, only a quarter of caregivers exhibited effective HSB (Donovan & Henley, 2020; Osman et al., 2023). The observation led (Donovan & Henley, 2020) to suggest for more research on KAB.

Since the introduction of KAB model, majority of research on attitudes as a mediating factor has been conducted in Western, European, and Arabian Gulf countries (Hove, 2015; Khombo et al., 2023). However, there is a noticeable lack of such studies in Africa, particularly Zimbabwe, on freely accessible platforms (Khombo 2023; Khaled et al., 2023). Attitudes, being social constructs, are largely influenced by the individual knowledge of the phenomenon (Haddock & Maio, 2017). Therefore, significant variations are likely to exist in the definition and measurement of attitudes across different cultures (Avi & Maryl, 2020). Furthermore, attitudes are dynamic, evolving over time and adapting to specific knowledge contexts (El-Ganzoury et al., 2020). A positive shift in attitudes can potentially improve HSB of family caregivers. Achieving this positive change requires accurate identification of attitudes using reliable and validated instruments specifically normed for the target population (Wang et al., 2020).

The relationship between knowledge, attitudes, and behaviour (KAB) in HSB is more complex than originally thought (Sounderraj, 2023). Yeng et al. (2023) identified knowledge and attitudes as key influences, but also found they can weaken each other's positive effects. For example, a negative attitude can hinder the benefits of good knowledge, and vice versa. Sounderraj's (2023) assertion that behaviour is always greater than knowledge highlights situations where knowledge may be insufficient, but appropriate behaviour can lead to positive outcomes. This resonates with Albert Einstein's view (as cited in Sounderraj, 2023) that "Any fool can know. The point is to understand." Thus, the above literature has constructed a foundation path for a roadmap explaining how these variables direct and indirect influence each other. At the core of these research and literature, the model Knowledge-Attitude-Behaviour (KAB) serves as a cornerstone theoretical framework.

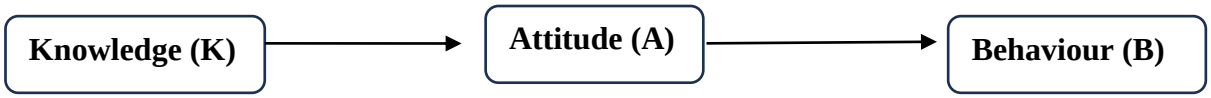
Theoretical Framework

The Knowledge Attitude Behaviour (KAB) Model

The KAB Model was first introduced by Martin Fishbein and Icek Ajzen in the 1970s as a framework to study human behavior. It proposes that an individual's knowledge about a specific topic influences their attitudes, which in turn affects their behavior. In the model, knowledge refers to the information an individual has about a particular subject; attitudes represent an individual's positive or negative evaluations, feelings, or beliefs towards that subject; and behavior is the observable action or response (Shinde et al., 2014). The model posits that increasing knowledge of health risks and prevention can lead to more positive attitudes towards health

behaviours, which in turn can lead to actual health behaviours (Eagly, 2000; Fishbein & Ajzen, 2010). Over the years, the KAB model has been widely used and adapted in a variety of health and social contexts, including caregiving and mental health management (Gabra et al., 2020; Li et al., 2023).

Figure 1 Knowledge Attitude Behaviour Model



Adopted from: https://thejhpb.com/index.php/thejhpb

The KAB model posits a tripartite structure, drawing upon core concepts from social psychology: cognition (knowledge), affect (attitude), and behavioral response (Chen, 2012; Haddock & Wolf, 2020). Knowledge serves as the bedrock upon which attitudes are constructed (Paço & Lavrador, 2017). The KAB model posits that the gradual accumulation of knowledge within a relevant domain, such as mental health management, progressively influences an individual's attitudes, ultimately prompting behavioural change (Haddock & Maio, 2017). Knowledge, in this context, encompasses both factual understanding (declarative) and the ability to utilize that knowledge (procedural). Additionally, it includes understanding when and why such knowledge is applicable (conditional) (Eagly & Chaiken, 1993; Zanna & Rempel, 1988). Thus, it assumes that behaviour is the culmination of the complex interplay between knowledge and attitude, with knowledge forming the foundation for both attitude and subsequent behavioural change (Jiang et al., 2022; Yoon & Lee, 2023).

Fishbein & Ajzen (1975) define attitudes as a person's overall evaluation, positive or negative, of a specific object. In the context of HSB for EPM, attitudes significantly influence how, particularly family caregivers, respond to and manage the condition (Ahmad et al., 2020). In the KAB model, attitudes can be understood using the tripartite model of attitudes, proposed by Buck et al. (2014). Attitudes are comprised of three interrelated and measurable components: affect (feelings), behavior (intentions/actions), and cognition (acquired knowledge). The model posits that a complete attitude requires the presence of all three components. For example, a positive attitude HSB for EPM might encompass: Affect: feeling happy to seek professional help and monitor medication intake. Behavior: Intention to research more about psychosis management strategies. Cognition: believing that psychosis can be effectively managed with medication and therapy (Tolvanen et al., 2012). Conversely, a negative attitude towards HSB for EPM could include: Affect: feeling ashamed or stigmatized by the illness. Behavior: avoiding professional help or neglecting medication adherence. Cognition: believing that psychosis is untreatable or difficult to manage (Yang et al., 2020).

The study hypothesizes that family caregiver attitudes mediate the relationship between knowledge of EPM and HSB for effective psychosis management. Employing the KAB Model within a simple mediation model framework gives room in explaining how and why knowledge influence HSB (Hayes, 2018). The approach has been demonstrably useful for exploring complex relationships within theoretical frameworks, as evidenced by prior research (Byrne, 2010; Rinds Kopf & Preacher, 2009; Preacher & Hayes, 2018).

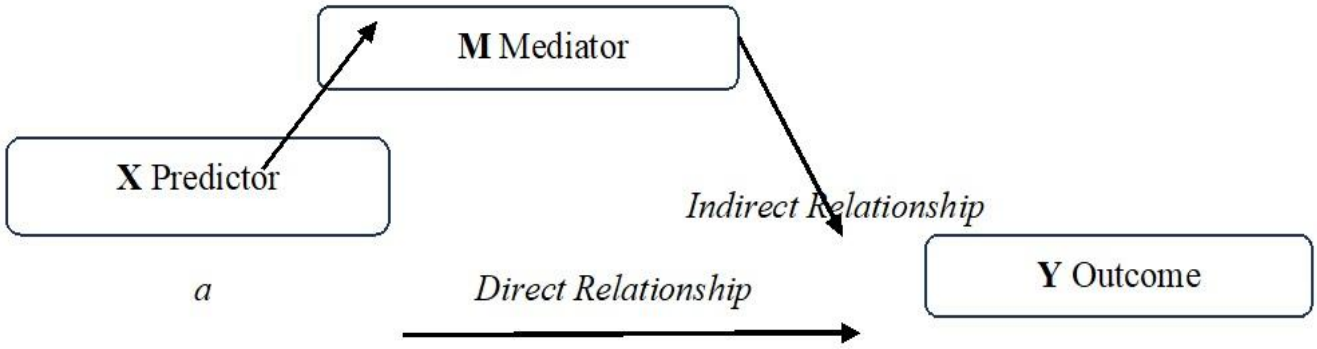
Preacher-Hayes Simple Mediation Model

Baron and Kenny (1986) argued for a significant predictor-outcome relationship before testing mediation.

However, current scholars like Hayes (2018) critique this as overly restrictive but, in some cases, it needs to be determined (Hair et al., 2019). The complex relationship between knowledge and HSB highlights the need to explore mediation effects by use of Preacher Hayes Simple Mediation Model which allow for bootstrap. Hayes (2009) notes that studies that identify links between independent and dependent variables are crucial to the behavioural sciences. According to Preacher and Hayes (2008), correlation is an essential preliminary step, but genuine scientific investigation goes further and aims to comprehend the mechanisms underlying these associations. Here's where mediation becomes useful in explaining why and how the relationship takes place (Fritz & Mackinnon, 2007). By going beyond simple correlation, mediation enables us to investigate the ways in which these knowledge and attitudes explain the exhibited HSB.

The simple mediation model proposed by Preacher and Hayes (2008) offers a framework for theorizing relationships within a phenomenon. The model, represents a theoretical construct that outlines the causal interrelationships between various aspects without need for manipulating variables (Kline, 2010). As depicted in Figure 2, the model posits a single mediating variable (M) that transmits the influence of the independent variable (X) on the dependent variable (Y) (Preacher & Hayes, 2008). Figure 2

Preacher-Hayes Simple Mediation Model



Adopted from: https://www.statisticssolutions.com/Preacher-and-Hayes-model-for-mediation/

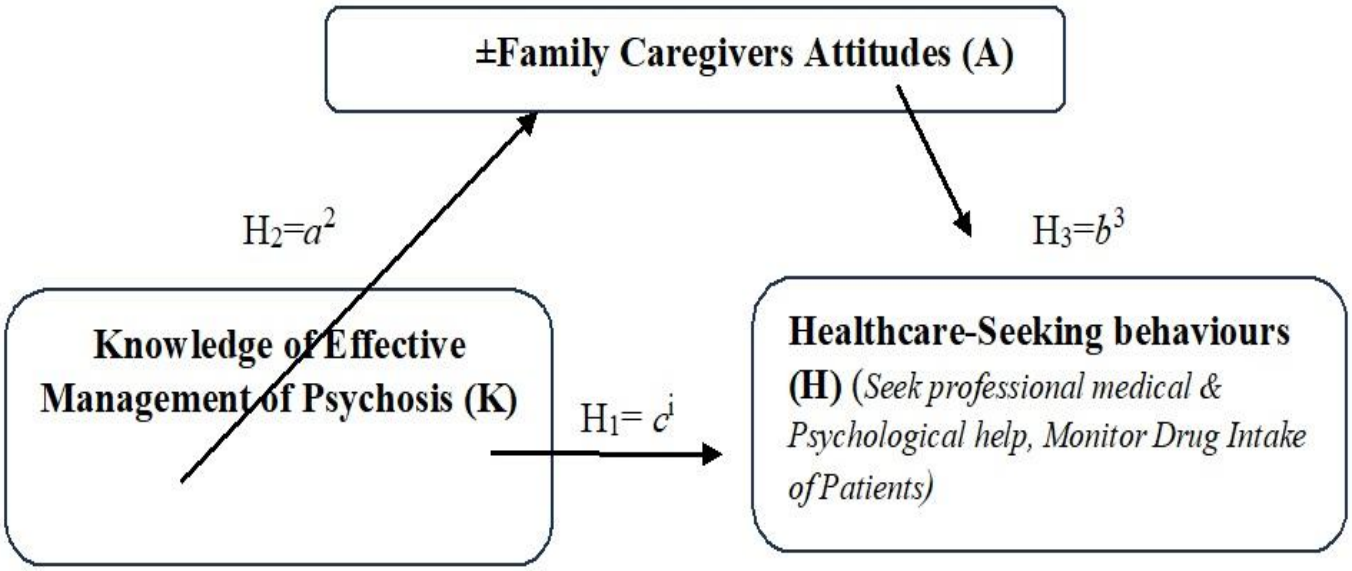
The model incorporates two key types of variables: latent variables and observed variables. Latent variables represent underlying constructs that are inferred to exist but cannot be directly measured (Preacher & Hayes, 2008). Examples of latent variables include intelligence, job satisfaction, or attitude. In contrast, observed variables are directly measurable indicators of the underlying latent constructs. These are test scores, survey responses, and behavioural observations (Hair et al., 2017; Hayes, 2018). The core strength of the simple mediation model lies in its ability to explain how and why these relationships exist between latent and observed variables (Hayes, 2009). By examining the influence of the independent variable (X) on the mediator (M) and subsequently on the dependent variable (Y), the model offers valuable insights into the underlying mechanisms driving the observed phenomenon. Furthermore, X is classified as an exogenous variable (MacKinnon, 2008), indicating that it exerts influence on other variables in the model without itself being influenced by them. In contrast, M and Y are considered endogenous variables, meaning that they are influenced by other factors in the model.

The variable that is thought to have an influence on other variables is called the predictor variable, sometimes referred to as the independent variable (Creswell, 2018). An intermediary between the independent and dependent variables, on the other hand, is the mediator variable (Hayes, 2018). Positioned inside the causal chain, it clarifies the process by which the independent variable influences the dependent variable (Hayes, 2018; Preacher & Hayes, 2009). A mediation analysis reveals a significant indirect effect, indicating that the mediator has a role in at least some of the independent variable's influence over the dependent variable (Hayes, 2018). The variable that the researcher eventually aims to explain or predict is represented by the outcome variable. The dependent variable, through the mediating variable, the independent variable exerts its effects (Hayes, 2018).

Conceptual framework

Using concepts from the Knowledge-Attitude-Behaviour (KAB) model and Preacher and Hayes' simple mediation model the researcher conceptualise the study framework. The present study employed the Knowledge-Attitude-Health-seeking behaviour (K→A→H) model. The KAH model aligns with core concepts in social and health psychology, where attitudes heavily influence behaviour through social cognition (Rindskopf, 2016; Spellman & Kahneman, 2018). Similarly, clinical psychology views behaviour as a reflection of thoughts, feelings, and beliefs (Clark & Beck, 2010; Festschrift, 2014). Thus, KAH explains how knowledge and attitudes directly and indirectly influence HSB, making it a valuable tool for understanding family caregivers HSB in a clinical context (National Health Services, 2019). Figure 3 depicts the KAH model used in the present study.

Figure 3 Structural Knowledge Attitude Healthcare Seeking Behaviours (KAH) Model



Adapted from: https://www.mdpi.com/2076-0760/8/10/288

In KAH model, Knowledge (K) exerts influence on Attitudes (A) and HSB, but it is not itself influenced by them (Hayes, 2018). In contrast, family caregivers' Attitudes and HSB are influenced by other factors in the model. (Hayes, 2018; MacKinnon, 2008). The path model (K→A→H) depicts the causal relationship, specifically demonstrating that Knowledge directly influences both Attitudes (either positively or negatively) and HSB, without being reciprocally influenced by them. (Romero & Raposa, 2008; Kline, 2010).

KAH model incorporates three hypothesized paths (a^2, b^3, c^i) representing the casual-relationships and the total effect (MacKinnon, 2008; Hayes, 2018). Path c^i (K→H) the effect of "K" is denoted by c^i thus, indicating the hypothesis that knowledge of EPM directly influences HSB (Hayes, 2018). Path a^2 (K→A) depicts the hypothesized positive relationship between knowledge of EPM and family caregiver attitudes (Hayes, 2018). Finally, path b^3 (A→H) represents the hypothesis that family caregiver attitudes indirectly influence HSB for EPM (Hayes, 2018; MacKinnon, 2008). The core hypothesis, encapsulated by the path model (K→A→H), lies in examining the mediating role of family caregiver attitudes total effect in the relationship between knowledge of EPM and HSB (Hayes, 2018). In essence, the model suggests the influence of knowledge of EPM on HSB is transmitted through the mediating effect of family caregiver attitudes (Baron & Kenny, 1986; Hayes, 2009).

Knowledge causal influence is divided into two parts: a direct effect on HSB (path c′) and an indirect effect on HSB through Family caregivers' Attitudes. Path *b* shows how Family caregivers attitudes influence on HSB somewhat isolates the influence of Knowledge, whereas path *a* show how Knowledge affects the suggested mediator (Preacher & Hayes, 2018). Hayes (2018) emphasizes the distinction between Knowledge and other variables like socioeconomic status, cultural background and intelligence quotient (IQ). Attitudes, as illustrated in the model, is a variable affected by Knowledge and, in turn, exerts an effect on the HSB. Thus, the research model implies the ceteris paribus approach to focus on (A→H). Thus, the model help explain family caregivers Healthcare seeking behaviours for effective psychosis management.

Family Caregivers Healthcare-Seeking Behaviours in the Context of Zimbabwe

A wide variety of documented mental health illnesses are present in Zimbabwe, a landlocked country in Southern Africa with a population of about 16 million people (Mangezi & Chibanda, 2010; WHO, 2022; ZimStat, 2023). The two main psychiatric facilities in the nation's capital, Harare Hospital Psychiatric Unit and Parirenyatwa Mental Health Hospital, are where the majority of the nation's mental healthcare services are provided by formal professional mental health specialists and where family caregivers visit for and behalf of their loved ones (Mangezi & Chibanda, 2010; Letters to Strangers, 2021). These institutes have facilities for

both in-patients and out-patients with mental illness related to HIV, bipolar and other related mood disorders, schizophrenia and other related psychotic disorders, temporal lobe epilepsy, or other severe mental illnesses (Chibanda et al., 2019; Mangezi & Chibanda, 2010). Before and after discharge, family caregivers are essential in delivering care at home because of the nature of these illnesses and limited resources within the institution (Muparamoto et al., 2017).

Lack of knowledge, awareness and public stigma surrounds mental illness, characterized by negative attitudes held by others (Khombo, 2023; Muparamoto et al., 2017). This is prevalent in Zimbabwe, affecting even caregivers' interactions with those experiencing mental health conditions (Gudyanga et al., 2021). Lack of knowledge and misconceptions about the causes of mental illness fuel this stigma (Khombo, 2023; WHO, 2022). A recent collaboration between the Zimbabwe Ministry of Health and Child Care (MoHCC) and UN partners underscored the persistence of social stigma, particularly regarding mental disorders like Schizophrenia and related psychotic disorders (WHO, 2023). The stigma often translates into negative attitudes towards individuals with mental illness, which can negatively influence family caregiver behaviours. Consequently, crucial support for treatment adherence and recovery (HSB) can be hindered (WHO & UNDP, 2023).

The 2019 Multiple Indicator Cluster Survey is one of the only complete sources of data on mental health in Zimbabwe, as there is still a dearth of information (Letters to Strangers, 2021; WHO, 2022). According to the research, although patients exhibit a wide range of psychotic symptoms, effective HSB are frequently limited. This is due to established social networks and shared knowledge resulting in family caregivers consulting religious leaders and traditional healers (Muparamoto et al., 2017).

Even though hospitals offer free mental health care, insufficient knowledge about efficient treatment methods frequently causes delays in seeking expert assistance across Africa (Chibanda, 2020). Particularly in Zimbabwe, higher density areas, people suffering from psychosis can be referred to unofficial and none objective healers for purification rites; this is indicative of a traditional mystic interpretation of the origins of the illness (Letters to Strangers, 2021). The negative attitudes towards mentally ill people are further reinforced by stereotypes and jeers on the street, which makes seeking medical attention more difficult. Even after these early delays, some family caregivers may continue to use informal services in addition to professional healthcare because of conflicting emotions and little understanding of accepted medical guidelines (Chibanda, 2020). The problem results when these healers discourage the use of objective treatment regimen, patient relapses and reduces quality of life (Chibanda, 2020; Letters to Strangers, 2021).

On the guidance of self-established experts, this results in the withdrawal of the effective treatment regime (Chibanda, 2020). Occasionally, family caregivers may choose to accept their family member sickness and choose not to pursue formal professional assistance, thereby exacerbating the problem (Muparamoto et al., 2017). These obstacles to effective HSB are further strengthened by the informal networks that family caregivers use to spread none objective information regarding treatment methods (African Mental Health Research Initiative (AMARI), 2023).

Summary

Literature indicated the partial mediating effects of family caregivers' attitudes. Furthermore, there is few literatures and studies on the mediating role of attitudes between knowledge and effective HSB for effective psychosis management, specifically in Africa, down to Zimbabwe. Based on the reviewed literature it is important to investigate the relationship for improved quality of life of the patients. The next chapter discusses the research methodology used in this study.

RESEARCH METHODOLOGY

Introduction

The present chapter discusses the systematic collection of numerical data used by the researcher in investigating the mediating role of family caregivers' attitudes in the relationship between knowledge and

Healthcare-seeking behaviour for effective psychosis management. To objectively answer the research question and, solve the research problem, a structural and standardized approach was employed. A detailed framework describing the research philosophy, the research design, research approach, study population, sample and sampling techniques, data collection instruments and data analysis methods, credibility of the instrument used are presented in the following sections. The study was designed, conducted and reported in accordance with established ethical guidelines, respecting the rights and well-being of all family caregivers who participated.

Philosophical Assumptions

The researcher grounded the design in a positivist approach that seek to understand and solve problems objectively (Romero & Rosopa, 2008). Comte (2019) defines positivism as a philosophical school of thought that emphasises the use of quantifiable facts and empirical observation in comprehending the natural and social worlds. Objectivity was key to a comprehensive understanding of the study's aim, as the priority was uncovering empirical explanation on ways family caregivers' HSB are directly and indirectly influenced by knowledge and attitude rather than delving into subjective explanations. The chosen theoretical frameworks, the KAB model and the Preacher-Hayes Mediation approach, further reflected emphasis on objective measurement and the deduction of hypotheses to be tested (Creswell, 2014; Saunders et al., 2011).

The researcher opted for a deductive reasoning approach given the study aim was built upon existing theories, and to identify explanatory or causal relationships within the KAH model (Zhang & Creswell, 2013). Hence, deductive approach was chosen for its theory-driven nature. This strategy allows for data credibility, as emphasized in quantitative research (Zhang & Creswell, 2013), and facilitated potential generalizability of validated KAH model results to the family caregivers of patients with psychosis at PMHH (Casula et al., 2020). As Creswell et al. (2014) note, the chosen philosophical strategy and research approach informs the research methods. Thus, the focus was on identifying explanatory associations or causal relationships within the KAH model, using quantitative methods, hence the characteristic of studies grounded in positivism (Creswell, 2014; Romero & Rosopa, 2008).

Research Design

The researcher employed a quantitative explanatory research design using a cross-sectional survey approach to investigate knowledge and attitudes, effects on HSB of family caregivers caring for individuals with psychosis. Explanatory research is a method developed to investigate a phenomenon that has not been studied or explained properly (Creswell & Guetterman, 2019). The design is used to examine the relationships between variables without manipulating them but getting an understanding of the relationships (Hair et al., 2019). It is used to determine the effect of latent and observed variables on each other (Creswell & Gattermann, 2019). The design choice allowed for an explanation of the mechanism behind the KAH causal relationship in answering the study research question (Creswell, 2018).

The aim of the research was not to establish cause-and-effect through manipulation but rather to understand the underlying factors influencing family caregivers' HSB (Levin et al., 2009; Saunders, 2011). Unlike experimental designs where variables are manipulated, the design enabled data capturing at PMHH in a short period of time, enabling the examination of existing relationships between KAH (Saunders et al., 2011). The approach was particularly relevant as the research question focused on explaining "why" and "how" Knowledge and Attitudes exerts its effects on HSB, not establishing a causal relationship through intervention (Hayes, 2018). Nevertheless, the researcher also acknowledges use of descriptive approach in describing the sociodemographic characteristics of the sample and their responses with bar graphs, pie charts, measure of central tendency and variance tables, and percentages.

The approach aligned with the concept proposed by Yuan and MacKinnon (2007) who demonstrated testing mediation models with cross sectional data with no manipulation of variables using an explanatory design. Therefore, the chosen research design not only facilitated data collection but also provided a framework for the complex data analysis required to test the proposed model. The nature of the research questions, which delve beyond simple association and focus on the influence of Knowledge, Attitude, and their combinations on HSB,

necessitated a positive approach (Creswell, 2018). The research question was not simply "Are there associations between KAH?" but rather, "How do attitudes mediate the relationship between knowledge and behaviour". To answer such a question, required a causal explanation (Yuan & Hayes, 2007), therefore examining causal relationship among interacting variables within a model, rather than simply describing their associations, proves to be the most effective approach for addressing such a complex question (MacKinnon, 2008; Saunders et al., 2011).

Target Population

Family caregivers: parents, partners, legal guardians, and adult siblings living with the patient and seeking professional help at PMHH during data collection (outpatient or inpatient). Caregivers had to be over 18 and mentally competent. Those under 18 or with cognitive impairments were exclude. The group aligns with the primary family caregiver population identified in literature (Gabra et al., 2020; Shinde et al., 2014). Their experience caring for the patient suggests they can provide reliable information about their KAH. Due to time constraints and the lack of readily available data at the time of the study, a sampling frame was not established. Additionally, the sensitive nature of the topic and the inherent difficulty in quantifying the population necessitated the use of convenient sampling (Creswell, 2018). The approach allowed for the recruitment of a smaller sample that still met the target population criteria.

Sample Size

Convenient sampling was employed to recruit a total of 50 family caregivers (28 females, 22 miles) from PMHH. A sample size of 50 was chosen to strike a balance between feasibility and the ability to conduct robust statistical analysis (Shinde et al., 2014). The following were considered; time constraints limited the feasibility of establishing a more robust list of every family caregiver of patient diagnosed with psychosis. The sensitive nature of the topic and the difficulty of quantifying the target population of family caregivers presented challenges in traditional sampling methods (Creswell, 2018). Convenient sampling allowed for the recruitment of a smaller, accessible sample that still met the inclusion criteria (Field, 2013).

Shinde et al. (2014), whose data collection instrument was adopted for this study, also employed a sample of 50 participants. While generalizability of results may be limited with convenient sampling (Zhang & Creswell, 2013), the cost-effectiveness and feasibility within the study timeframe were deemed advantageous (Shinde et al., 2014). The researcher acknowledged limitations of the sample size in mediation analysis; however this was addressed by Preacher-Hayes bootstrap approach and Shapiro-Wilk normality test (Bryne, 2010; Hair et al., 2013). Due to the mentioned limitation, convenience sampling served as the most suitable for participants data collection (Rea & Parker, 2014). The decision acknowledged the potential for non-normal data distribution. In essence, the sample size prioritizes practicality while ensuring sufficient statistical power to detect meaningful relationships, in case if the data did not perfectly adhere to a normal distribution (Field, 2013; Yuan & MacKinnon, 2007).

Sampling Technique and Procedure

The researcher approached readily available family caregivers who accompanied their loved ones to the hospital from the 8th to the 19th of April, 2024. After explaining the nature and purpose of the research, potential participants were consulted and invited to participate on the same day, following informed consent procedures (see Appendix One). The process continued for nine working days. Li and Tong (2021) used this approach in selecting intellectual disability key informants and participants. Shinde et al. (2014) employed this technique, same as Wu et al (2022) in validating the KAB questionnaire with 61 conveniently selected for those who need palliate care from family members due to severe psychiatry conditions. The method was appropriate because it enabled the researcher to gain access given sensitivity of the subject and select family caregivers that fitted the target population without harm.

Data Collection Instrument

To ensure standardisation, reliability, and validity across respondents, a closed-ended structured questionnaire

by (Shinde et al., 2014), was modified and adapted for objective data collection (Bryman, 2016). The questionnaire (Appendix five), used to collect data consisted of three sections. The first section provided an introduction to the study, explaining its purpose and outlining ethical considerations such as informed consent. It also included instructions for participants to carefully read and understand the information provided.

The second section gathered sociodemographic information about family caregivers. The data included relationship to the patient (for verification of caregiver status), age (for ethical considerations), gender, and education level. The third and most extensive section addressed the core constructs of the study: Knowledge, Attitude, and Healthcare-Seeking Behaviour (KAH) for effective psychosis management. This section, comprised of 17 items, adapted from the well-established and validated 27-item KAB questionnaire developed by Shinde et al. (2014). Additional modifications and changes were incorporated from other validated instruments by Ma et al. (2021), Yeap and Low (2009), and Li and Tong (2021).

Knowledge of effective psychosis management comprised eight questions specifically focusing on causes, symptoms, factors influencing symptom management, and treatment options. The initial version of the questionnaire contained 10 knowledge items before modification. Each knowledge question offered three dichotomous response choices ("True," "False," or "Unknown"). Correct answers were scored as "1," while incorrect or unknown responses received a score of "0."

Five questions explored family caregivers' attitudes towards seeking formal professional help and medication adherence monitoring for their family members. A 5-point Likert scale was used, ranging from 1 ("Strongly Disagree") to 5 ("Strongly Agree"), with three representing a neutral position. Positively worded items, such as "I feel it's my duty to monitor drug intake of the patient," were scored such that higher scores reflected more positive attitudes. The Likert scale was chosen due to its ability to efficiently gather large amounts of data suitable for analysis and generalization within a reasonable timeframe (Black, 1999; Oppenheim, 1992).

Four questions assessed family caregivers' Healthcare-Seeking Behaviour, defined within the context of the study. These HSB included seeking formal professional medical help and monitoring medication adherence. Dichotomous response options ("Yes" or "No") were provided for each question, with scores of "1" assigned to positive responses (“I have sought professional medical help for managing my family member's psychosis in the first 30 days of symptoms occurrence") and "0" assigned to negative responses.

The questionnaire was then translated into Shona for respondents that preferred Shona survey as the population native language is Shona. The researcher used “translate software” to translate English into Shona, the Shona and English versions were given to bilingual colleague and an expert at the Linguistic department. The researcher then translated the questionnaire back to English to see any difference and meaning lost, the English version was then translated back. Ma et al. (2021) and Li and Tong (2021) used this approach in translating their survey instruments.

The questionnaire proved to be a relatively inexpensive data collection instrument (Bryman, 2016; Oppenheim, 1992). Closed-ended structured format promoted ease of understanding for participants and allowed for broad characterisation of the target population and ensured anonymity and confidentiality for participants, as they did not or were required to provide any personally identifiable information.

Data Collection Procedure

Prior to data collection the researcher got a letter from the Department of Applied Psychology (Appendix Seven), University of Zimbabwe endorsing that the researcher is a student with the institute fulfilling a requirement as part of a Masters in Clinical Psychology Program. An authorisation letter to conduct research was obtained from the Clinical Director of Parirenyatwa Group of Hospitals and Head of Parirenyatwa Mental Health Hospital (Appendix Eight), to collect data at PMHH. Data collection took place in two phases. The first survey was preliminary pilot study which conveniently selected 14 participants followed by the second survey, the main study which conveniently selected 50 participants. The former and the latter are described and explained in two difference sections starting with the Pilot study as its main aim was to validate the KAH

questionnaire and gauge participant recruitment success.

Data was gathered from family caregivers of patients diagnosed with a mental disorder with psychosis characteristics by means of a close-ended structured questionnaire adapted from Shinde et al. (2014). The KAH structured questionnaire was in English (Appendix Five) and Shona (Appendix Six) versions. Those who were unwilling to participate or sign an informed consent were excluded. The approach minimised interviewer bias and allowed participants to complete the survey at their own pace (Bryman, 2016).

Pilot Study

The pilot study assessed for potential logistical problems, gauged participant recruitment success given the sensitivity and lack of a sampling frame and the suitability of the questionnaire items for the main study (Bryman, 2016). Given the researcher adapted the Questionnaire, validation and reliability testing was paramount, hence it was done on pilot and main study. The pilot study commenced with the supervisor and consulted experts in the Department of Applied Psychology looking at the instrument and giving feedback if the concept and items measured Knowledge Attitude Healthcare-Seeking Behaviour it intended to measure, hence face validity and content validity.

This process resulted in the refinement of the original 27-item Knowledge, Attitude, and Practices (KAP) Questionnaire. Ten items were reworded, and the title was revised to the "Knowledge, Attitude, and Healthcare-Seeking Behaviour (KAH)" Questionnaire to better reflect the revised content. Furthermore, peer review was conducted with two male and two female experts to assess item understanding and ensure alignment with the intended construct (Bryman, 2016). These reviewers confirmed that the questionnaire items were clear and easy to understand. Peer and expert review are valuable tools for establishing both instrument reliability and construct validity Bryman, 2016; Zhang & Creswell, 2013).

Following the peer review, cognitive interviews were conducted with four conveniently chosen family caregivers (two male and two female) from PMHH. These interviews provided crucial insights into the family caregivers' comprehension of the various scale items. Interviews revealed no need for further modifications, as all participants correctly interpreted the questionnaire items. Cognitive interviews are a valuable tool for identifying and addressing potential problems within a questionnaire (Mininger, 2014).

To assess the suitability of the revised 17-item KAH instrument, the survey instrument was distributed to a convenient sample of 14 family caregivers (seven male and seven female) recruited from the PMHH. Of the 14 questionnaires distributed, 12 were deemed usable after data cleaning and double entry, resulting in an impressive response rate of 86%. This high response rate surpasses benchmarks set by the American Association for Public Opinion Research (AAPOR) (2020), which suggests that achieving response rates above 70% is uncommon in research, with many social science studies striving for rates in the 50-60% range. In pilot studies, a higher response rate like 86% strengthens the credibility of the instrument by minimizing potential bias due to non-participation.

To ensure the KAH instrument effectively gathered reliable and valid data in the main study, the pilot assessed its internal consistency and construct validity using the Statistical Package for Social Sciences (SPSS) version 27. Additionally, item analysis and Cronbach's Alpha reliability testing were conducted. It is crucial to note that all 14 participants from the pilot study were excluded from the main study to prevent bias that could arise from familiarity with the questionnaire items (Creswell, 2018).

The KAH instrument was found to be highly reliable (17 items; α=.847). All subscales surpassed the .7 threshold recommended by Cronbach (1951), as shown in Table 1. Notably, the Knowledge subscale consisted of 8 items (α > .946), the Attitude subscale consisted of 5 items (α > .756), and Healthcare-Seeking Behaviour consisted of 4 items (α > .841). However, the item-total correlation analysis within the KAH sections revealed two areas for potential improvement. Knowledge sub-item 3 and Attitude sub-item 2 fell below the .7 threshold suggested by Hair et al. (2019). While the pilot sample size was too small to definitively remove these items, they were flagged for further investigation in the final analysis with a larger sample size.

Table 1 Internal consistency of the various sections of KAH Questionnaire

Variable	Cronbach's Alpha	Number of Items
Knowledge	.946	8
Attitudes	.756	5
Healthcare-Seeking Behaviour	.841	4
Overall reliability	.847	17

Construct validity, specifically focusing on convergence validity, was evaluated through item analysis and Corrected Item-Total Correlation. Initially, an Exploratory Factor Analysis (EFA) using varimax rotation was attempted to assess how well the items converged to form the underlying constructs of knowledge, attitude, and healthcare-seeking behaviour. However, challenges arose due to the dichotomous nature of the response options (true/false or unknown) in the KAH instrument (Saunders et al., 2011).

EFA typically assumes continuous, normally distributed data. When applied to dichotomous responses, it can lead to distorted factor loadings and an underestimation of the true number of factors (David & Sava, 2015; Holzinger & Swineford, 1937). Given these limitations, inter-item correlation was employed to evaluate convergence validity and discriminant validity. Inter-item correlations were all greater than 0.30 showing a good convergence validity and no correlations above 0.20 on items measuring different constructs indicating a good discriminant validity. This method assessed the degree to which items within each section (knowledge, attitude, and healthcare-seeking behaviour) correlate more strongly with each other than with items from other sections. A strong inter-item correlations within sections provided evidence that the items measured a distinct construct.

For the Knowledge section, correlations ranging from $r = .736$ to $r = .986$ indicated good convergence of items with the construct of knowledge of effective psychosis management. Similarly, correlations ranging from $r = .75$ to $r = .98$ for the Attitude section suggested good convergence validity for items measuring family caregiver attitudes. One exception emerged: the item "Family plays a crucial role in effective psychosis management" exhibited a negative and insignificant correlation $r = -.184$, $p > .05$. This item was flagged for further investigation in the final analysis.

Overall, the pilot study provided valuable insights. The questionnaire instructions were found to be adequate, and the items were well-worded and could be completed within the anticipated timeframe of 15 minutes (Creswell, 2012). More importantly, the pilot identified problematic items with potentially weak convergence validity, allowing for targeted refinement before data collection in the main study.

Main Study

Following the pilot study, the researcher scheduled dates to administer questionnaires to the 50 conveniently sampled family caregivers. Minimizing bias and collusion, participants were mixed by gender and completed the self-administered questionnaires in consultation and waiting rooms at PMHH over nine days. Similar to the pilot study, all research protocols were followed. To ensure data quality, the researcher personally distributed and collected the questionnaires. After completion, member checking was conducted, allowing participants to review their responses for accuracy (Lincoln & Guba, 1985; Creswell, 2018). All completed questionnaires were collected and then secured in a safe location accessible only to the researcher. The baseline sociodemographic characteristics of the participating family caregivers are described in Table 2.

Table 2 Sociodemographic Characteristics of Participants at Baseline

Baseline Characteristics	Description	Frequency	Percentage (%)
Gender	Male	22	44.0

	Female	28	56.0
Age (Years)	18 – 23.5	15	30.0
	23.5 – 57.5	24	48.0
	57.5 - 83	11	22.0
Education	No Formal Education	11	22.0
	Junior college	17	34.0
	Primary, Secondary & High School	8	16.0
	Undergraduate and above	14	28.0
Family Caregivers	Parent	22	44.0
	Partner	4	8.0
	Adult Child	15	30.0
	Sibling	9	18.0

Note. $N = 50$. Participants were on average 57 years old ($SD = 15$).

Data Analysis and Interpretation

Following data collection, grouping and clean up, the research employed a multi-software approach for analysis. Quantitative data from the 42 completed questionnaires was processed using SPSS version 27, Hayes Process version 22, and Microsoft Excel Professional Plus 2019. The analysis aimed to answer the research questions and test the study's hypotheses.

For data entry accuracy, questionnaires were assigned unique codes (1-42) and entered into a pre-designed spreadsheet created during the pilot study. Double data entry was employed to ensure accuracy, with discrepancies resolved by consulting the original questionnaires (Hair et al., 2019). Standard data cleaning procedures identified and addressed missing values and outliers replacing with coded "-1" (Hair et al., 2019). SPSS assessed questionnaire credibility using Cronbach's alpha (> .7) and inter-item correlation (> .30). Descriptive statistics (averages, percentages, standard deviations) were used to summarize sociodemographic data, visualised with bar graphs and pie charts in Microsoft Excel and SPSS for clear presentation.

Inferential statistics was used to answer the research question drawing conclusions using confidence intervals and probability values. Pearson correlation coefficients examined relationships between knowledge, attitude, and HSB. To ensure data suitability for regression analysis and Hayes Process Model 4, normality tests were conducted. This included measures of skewness, kurtosis, visual inspection of data distributions, and the Shapiro-Wilk test was the preferred choice. The test was chosen over the Kaiser-Meyer-Olkin (KMO) measure for normality assessment due to its robust, particularly when dealing with smaller sample sizes (Royston, 1982). This comprehensive approach verified if all key assumption for the chosen techniques were met. Subsequently, linear regression and Hayes Process Model 4 were employed to assess the hypothesized mediation process (Knowledge → Attitude → HSB). Direct, indirect, and total effects were reported as unstandardized beta coefficients with 95% confidence intervals (CI). A probability value ($p<.05$) less than 0.05 was considered statistically significant (Hair et al., 2019).

Ethical consideration

The following ethical factors were taken into account during the research process in accordance with the Joint Research Ethics Committee for the University of Zimbabwe Faculty of Medicine and Health Science (Appendix Nine) and the Parirenyatwa Group of Hospitals policies and procedures regarding the use of human subjects in research (University of Zimbabwe (UZ), 2016: Health Research Web (HRW), 2014).

Informed Consent

Participants were fully informed about the purpose of the study, what it involved, the potential risks and benefits, and their rights as participants (including the right to withdraw at any time without penalty) (Creswell, 2018). The consent process was clear and understandable, and participants had the opportunity to ask questions. Informed consent was sought from the participants of the research through an invitation letter (Appendix One). The letter contained basic information about the purpose of the research and the name of the researcher and their credentials. The letter was made easy to understand and translated into a Shona version (Appendix Three).

Confidentiality and Privacy

The study involved collecting sensitive information about individuals' knowledge, attitudes, and Health-Seeking Behaviour. The information was kept locked and was never disclosed to anyone but the researcher. Thus, the data was secured in a locked place and was not visible to other people and the results did not identify individual participants (Creswell, 2018).

Risk-Benefit Ratio

The potential benefits of the research include improved understanding of effective HSB, this did not outweigh any potential risks to participants like distress caused by discussing sensitive topics. Senior consultant intern psychologists were available for any distress caused during the research.

Respect for Persons

This principle involved acknowledging the autonomy of individuals and protecting those with diminished autonomy (Creswell, 2018). The respondents were not coerced; they willingly participated and were given freedom to choose.

Cultural Sensitivity

Given that knowledge attitudes and healthcare-seeking behaviour in mental health can be influenced by cultural factors, the researcher approached the topic with sensitivity and respect for cultural differences (Creswell & Gattermann, 2019).

Avoidance of Harm

No harm to respondents during the research was recorded (Creswell, 2018). This involved ensuring that discussions about psychosis and mental health were handled with sensitivity to avoid causing distress.

Chapter Summary

The Chapter outlined the methodology which was adopted to answer the research question and solve the research problem. A positivist research philosophy which utilises deductive reasoning approach to research was adopted. An explanatory research design, a cross-sectional survey was employed. A validated survey instrument was used to gather data and SPSS and Hayes Process Model 4 was used to analyse the data. The next chapter presents results of the study.

RESULTS

Introduction

The present chapter presents the results of the study. The results are outlined as follows, response rate, description of sociodemographic information, KAH instrument validation, Pearson correlations, normality test, liner regression, and Hayes Process model 4. The analysis was done to meet the following research objectives; to determine the influence of family caregivers' knowledge of EPM on their healthcare-seeking behaviours. To

establish the relationship between family caregivers' attitudes and their knowledge of EPM. To assess whether family caregivers' attitudes indirectly influence their HSB for effective psychosis management, and to determine the total effect size of attitudes and knowledge on healthcare-seeking behaviours.

Response

A total of 50 questionnaires were distributed, and 42 were usable for analysis, resulting in a response rate of 84% shown in Table 3. One did not sign the consent letter, two had merged answers and five were incomplete.

Table 3 Response rate of the study

Number Distributed	Number of Questionnaire Usable	Response Rate (%)
50	42	84

Sociodemographic

Age

The average age of caregivers was 57 years old with a standard deviation of 15 years old. The minimum age was 23 years old and maximum age was 83 years old. The range of 60 years old and standard deviation in years shown in Table 4 indicate that the ages of family caregivers were over a wide range from young adults to very old.

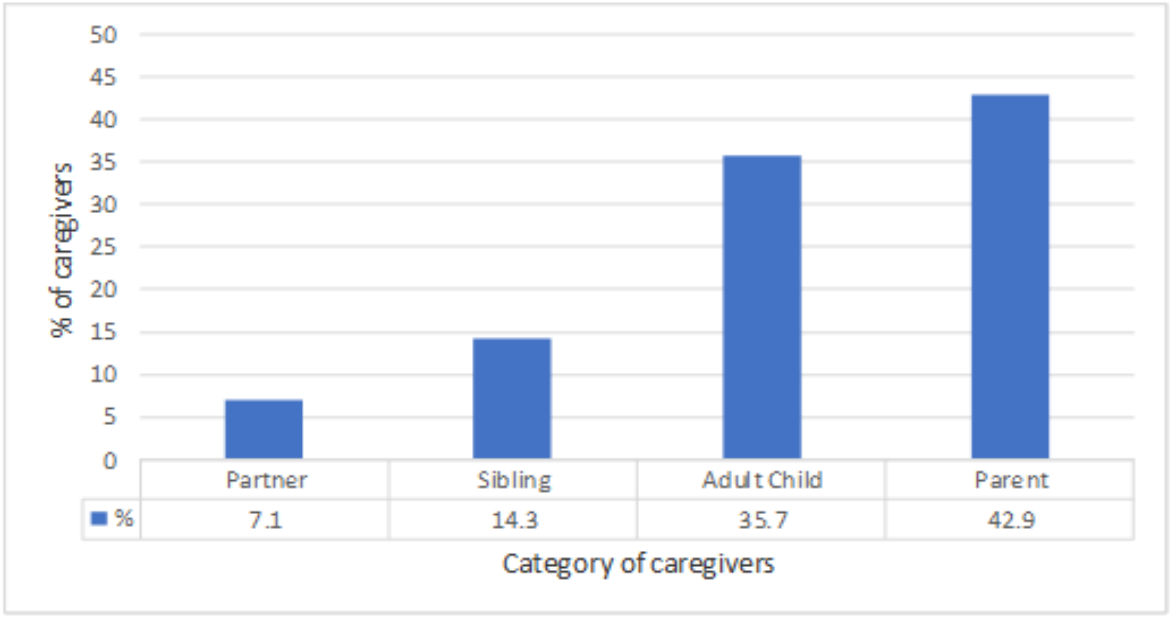
Table 4 Age of the respondents

N	Range	Minimum	Maximum	*M*	*SD*	Skewness	Kurtosis
42	60	23	83	57.98	15.260	-.444	-.596

Family Caregivers

Parents constituted the largest group of caregivers, making up 42.9% of the sample. Interestingly, a significant proportion, 35.7%, were identified as young adults as indicated in Figure 4. Siblings 14.3% and partners 7.1% comprised a smaller percentage.

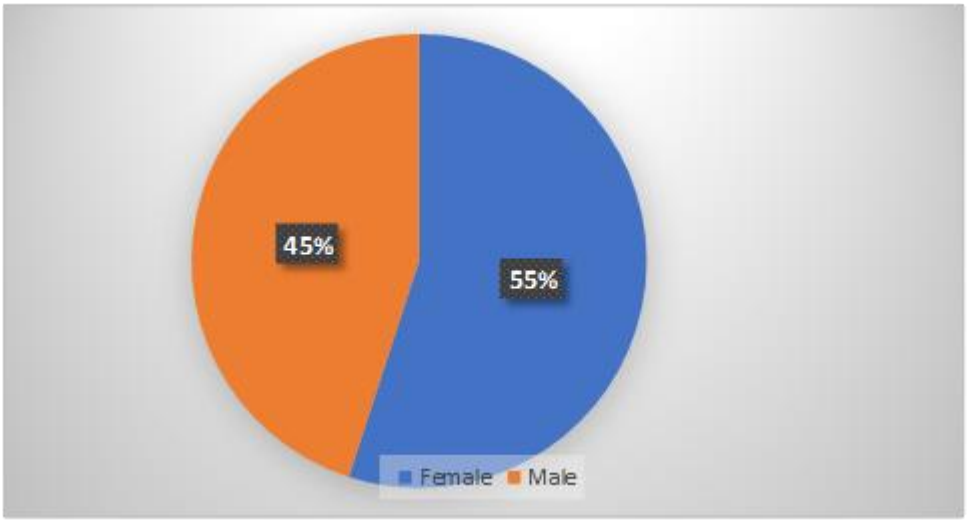
Figure 4 Relationship with patient



Gender

Gender distribution showed the majority, 55% of the family caregivers were females, and 45% were males suggesting that caregiving is associated with the gender dimension as depicted in Figure 5.

Figure 5 Family Caregivers Gender Distribution



Educational Attainment

Over half of the family caregivers, 54.8% had limited formal education, with no formal schooling or having attended junior college. A significant portion of 28.6% held at least an undergraduate qualification, suggesting a substantial presence of highly educated family caregivers. The remaining family caregivers, 16.6% were primary or secondary/high school graduates as shown in Table 5.

Table 5 Educational Level

Education Level	Frequency	Percent
No Formal Education	10	23.8%
Junior college	13	31.0%
Primary, Secondary & High School	7	16.6%
Undergraduate and above	12	28.6%

Note. *N* = 42.

Number of Relapses

After one year of diagnosis and treatment adherence, 69% of the patients with psychosis did not experience a relapse of their symptoms. However, 31% of the patients experienced relapses during this time period. The number of relapses recorded for patients suffering with psychosis after caregivers HSB are shown in Table 6.

Table 6 Number of Relapses Rates

Number of Relapses	Frequency	Percent (%)
1	1	2.4
2	12	28.6

None	29	69.0
Total	42	100

Knowledge of Effective Psychosis Management

Family caregivers demonstrated a strong understanding of key signs of psychosis (hallucinations, delusions, disorganized speech) with 71.4% recognizing the symptoms. The knowledge extended to potential risk factors and triggers, as evidenced by 57.1% awareness of factors such as substance abuse, sleep deprivation, brain tumours, and genetic predisposition as shown in Table 7. Similarly, 71.4% of caregivers exhibited knowledge of crucial aspects of HSB (medication adherence, seeking professional help). A smaller proportion 28.6% showed a lack of EPM knowledge. The high percentage, 71.4% of caregivers demonstrating this understanding aligns with the observed low relapse rate 69% among patients.

Table 7 Knowledge Domain

	True (%)	False (%)	Unknown (%)
When someone experiences things that aren't really there, like seeing or hearing things no one else can (hallucinations), believes things that aren't true (delusions), or speaks in a way that's hard to follow or understand (disorganized speech), these are signs of psychosis.	71.4	28.6	0.0
Psychosis can be caused by certain physical conditions such as brain tumours or infections	57.1	42.9	0.0
Substance abuse, prolong sleep deprivation and genetic factors can induce psychosis.	71.4	28.6	0.0
Skipping and not consulting formal professional medical specialist maintain or worsen psychosis.	71.4	28.6	0.0
Lack of adherence to prescribed medication increase the course and severity of psychosis.	71.4	28.6	0.0
Psychosis is treated with medication prescribed by Psychiatrist.	71.4	28.6	0.0
Effective psychosis management can be achieved by talk therapy	57.1	42.9	0.0
Family plays a crucial role in effective psychosis management	71.4	28.6	0.0

Family Caregivers Attitudes

Family caregivers reported positive attitudes towards HSB, with an overall mean score of 3.69 (*SD* = 1.29) on the attitude scale as shown in Table 8. The positive sentiment was reflected in their strong agreement (*M* = 4.29, *SD* = 0.89) with the importance of seeking professional help for mental illness as similar to physical health illness. Caregivers also endorsed their responsibility for monitoring medication adherence (*M* = 3.86, *SD* = 1.37) and the potential for early intervention to delay symptom severity (*M* = 3.57, *SD* = 1.78) through seeking professional help and medication use. Additionally, they believed that professional help would benefit their loved ones (*M* = 3.43, *SD* = 1.21). Finally, results indicated a moderate level of comfort (*M* = 3.29, *SD* = 1.18) discussing psychosis with mental health professionals.

Table 8 **Attitudes Domain**

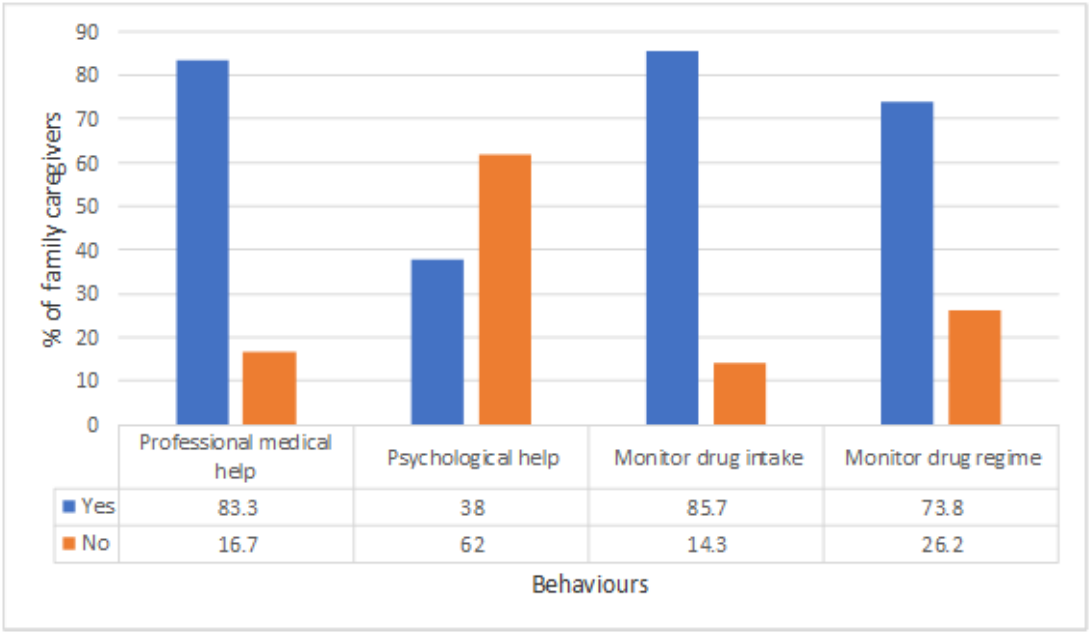
Attitude item	N	*M*	*SD*
1. I feel comfortable discussing psychosis with mental healthcare	42	3.29	1.18

professionals.			
2. I believe that seeking professional help for psychosis is beneficial	42	3.43	1.21
3. I feel that it's my duty to monitor drug intake of the patient	42	3.86	1.37
4. I believe that psychosis severity can be delayed by quickly consulting with formal professionals in mental Health and taking medication	42	3.57	1.78
5. I believe that seeking professional help for mental health issues is as important as for physical health issues.	42	4.29	0.89
Caregiver attitude (overall)	42	3.69	1.29

Healthcare-Seeking Behaviour for Effective Psychosis Management

The majority of family caregivers 83.3% sought professional medical help. A high proportion of family caregivers 85.7% actively monitored medication intake and adherence with 73.8% within the crucial first 30 days of symptom onset. Only 38% pursued psychological services as shown in Figure 6.

Figure 6 Family Caregivers Healthcare-Seeking Behaviours



Note. N=42.

Knowledge Attitude Healthcare Seeking Behaviours Questionnaire Validation Reliability of KAH Questionnaire

The KAH instrument was found to be highly reliable (17 items; α =.88). Internal consistency of the KAH questionnaire was assessed using Cronbach's alpha (Tavakol & Dennick, 2011), as shown in Table 9 with its reliability statistics. The Knowledge subscale consisted of 8 items (α=.97), the Attitude subscale consisted of 5 items (α=.87), and the HSB subscale consisted of 4 items (α=.78).

Table 9 Reliability Statistics

Variables	Cronbach's Alpha	Number of Items
Knowledge	.979	8
Attitudes	.876	5

Behaviour	.787	4
Overall reliability	.881	17

Validity of KAH Questionnaire

A strong positive association between sub items and the overall knowledge score was found ranging from *r* = .74 to *r* = .99. The corrected item-total correlations presented in Table 10 provide evidence for the convergence validity of the knowledge construct.

Table 10 Results from an Item Analysis Showing Knowledge Convergence validity (KAH) Questionnaire

	Corrected item-Total Correlation	Cronbach's Alpha if Item Deleted
1. When someone experiences things that are not really there, like seeing or hearing things no one else can (hallucinations), believes things that are not true (delusions), or speaks in a way that's hard to follow or understand (disorganized speech), these are signs of psychosis.	.992	.977
2. Psychosis can be caused by certain physical conditions such as brain tumours or infections	.743	.989
3. Substance abuse, prolong sleep deprivation and genetic factors can induce psychosis.	.992	.977
4. Skipping and not consulting formal professional medical specialist maintain or worsen psychosis.	.992	.977
5. Lack of adherence to prescribed medication increase the course and severity of psychosis.	.992	.977
6. Psychosis is treated with medication prescribed by Psychiatrist.	.992	.977
7. Effective psychosis management can be achieved by talk therapy	.743	.989
8. Family plays a crucial role in effective psychosis management	.992	.977

A strong positive association between sub items and the overall attitude score was found ranging from *r* = .54 to *r* = .74. The corrected item-total correlations presented in Table 11 provide evidence for the convergence validity of the attitude construct. However, one item "1" stand out with a lower corrected item correlation.

Table 11 Results from an Item Analysis Showing Attitude Convergence Validity (KAH) Questionnaire

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I feel comfortable discussing psychosis with mental healthcare professionals.	.547	.654
2. I believe that seeking professional help for psychosis is beneficial	.740	.664
3. I feel that it's my duty to monitor drug intake of	.646	.607

the patient		
4. I believe that psychosis severity can be delayed by quickly consulting with formal professionals in mental Health and taking medication	.742	.554
5. I believe that seeking professional help for mental health issues is as important as for physical health issues.	.733	.665

A strong positive association between sub items and the overall HSB score was found ranging from *r* = .65 to *r* = .92. The corrected item-total correlations presented in Table 12 provide evidence for the convergence validity of the HSB construct.

Table 12 Results from an Item Analysis Showing Healthcare-Seeking Behaviours Convergence validity (KAH) Questionnaire

	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted
1. I have sought professional medical help for managing my family members psychosis in the first 30 days of symptoms occurrence?	.921	.989
2. I have sought psychological help for effective psychosis management after psychiatrist consultation?	.835	.982
3. I monitor my family member drug intake and ensure it is being swollen?	.754	.845
4. I monitor my family member drug regime	.651	.765

Inter-Item Correlation

Inter-item correlations were greater than 0.30 showing a good convergence validity of the items. There were no correlations above 0.20 between the items measuring different constructs indicating good discriminant validity (Marsh & Byrne, 1998). Use of inter-item correlation to examine construct validity of the model are shown in Table 13.

Table 13 Results from an Inter-Item Correlation Matrix Showing Good Convergence and Discriminant Validity (KAH) Questionnaire

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q10	Q11	Q12	Q13	Q14	Q15	Q16	Q17
Q1	1																
Q2	.381	1															
Q3	.417	.601	1														
Q4	.331	.381	.370	1													
Q5	.358	.363	.471	.408	1												
Q6	.393	.494	.578	.493	.559	1											
Q7	.500	.334	.417	.378	.477	.329	1										
Q8	.301	.340	.310	.335	.330	.301	.362	1									
Q9	.011	-.030	-.064	-.055	-.002	-.140	.197	.523	1								

Q10	.103	.149	-.031	.037	-.188	-.183	.020	.074	.346	1							
Q11	.000	.013	-.085	.044	.122	-.088	.128	.543	.566	.320	1						
Q12	.114	.177	.095	.081	.149	.095	.141	.265	.389	.329	.441	1					
Q13	.049	.080	.107	-.105	-.060	-.203	-.013	.045	.453	.351	.409	.321	1				
Q14	.158	128	.240	-.143	-.157	-.258	.006	-.053	-.041	-.085	.170	-.108	.129	**1**			
Q15	.047	.040	.046	-.022	.010	-.015	.171	.249	.185	.084	.203	.103	.024	**.324**	**1**		
Q16	.025	.005	.133	.005	-.119	-.165	.140	.148	.145	.091	.103	.105	.146	**.427**	**.484**	**1**	
Q17	.036	.039	-.051	-.005	.116	-.109	.105	.278	.019	.008	.189	.041	.110	**.308**	**.541**	**.534**	**1**

By analysing both convergence and discriminant validity, the researcher established a solid foundation for interpreting the data and ensure it reflects the intended constructs.

Underlying Assumptions of Linear Regression Analysis and Hayes Process Model 4 Correlation

Knowledge of EPM and Healthcare seeking behaviours were moderately positively correlated, r (42) = 0.373, $p < 0.05$. HSB and family caregivers' attitudes were moderately positively correlated, r (42) = 0.378, $p < 0.05$. Family caregivers' attitudes and knowledge were strongly positively correlated, r (42) = 0.730, $p < 0.01$. Pearson correlation coefficients revealed all positive associations between KAH as shown in Table 14 informing the appropriateness of using regression analysis to examine the hypothesized relationships in the model.

Table 14 Results of Pearson's Correlations Coefficients for KAH

		HSB	Attitude	Knowledge
Healthcare-Seeking Behaviour (HSB)	Pearson Correlation	1		
Attitude	Pearson Correlation	.378*	1	
Knowledge	Pearson Correlation	.373*	.730**	1

Note. * Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Normality Tests

Skewness and Kurtosis

The skewness of attitude subscale .09, knowledge subscale .66, and HSB subscale .09 were found indicating that the distribution was right skewed as shown in Table 15. The values for asymmetry and kurtosis between -2 and 2 are considered acceptable in order to prove normal univariate distribution (Bryne, 2010; George & Mallery, 2010; Hair et al., 2010). They further argued that data is considered to be normal if skewness is between -2 to +2 and kurtosis is between -7 to +7.

Table 15 Results of Normality Test

	Skewness		Kurtosis	
	Statistic	*SE*	Statistic	*SE*
Attitude	.090	.350	-2.085	.688

Knowledge	.661	.350	-1.637	.688
Behaviour	.090	.350	-2.085	.688

Shapiro-Wilk test was conducted to assess normality of the data. The results indicated that the data for residual was normally distributed, W (42) = .542, p = .067, and the data for Behaviour were also normally distributed, W (42) = .561, p = .058. The significance levels are greater than .05 as shown in Table 16, we fail to reject the null hypothesis of normality meaning the test results suggest that the data may be considered normally distributed (Mishra et al., 2022).

Table 16 **Shapiro-Wilk Test of Normality**

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
	.464	42	.066	.542	42	.067
Behaviour	.452	42	.054	.561	42	.058

Note. [a]. Lilliefors significance correction was applied to the Kolmogorov-Smirnov test because the mean and standard deviation were estimated from the sample data

Model Analysis

Relationship between Knowledge of EPM and HSB for Effective Psychosis Management among Family Caregivers

A linear regression analysis examined the relationship between family caregivers' knowledge of EPM and their HSB. The results revealed a significant positive effect of knowledge on HSB, β = .373, p < .05. Higher knowledge of EPM among caregivers increases their HSB by .373. Additionally, the model explained a significant portion of the variance in HSB, R^2 = .117, F(1, 40) = 6.458, p < .05. Caregivers' knowledge accounts for 11.7% of the variability in their HSB, supporting the hypothesis of a positive relationship between EPM knowledge and HSB for psychosis management as shown in Table 17.

Table 17 Results showing Relationship between Knowledge of EPM and Healthcare-Seeking Behaviour for EPM among Family Caregivers (Model Summary)

Model	R	R^2	Adj. R^2	*SE* of the Estimate
1	.373[a]	.139	.117	.47324

Note. a. Predictors: (Constant), Knowledge

ANOVA[a]						
Model		SS	df	MS	F	Sig.
1	Regression	1.446	1	1.446	6.458	.015[b]
	Residual	8.958	40	.224		
	Total	10.405	41			

Note. [a.] Dependent Variable: HSB.

Note. [b.] Predictors: (Constant), Knowledge.

Coefficient[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	*SE*	β			Tolerance	VIF
1	(Constant)	.292	.097		3.019	.004		
	Knowledge	.375	.148	.373	2.541	.015	1.000	1.000

Note. a. Dependent Variable: HSB

Relationship between Knowledge of Effective Psychosis Management and Family Caregivers' Attitudes

Linear regression analysis examined the relationship between family caregivers' knowledge of EPM and their attitudes. Results showed a significant positive effect of knowledge on attitudes β = .378, $p < .001$. As caregivers' knowledge increases, their positive attitudes increase by .378. The model explained a significant portion of the variance in attitudes $R^2 = .143$, $F(1, 40) = 6.67$, $p < .05$. Family caregivers' knowledge accounts for 14.7% of the variability. The finding supports the hypothesis of a positive relationship between EPM knowledge and caregivers' attitudes as shown in Table 18.

Table 18 Results Showing the Relationship between Knowledge of EPM and Family Caregivers' Attitudes (Model Summary)

Model	*R*	R^2	Adj. R^2	*SE*
1	.378[a]	.143	.122	.47214
Note. a. Predictors: (Constant), Attitude				

ANOVA[a]						
Model		*SS*	*df*	*MS*	*F*	Sig.
1	Regression	1.488	1	1.488	6.676	.014[b]
	Residual	8.917	40	.223		
	Total	10.405	41			
Note. a. Dependent Variable: attitudes						
b. Predictors: (Constant), Knowledge						

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
		B	*SE*	β			Tolerance	VIF
1	(Constant)	.333	.086		3.867	.000		
	Attitude	.417	.161	.378	2.584	.014	1.000	1.000
Note. a. Dependent Variable: attitudes								

Total Effect

Hayes' Process Model 4 was employed to examine whether family caregivers' attitudes mediate the relationship between their knowledge of Effective Psychosis Management (EPM) and their healthcare-seeking behaviours (HSB). The analysis revealed a significant direct effect of knowledge on HSB (β = .45, p < .001), indicating that knowledge positively influences HSB even when attitudes are accounted for. The model also revealed a significant indirect effect of knowledge on HSB through attitudes (β = .32, 95% CI [0.13, 0.51]), confirming that caregivers' attitudes partially mediate the relationship. This suggests that knowledge influences HSB both directly and indirectly by shaping positive attitudes. The total effect of knowledge on HSB remained significant (β = .45, 95% CI [0.27, 0.57], p < .001), indicating a robust overall relationship. Notably, while the direct effect (β = .13) remained, the indirect effect (β = .32) contributed more to the total variance explained, highlighting the importance of caregivers' attitudes in the behaviour change pathway. The overall model was statistically significant (R = .56, R^2 = .314, F(3, 205) = 187.60, p < .001), suggesting that knowledge and attitudes together explain 31.4% of the variance in HSB. These findings support the hypothesis that caregivers' attitudes are a key mechanism through which knowledge leads to better healthcare-seeking behaviour, and may be even more influential for promoting timely psychosis care than knowledge alone.

Table 19 Model Results Showing Direct, Indirect and Total Effect

R	R^2	*MSE*	*F*	df^1	df^2	*p*
.56	.314	.49	187.60	3.00	38.00	.000
Model					95% CI	
	Coefficient	*SE*	*t*	*p*	*LL*	*UL*
Constant	1.43	.45	3.16	.003	0.54	2.32
Knowledge	.63	.16	3.82	.0002	.31	.96
Attitudes	.178	.19	9.47	.00	1.41	2.16
	Conditional Effects				95% CI	
HSB	Effect	*SE*	*t*	*p*	*LL*	*UL*
DR 1.50	.32	.10	3.23	.001	.13	.51
ID 2.50	.11	.08	1.49	.042	.02	.26
TE 3.50	.25	.09	-1.10	.031	.27	.57

Note. Healthcare-Seeking Behaviour (HSB), Direct Relationship (DR), Indirect Relationship (IR) and Total Effects (TE). CI= 95% Confidence Level. *LL* =Lower limit, *UL*= Upper Limit.

Hypotheses of the Study

The model explained a significant portion of the variance in HSB, R^2 = .314, $F(2, 40) = 18.24$, $p < .001$. Family caregivers' knowledge, β = .45, $p < .00$ and attitudes β = .63, $p < .001$ both had significant positive direct effects on HSB, supporting Hypotheses 1 and 2. Hayes' Process Model further revealed a significant indirect effect of knowledge on HSB mediated by attitudes, β = .32, 95% CI [0.13, 0.51], supporting mediation (Hypothesis 3). The total effect of knowledge on HSB remained significant, β = .77, $p < .001$, suggesting both direct and indirect influences (Hypothesis 4) as shown in Table 20. Given credibility of the instrument and the measures used in the study, the results provided evidence that family caregivers attitudes mediate the relationship between knowledge of EPM and their HSB in the context of effective psychosis management. The indirect effect of attitudes appears to be greater than the direct effect of knowledge, highlighting the importance of addressing family caregivers' attitudes in interventions aimed at effective HSB.

Table 20 Summary of the Hypothesis of the Study

Hypothesis	Hypothesis Description	Result (β, *p*, R^2)	Conclusion
H1	There is a significant direct relationship between knowledge of EPM and Healthcare seeking behaviour for EPM among family caregivers.	β = .373, $p < .05$; $R^2 = .117$, $F(1,40) = 6.458$, $p < .05$	H1 Accepted
H2	There is a significant positive relationship between family caregivers' attitudes and knowledge of EPM.	β = .378, $p < .001$; $R^2 = .143$, $F(1,40) = 6.67$, $p < .05$	H2 Accepted
H3	Family caregivers' attitudes have a significant indirect effect on family caregivers' HSB.	β = .730, $p < .001$; $R^2 = .533$, $F(1,40) = 45.71$, $p < .001$	H3 Accepted
H4	The indirect effect size of caregivers' attitudes on healthcare-seeking behaviours is greater than the direct effect size of the caregivers' knowledge of effective psychosis management on healthcare-seeking behaviours.	Direct effects: β = .32, 95% CI [0.13, 0.51] Indirect effect: β = .32, 95% CI [0.13, 0.51] Total effects: β = .25, $p < .05$, 95% CI [0.27, 0.57]	H4 Accepted

Summary

The chapter presented the analysis and results of data gathered from 42 family caregivers at Parirenyatwa Mental Health Hospital in Harare. The analysis was computed in line with the research objectives testing the study hypotheses. Findings confirmed that family caregivers' attitudes mediate the relationship between knowledge of effective psychosis management and healthcare-seeking behaviour for effective psychosis management. KAH model is a three-factor model, with a significant positive relationship among the variables. Knowledge had a direct effect on healthcare-seeking behaviours, attitudes had an indirect effect on healthcare-seeking behaviour and the total effect size of attitudes were greater than that of knowledge on healthcare-seeking behaviour. Furthermore, reliability and validity of the instrument was established, and sociodemographic descriptive statistics were presented.

DISCUSSION, CONCLUSION AND RECOMMENDATION

Introduction

The present chapter discusses the results presented in chapter four drawing connections between the reviewed literature, and the KAH conceptual framework. The key conclusions, delimitations and limitations are presented in the following sections, providing valuable insights for future research endeavours. The chapter culminates with recommendations for service providers, aiming to leverage the study's findings for effective Healthcare-Seeking Behaviours in psychosis management.

Discussions

Family caregivers' knowledge of effective psychosis management significantly influence their healthcare-seeking behaviours for effective psychosis management

The first objective sought to determine the influence of family caregivers' knowledge on their HSB on behalf of their loved ones. The findings supported the first objective, demonstrating a significant positive relationship between knowledge and HSB, β = .373, $p < .05$ and a Pearson correlation of r (42) = 0.373, $p < 0.05$ between

the K→H. The results indicated that as family caregivers' knowledge increases to high level, they engage in effective HSB. This aligned with the theoretical framework assumptions adopted from the Knowledge Attitude Behaviour (KAB) model (Ajzen & Fishbein, 1980), and the subsequently developed Knowledge Attitude Healthcare-Seeking Behaviour (KAH) model in chapter two in developing interventions aimed to improve quality of life for patient suffering with psychosis.

The findings underscored a key principle: knowledge empowers effective action when dealing with a phenomenon, concurring with previous research by Wei et al. (2015) and Jorm et al. (1997) who reported similar positive associations between knowledge and HSB for schizophrenia (psychosis disorder) and major depressive disorder with psychotic features. Respectively, the researcher established the importance of educating family caregivers about the importance of HSB for themselves and the person they care for. Similarly, Baba-Nalikant et al. (2023) concluded that knowledge of a subject and healthcare practices among family caregivers had a positive association and family caregivers reported to have gone for workshops or used online resources to educate themselves about the condition.

The results established that, family caregivers equipped with higher knowledge are more likely to exhibit proactive effective HSB, which then reduce patient relapse rates and improve quality of life. This was reflected in the finding that 83.3% of family caregivers grasped crucial aspects of effectively managing psychosis, including medication adherence, seeking professional help, and the role of family support. The high percentage aligns with the observed low relapse rate (69%) among patients, suggesting a potential causal link between knowledge and positive health outcomes like increased quality of life, symptom remission.

Additionally, the findings supported the importance of building awareness and knowledge in effective HSB. The psychometric properties of the knowledge measure supported its validity in capturing the intended construct. The high convergence validity (item-to-total correlations ranging from $r = .743$ to $r = .992$) indicated a strong positive association between individual knowledge items and the overall score (Hair et al., 2019). With the inter-item correlation matrix further substantiating a good convergence and discriminant validity. This showed that knowledge measure effectively assessed family caregivers' understanding and awareness of psychosis, encompassing key aspects like signs and symptoms, potential risk factors, and available treatment options as this forms part of psychoeducation in clinical settings which family caregivers usually get in first therapy or consultation sessions (Boland et al., 2021; Sadock & Sadock, 2015). Thus, it is important to teach family caregivers how to identify signs and symptoms that might indicate a health concern in themselves or the care recipient. This could involve training on specific conditions or general red flags that warrant a doctor's visit.

Furthermore, the survey data revealed that a substantial majority (71.4%) of family caregivers recognized core signs of psychosis, such as hallucinations, delusions, and disorganized speech. This knowledge extended to understanding potential risk factors and triggers, including substance abuse, sleep deprivation, brain tumours, and genetic predisposition (Sadock & Sadock, 2015). Interestingly, a significant proportion (37.5%) of family caregivers were identified as young adults (Erikson, 1982), suggesting a growing knowledge and awareness of mental health issues among younger generations and their willingness to adhere to effective HSB through evidence-based interventions. Additionally, as noted by LaMontagne et al. (2023), the improvement in knowledge attitude and behaviour was attributed to a noticeable increased engagement in mass media mental health awareness among young adults in colleges.

However, it is essential to acknowledge the moderate direct effect size of knowledge on HSB (.373). Avi & Damon (2020) and Gabra et al. (2020), highlighted that other factor beyond knowledge influence HSB. Factors, such as stigma associated with mental illness, access to healthcare services, and cultural beliefs, warrant further exploration in future research. For instance, some family caregivers might not recognize transient symptoms or misinterpret symptom resolution as a cure due to a lack of knowledge or cultural beliefs. The objective provided evidence supporting the (K→H) model's proposition that family caregivers' knowledge of EPM has a significant influence on their HSB. The model delved deeper into exploring the influence of other potential factors to gain a more comprehensive understanding of family caregivers' HSB in the context of effective psychosis management.

Family caregivers' attitudes and knowledge of effective psychosis management among family caregivers.

The second objective sought to establish the relationship between family caregivers' knowledge of effective psychosis management and their attitudes. The second objective assumed that knowledge exerted its influence through attitudes introducing and rejuvenating a potential explanation of how and why family caregivers act the way they act in the Knowledge →Healthcare Seeking Behaviours relationship.

The results revealed a significant positive effect of knowledge and attitudes, $\beta = .378$, $p < .001$, indicating that as family caregivers' knowledge of EPM increased, so did their positive favourable evaluations, believing and feeling that they could do more for their loved ones. The findings supported the conceptualised KAH model path (K→A), which was guided by one of the core principles of psychology, of the interconnectedness of thoughts, feelings and actions (Myers & Spencer, 2023). The results and literature from accredited scholars in the field of psychology were congruent, supporting that knowledge shapes attitudes in explaining how individuals evaluate objects, events or phenomenon (Ajzen & Fishbein, 1980; Eagly &Chaiken, 1993). The positive association is further bolstered by the overall mean attitude score of 3.69 (*SD*=1.29). The score suggested a general trend of favourable feelings and emotions among the 42 family caregivers and a Pearson correlation strongly positively correlated, r (42) = 0.730, $p < 0.01$ given 71.4% of family caregivers demonstrated knowledge of EPM.

Gaining a deeper understanding of psychosis, treatment options, and the potential benefits of effective HSB, family caregivers may develop more informed cognitive, affective, and behavioural responses in seeking medical and psychological professional intervention (Gabra et al., 2020; Shinde et al., 2014). Parents who research to acquire objective knowledge or had prior experience with psychosis, or used medical and psychological specialist, or noticed the recovery process and increased quality of life of their loved ones are more likely to form more informed evaluations about the illness and its management, reducing relapse rates and mortality rates among patients. Thus, the KAH model is based on the concept that knowledge of how and why effective HSB is important leads a parent, spouse, adult child, or sibling to have a favourable and positive evaluation towards the act (Admad et al., 2020; Eagly & Chaiken, 1993). This then increases the quality of life for an individual upon hospital discharge.

On a 5-point Likert scale ranging from 1 (Strongly disagree) to 5 (Strongly agree) and 3 (neutral), an overall mean attitude score of 3.69 and (*SD*=1.29) indicated that family caregivers had a positive attitude for effective HSB. The observation can be traced back to 71% of knowledge indicated in the majority of family caregivers. Those who believed and thought early intervention and specialist reviews are crucial for positive outcomes showed positive attitudes and inversely. A parent feeling fear or concern about their loved one's mental health and quality of living would have positive evaluation. A sibling might not seek medical and psychological help for their loved one by just feeling it is not their obligation to do so due to negative attitudes. Taken together, Bouchrika (2023) indicted that this stems from understanding and awareness of the illness and its management. The results indicated that attitudes are a social construct that can also be influenced by different factors, and in this case knowledge.

Furthermore, the results resonate with previous research by Sirey et al. (2001) and Clement et al. (2015) who reported that caregivers with higher level of knowledge of mental illness showed favourable attitudes due to proper understanding aetiology, risk factors, maintaining factors, and available evidence-based treatment options. This positive association between knowledge and attitudes suggests that knowledge acquisition programs and psychoeducational interventions for family caregivers can be instrumental in fostering favourable attitudes. The study findings also align with Mendoza's (2001) study conducted in Jaro, which revealed a significant positive correlation r (342) = 0.723, $p<0.000$ which informed some hospital interventions in mental health awareness.

Additionally, future research could delve deeper into the specific content of knowledge that has the strongest impact on shaping positive attitudes. For example, does knowledge about specific treatment options (medication types, therapy approaches) hold more weight in influencing attitudes than general knowledge about the nature of psychosis? Exploring these nuances can provide valuable insights for developing targeted

knowledge-based interventions to promote positive attitudes and ultimately encourage HSB among family caregivers.

Family caregivers' attitudes have an indirect effect on their HSB for effective psychosis management

The third objective of this study was to elucidate the indirect effect of attitudes on the relationship between family caregivers' knowledge of EPM and their Healthcare-Seeking Behaviour (HSB). The Hayes Process Model 4 revealed a significant indirect effect of knowledge on HSB mediated by attitudes, $\beta = .142$, $p < .05$. The results were aligned with the KAH model adapted concepts and assumptions from the Knowledge-Attitude-Behaviour (KAB) model (Ajzen & Fishbein, 2005), and studies by Shinde et al. 2014 and Ma et al. (2021) indicating that attitudes serve as a bridge that transfers knowledge effects to practices.

The study findings being congruent with assumptions in both models, the researcher established that as attitudes acted as an intermediary between knowledge and behaviours, declarative and procedural knowledge is important (Myers & Spencer, 2023). Building upon previous literature and empirical evidence that informed the KAH model, family caregivers' attitudes are one of the key determinants of their actions, which in turn predict actual effective HSB (Gabra & Osman, 2021). Consistent with study results, Moon and Heeyoung (2020) notes that when parents acquire knowledge about health caring, this knowledge shapes their evaluation of healthcare practices therefore end up consulting medical specialist and buying pharmaceutical medication. This then improves the quality of life of the individual as the symptoms moves into remission (Harvey et al., 2013). Results from other heath research also indicate that, if smokers learn about the negative health effects of smoking, they might develop a negative attitude towards smoking. This negative attitude can then discourage them from engaging in smoking behaviours (Ajzen, 1991; Zhang et al., 2021).

Similarly, In the KAH model, understanding and knowing about psychosis and its effective treatment exerts its influence on the family caregiver feelings and beliefs (attitudes) towards effective HSB for improved caregiving and robust quality of life. The overwhelming majority (83.3%) sought professional medical help, showcasing their proactive approach as shown on the reduced relapse rates by the results. This concurs with Baranowski et al. (2003) who reported that individuals who knew a lot about the benefits of exercise developed a positive attitude towards physical activity, which led to increased engagement in gym, sports and cardio-exercises. Additionally, a high proportion actively monitored medication intake (85.7%) and adherence (73.8%) within the crucial first 30 days of symptom onset. The 71.4% indicated presence of knowledge of EPM, which then translated into HSB with a mean attitude score of 3.69. These findings suggest that family caregivers are taking essential steps towards behaviour activation for effective psychosis management.

The strong positive association between individual HSB items and the overall behaviours score (item-total correlations ranging from $r = .65$ to $r = .92$) supports the validity of the HSB measure. This indicates that the instrument effectively captures a unified construct of HSB in family caregivers of individuals with psychosis. For instance, when family caregivers learn about the benefits of medication adherence for managing psychosis from educational programs, healthcare professionals, and awareness campaigns, this knowledge acquisition might influence their evaluation about the effectiveness of treatment, leading to the formation of a more positive attitude towards seeking professional help hence, due to positive reward of symptom remission. The results indicated a behaviour modification given that positive attitude can then motivate them to engage in specific HSB, such as scheduling a doctor's appointment or reminding their loved one to take medication. In essence, knowledge lays the groundwork for positive attitude formation, which then translates into concrete behaviours aimed at effective psychosis management. This research finding aligns with Zhao et al. (2018), who demonstrated that knowledge about depression indirectly influenced help-seeking behaviours through positive attitudes, further corroborating the mediating role of attitudes.

Total effect size of attitudes and knowledge on healthcare-seeking behaviour for effective psychosis management among family caregivers.

The fourth objective of this study aimed to determine the total effect size of family caregivers' attitudes and their knowledge of effective psychosis management on healthcare-seeking behaviours (HSB). The results demonstrated a significant total effect (combined direct and indirect effects) of knowledge on HSB, $\beta = .515$, p

< .05. The finding suggested that when considering both knowledge and attitudes together, they account for a substantial portion of the variance in HSB among family caregivers (Hair et al., 2019). Furthermore, the total effect of family caregivers' knowledge of EPM on their HSB, which combines both the direct effect and indirect effects, was statistically significant, β=.25, *p*<.05, 95% CI[0.27, 0.57], indicating that caregivers' knowledge predicts behaviour both directly and indirectly through the mediator variable, attitudes.

The results complemented and mirrored the assumptions of the KAH model showing the path influences and relationships that translate into practices. The direct effect of family caregivers' knowledge showed the importance of psychoeducation as part of behaviour activation and modification for family caregivers to engage in HSB which increases the patient quality of life. To complete the path, the indirect effect of family caregivers' attitudes showed how and why adequate knowledge is important as it affects other social construct and the total significant of those effects can be larger, to the extent of either increase or decrease the expected practices. This result indicated that the indirect effect of family caregivers' attitudes on HSB, through the influence of knowledge, is indeed greater than the direct effect of their knowledge on HSB. Therefore, family caregivers' attitudes play a more significant role in influencing HSB compared to their knowledge alone.

These findings align with previous research by El-gend et al. (2021), where the indirect effect size of knowledge combined with negative attitudes was found to be greater than the effect of knowledge alone affecting the individual's quality of life. The findings concur with Gordon Allport (1935) seminal work, that attitudes are most distinctive and indispensable concept in social psychology when explaining individual behaviour. This statement remains equally valid today, and in line with the study results as the combined influence of knowledge and attitudes continues to be at the forefront of social psychological research and theory in improving patients' quality of life (Haddock & Maio, 2017).

All and above, the results are consistent with the Knowledge-Attitude-Healthcare Seeking behaviours (KAH) model, which posits that knowledge and attitudes are complementary constructs that work together to influence behaviours. Knowledge equips caregivers with an understanding; positive attitudes act as a motivator to translate knowledge into action by seeking healthcare for their loved ones. Furthermore, the results complement the Theory of Planned Behaviour by Ajzen & Fishbein (2005), which posits that knowledge attitudes work synergistically to shape behaviours. Family caregivers' knowledge is crucial in developing favourable evaluations (positive attitudes) as they serve as a motivator to seek help on behalf of their loved ones.

It is essential to acknowledge that although the total effect size (.515) is larger than the direct effect of knowledge (.373), a significant portion of the variance in HSB remains unexplained. This further indicate that other factors beyond attitudes are crucial to explore for effective HSB. Future research could explore these additional factors, such as stigma, cultural beliefs, access to healthcare services, and social support networks, to gain a more comprehensive understanding of the complex factors influencing HSB among family caregivers and improve quality of life (Doe & Johnson, 2020; Smith et al., 2018).

Conclusion

The following conclusions can be made from the research results and the above discussions. The findings substantiate the applicability of the Knowledge-Attitude-Healthcare (KAH) model in determining effective HSB of family caregivers at PMHH. Both latent and observed variables of the KAH model demonstrated good reliability and construct validity, and significantly predicted family caregivers' HSB. The total effect size provided evidence that attitudes mediate the established relationship between knowledge of EPM and HSB. The study concluded that the credible KAH model can be used to explain family caregivers' HSB at home and improve the quality of life of patients suffering from psychosis.

While a significant majority recognized key signs and symptoms, some lacked a deeper understanding of potential risk factors and resources. This underscores the need for interventions that address knowledge gaps and promote knowledge acquisition. The study also revealed a significant positive association between knowledge and HSB. Moreover, attitudes were identified as a mediating factor in this relationship. Family

caregivers with a strong knowledge base were more likely to develop positive attitudes towards seeking medical and psychological help, which in turn motivated them to engage in HSB. These findings emphasize the importance of considering both knowledge and attitudes when developing interventions to improve HSB among family caregivers. While knowledge and attitudes played a crucial role, other factors such as access to healthcare services, personal beliefs, and cultural norms also were found to be of crucial importance.

The underutilization of psychological services identified exemplifies the need to address these additional factors in future research and intervention development. Family caregivers demonstrated a range of knowledge regarding effective psychosis management. This range of knowledge underscores the need for targeted educational interventions to ensure family caregivers are well-equipped to manage psychosis effectively by effective HSB. The survey data results showed that attitude and knowledge are crucial for behaviour activations and modification to improve the patient's quality of life.

Limitations and delimitations of the Study

The researcher opted for a quantitative approach because it offered an objective way to investigate the causal relationship between the knowledge, attitudes, and HSB of family caregivers at PMHH using ceteris paribus approach as focus was on attitude as a mediator only. An explanatory design was selected to help understand the complex relationships without the need for experimentation. The approach generated objective results that can inform decision-making and contribute to the advancement of knowledge, ultimately improving the quality of life for patients diagnosed with psychosis. However, the researcher faced some constraints, including use of statistical techniques in data analysis, the sensitive nature of the topic, and the unavailability of a larger sampling frame, which led to a limited sample size.

To gain a more comprehensive understanding of the factors affecting the quality of life among patients, a mixed method approach incorporating perspectives from both patients and family caregivers could have been beneficial but time and resources was of essence. The approach would have allowed for data triangulation, enabling researchers to cross-validate findings from different sources and enhancing the credibility and quality of the results. By including patients as key informants, the study could have provided a more holistic understanding of the research problem.

One challenge faced in mediation studies is the need for a larger sample size to achieve adequate statistical power. Although this limitation was encountered, the researcher mitigated it by employing a bootstrapping technique. Additionally, the complex interplay of relationships necessitated the use of advanced statistical techniques, which needed strong statistical skills and expert consultation. Mediation explanatory designs rely on theoretical assumptions about the relationships between variables (KAH). Incorrect or incomplete theories or models leads to inaccurate conclusions about mediating effects. The study was grounded in the widely accepted and accredited Knowledge-Attitude-Behaviour (KAB) model used in social and health psychology, which minimized the mentioned risk. Future research can benefit from a larger sample size, with a different research design to further enhance the generalizability of the findings.

Recommendation

In alignment with Zimbabwe's National Development Strategy One objective of enhancing the quality of life for individuals with chronic conditions, prominent companies and organizations such as United Nations Zimbabwe and its subsidiaries, together with the Ministry of Health and Child Care (MoHCC), should collaborate with mental health hospitals. The partnerships might enable the development of extensive research initiatives aimed at achieving objectives.

Furthermore, corporate social responsibility and governance policies of larger companies in Zimbabwe like Econet Group and its subsidiaries like Higher Life Foundation, even Friendship Bench can be leveraged to promote awareness campaigns. Engaging experts and medical professionals through radio discussions can shed light on potential areas that hinder effective HSB. Additionally, mass media campaigns can be employed to raise awareness about self-efficacy and the importance of family caregivers' belief in their ability to manage

their loved one's illness, engage in effective HSB, and overcome perceived barriers to care such as transportation issues, financial limitations, or lack of available services. Strengthening social support networks can also provide encouragement and resources for family caregivers, positively influencing their HSB.

These comprehensive efforts, combining with research's, corporate involvement, and mass media campaigns, might contribute to addressing the challenges faced by family caregivers and ultimately improve the quality of life for those living with chronic conditions in Zimbabwe.

Utilisation of Martin Fishbein and Icek Ajzen 1970s framework of understanding human behaviours

Providing accurate information about mental health conditions, treatment options, and support services can increase knowledge and challenge negative attitudes or misconceptions. This can promote more positive attitudes and encourage family caregivers to seek help on behalf of their loved ones or adhere to treatment plans. Addressing stigma related to mental health conditions and treatment can improve attitudes, leading to more positive behaviours such as seeking professional help, participating in support groups, or discussing mental health concerns openly. Mental health professionals can use the KAB Model to tailor treatment plans for their clients. By understanding a family caregivers' knowledge and attitudes towards mental health, therapists can address any misconceptions, provide relevant information, and promote positive attitudes that support healthy behaviours and improved well-being. Health organizations can develop campaigns to raise awareness and promote positive mental health practices by targeting specific knowledge gaps or negative attitudes in the community.

Utilisation of Knowledge Attitude Healthcare-Seeking Behaviours Model

At this point the Knowledge Attitude Healthcare-Seeking Behaviours (KAB) Model has been instrumental in understanding the factors influencing the quality of life for individuals diagnosed with psychosis. According to the model, knowledge and attitudes leads a family caregiver to either engage in either effective or ineffective HSB for effective psychosis management on behalf of their loved ones.

Programs for family caregivers to acquire knowledge about psychosis, its symptoms, and available evidence-based management strategies would be essential. This knowledge can be obtained through various channels such as educational materials as signage, radio programs, mass media campaigns, workshops, or free consultations with healthcare professionals for mental health related symptoms. As family caregivers become more informed, they are better equipped to identify the specific needs of their loved ones and make informed decisions regarding their care as they search for evidence-based medication and therapies.

As family caregivers gain knowledge, their evaluation of mental healthcare services, and the importance of seeking medical and psychological help begin to evolve. Favourable evaluations toward these aspects will foster an environment where caregivers are more likely to engage in proactive and effective HSB. This can also be done by normalising psychosis as any disease or illness through mass media by influencers and big companies as this has worked for HIV/AIDS. Establishing support groups for family caregivers can provide a platform to share experiences, knowledge, and resources which reinforces positive attitudes and normalising psychosis and healthcare-seeking behaviours.

The combined influence of knowledge and attitudes shapes actual HSB. When armed with accurate information and positive attitudes, family caregivers are more likely to engage in effective HSB, such as scheduling appointments with mental health specialists, adhering to treatment plans and monitoring drug intake and regimen, and participating in support groups or community-based rehabilitation programs. These behaviours contribute to improved management of psychosis and ultimately enhance the quality of life for individuals with the condition.

Implementing community-based rehabilitation programs can help individuals with psychosis reintegrate into society, improve their social functioning, and enhance their overall quality of life. Regular monitoring and evaluation of the implemented interventions and pathways can help identify areas of improvement and ensure that the strategies are effective in achieving the desired outcomes.

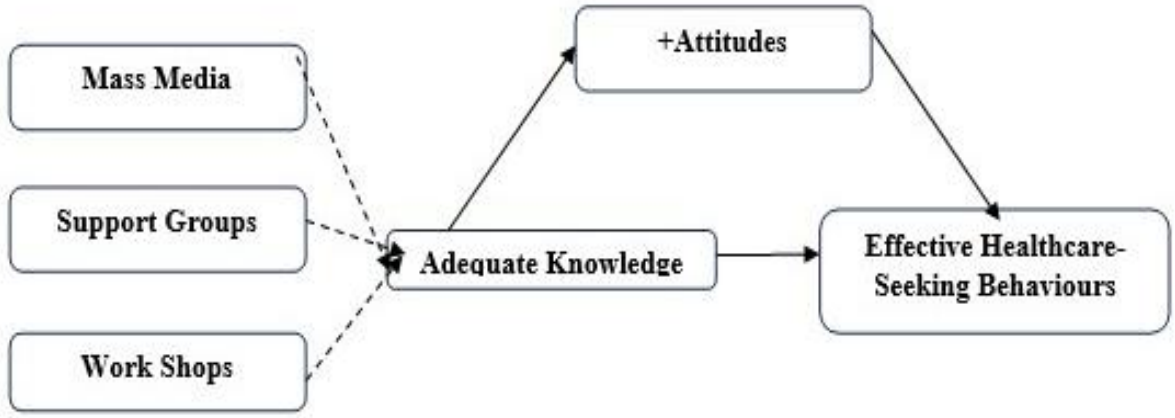


Figure 7 Evidence based Healthcare-Seeking Behaviour Activation and Modification Roadmap

ACKNOWLEDGEMENTS

Gratitude is a must to these people for assisting me in the development and completion of this study however, for the lord was my shepherd and I shall praise him. My supervisor, Regina Banda, for her expert guidance, quick responses and effective communication, which without, this research would not have been completed. My family and partner, for all the love, moral and emotional support they provided during trying times. The Directors and heads of Parirenyatwa Mental Health Hospital, the family caregivers, and patients for allowing me to conduct my research and giving informed consent and willingness to participate in this research. Last, but not least Mr. M. Paradza for being there for me when I needed your expertise in data analysis, I really appreciate. Dr M. Matika, Dr Farzan and Mr R. Kokera for your eye-opening comments and reviews that helped me understand mediation studies.

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APPENDICES

Appendix 1 - Participant Consent Letter

Department of Applied Psychology

University of Zimbabwe

Mount Pleasant

Harare

Date

Dear Participant

REF: INFORMED CONSENT

My name is Michael Hamadziripi Marandure, a student with the University of Zimbabwe, Department of Applied Psychology. As part of a masters' programme, MSc Clinical Psychology I am required to carry out a research study. The study I have decided to do focuses on how family caregivers' behaviours are important in preventing psychosis relapse in patients at Parirenyatwa Mental Health Hospital.

You shall be asked questions on your attitude, knowledge of psychosis and its management and behaviour. Your responses to the interview will remain confidential. No attempts will be made to link your responses to your names, and under no circumstances will your names be communicated to anyone outside the study.

Please note your participation in this study is voluntary and that you have the right to terminate your participation at any time.

Kindly answer all the questions as truthfully and honestly as possible. Your participation in this research is very important.

Thank you for your time

Yours Sincerely

Michael H Marandure (MSc Clinical Psychology Student) Date

Appendix 2 Consent Form

I_____ do hereby agree to take part in the Research project by Michael H Marandure on the importance of family caregivers' behaviours in preventing psychosis relapse in patients at Parirenyatwa Mental Health Hospital.

The researcher has fully explained the purpose of the study. I have been informed of my right to withdraw

from the study anytime I feel uncomfortable with the research process. There shall be no repercussions from excusing myself from the study. This participation is strictly voluntary.

I fully understand that I shall not derive any personal benefits from the study. I was informed my information shall be kept safe and confidential. My details as they appear on this form shall not be linked to the answers, I shall give in the research interviews.

Signature _____

Date _____

Appendix 3 - Tsamba Yekubvuma Kubvunzwa Nezve Tsakurudzo

Department of Applied Psychology

University of Zimbabwe

Mount Pleasant

Harare

Date

Kunemi

REF: KUKUZIVISAI NEZVE TSAKURUDZO

Zita rangu ndinonzi Michael Hamadziripi Maradure. Ndiri kuita zvidzidzo zveMSc Clinical Psychology paUniversity yeZimbabwe. Maererano nefundo dzandiri kuita, ndinotarisirwa kuita tsvakurudzo ye chimwe chezvandinenge ndichidzidza nezvazvo. Tsvakurudzo yandasarudza kuita ndeye kuda kuona kukosha kwe maitiro evachengeti vemhuri mukudzivirira kudzoka kwechirwere chepfungwa muvarwere vepaParirenyatwa Mental Health Hospital.

Tsvakurudzo iyi ichaitwa paParirenyatwa Mental Health Hospital. Kupindura kwamuchaita kunotarisira kuchengetedzwa zvakanyanya. Hapana achazama kutsvaga kuti mhinduro yapihwa iyi yataurwa naani. Mazita enyu haafe akaudzwa mumwe munhu asisi kuita tsvakurudzo iyi.

Munoziviswa kuti kupindurakwenyu mibvunzo iri mutsvakurudzo iyi kunoitwa nekuda kwenyu pasina kumanikidzira. Munokwanisa kutaura kuti hamuchakwanisa kupedzisa chero pamunenge maona kuti masungikana hamuchakwanisi kuenderera mberi ne tsvakurudzo.

Tinokurudzira kupindura mibvunzo yose makasununguka, nechokwadi chizere chamuinacho. Kupindura mibvunzo iyi nekutipa nguva yenyu yekupindura mibvunzo kwakakosha zvikuru.

Tinotenda

Ndini wenyu

_____ _____

Michael H Marandure (MSc Clinical Psychology Student) Zuva

Appendix 4 Fomu Rekubvuma Kubvunzwa Mibvunzo Ye Tsvakurudzo

Ini_____ ndinobvuma kubvunzwa mibvunzo pa tsvakurudzo iri kuitwa na Michael H Marandure pachipatara pano panyaya dzekuongorora makoshero akaita maitiro evachengeti vemhuri mukudzivirira kudzoka kwechirwere chepfungwa muvarwere vepaParirenyatwa Mental Health Hospital.

Vatsvanangura zvizere nezve tsvakurudzo iyi. Ndaziviswa zve kodzero dzangu. Ndaudzwa kuti ndinokwanisa

kutaura kuti handichakwanisa kupedzisa kupindura mibvunzo pandinenge ndaona zvakakodzera. Ndaziviswa zvakare kuti hapana chakaipa chingandiwane ndikasarudza kubuda mutsvakurudzo ndisati ndapedza kupindura mibvunzo. Kuda kubvunzwa kwangu ndaita ndichida pasina kumanikidzwa.

Ndanyatsonzwisisa kuti hapana chandichawana mukupindura mibvunzo yetsvakurudzo iyi. Ndaziviswa zvakare kuti zvese zvandichataura zvichachengetedzwa. Hapana chichataurwa nezvangu chichabatanidzwa ne kupindura kwandichaita mibvunzo.

Kusaina kwangu _____

Zuva rekusaina _____

Appendix 5 Structured Questionnaire

QUESTIONNAIRE

Questionnaire for Family Caregivers of Individuals with Psychosis

SECTION A

Instructions

- Answer all Questions to the best of your knowledge.
- Use an (X) to highlight the answer you have chosen in each corresponding box.
- If you cancel use (II) on top of the (X) and indicate your chosen answer again.
- For questions that require you to give a specific answer, please write your response in the spaces provided.

Before continuing, please make sure you have indicated your consent with the terms of the survey.

I certify that I am 18 years old or older and voluntarily agree to participate in this study

(Tick the box with an X before you can continue) ☐

Example on how to indicate your answer

Question	Answer
1. Which car do you prefer?	(X) Toyota, ② Mazda, ③ Benz
2. How many cars have you owned?	**3** Cars
3. Which category of cars do you prefer?	① Luxury, (X) Sports, (X) Off Roads

SECTION B

Demographics Characteristics

Please indicate with an X on each circle that correspond to your answer

Question	Answer
1. What is your relationship with the patient?	① Parent,

	② Spouse/Partner, ③ Adult Child, ④ Sibling,
2. How old are you now?	Years
3.What is your educational background?	① Primary, Secondary and High school, ② Junior college, ③ Undergraduate and above ④ No formal education
4. What's your gender?	① Male, ② Female
5. How many relapses did the patient have after medication adherence and therapy treatment adherence in the past year (or since being diagnosed)?	① 0, ② 1, ③ 2, ④ greater than 3

SECTION C

Knowledge Attitude Healthcare-Seeking Behaviour Questionnaire

Please indicate with an X on each circle that correspond to your answer

Question	Answer
1. When someone experiences things that aren't really there, like seeing or hearing things no one else can (hallucinations), believes things that aren't true (delusions), or speaks in a way that's hard to follow or understand (disorganized speech), these are signs of psychosis.	①True, ②False, ③Unknow
2. Psychosis can be caused by certain physical conditions such as brain tumours or infections	①True, ②False, ③Unknow
3. Substance abuse, prolong sleep deprivation and genetic factors can induce psychosis.	①True, ②False, ③Unknow
4. Skipping and not consulting formal professional medical specialist maintain or worsen psychosis.	①True, ②False, ③Unknow
5. Lack of adherence to prescribed medication increase the course and severity of psychosis.	①True, ②False, ③Unknow
6. Psychosis is treated with medication prescribed by Psychiatrist.	①True, ②False, ③Unknow
7. Effective psychosis management can be achieved by talk therapy	①True, ②False, ③Unknow
8. Family plays a crucial role in effective psychosis management	①True, ②False, ③Unknow
Attitudes Domain Please indicate your level of agreement with the following statements (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree	
1. I feel comfortable discussing psychosis with mental healthcare professionals.	① Strongly disagree, ② Disagree,

	③ Neutral, ④ Agree ⑤ Strongly Agree
2. I believe that seeking professional help for psychosis is beneficial.	① Strongly disagree, ② Disagree, ③ Neutral, ④ Agree ⑤ Strongly Agree
3. I feel that it's my duty to monitor drug intake of the patient	① Strongly disagree, ② Disagree, ③ Neutral, ④ Agree ⑤ Strongly Agree
4. I believe that psychosis severity can be delayed by quickly consulting with formal professionals in mental Health and taking medication	① Strongly disagree, ② Disagree, ③ Neutral, ④ Agree ⑤ Strongly Agree
5. I believe that seeking professional help for mental health issues is as important as for physical health issues.	① Strongly disagree, ② Disagree, ③ Neutral, ④ Agree ⑤ Strongly Agree

Behaviours	
1. I have sought professional medical help for managing my family member's psychosis in the first 30 days of symptoms occurrence?	① Yes, ② No,
2. I have sought psychological help for effective psychosis management after psychiatrist consultation?	① Yes, ② No,
3. I do monitor my family member drug intake and ensure it is being swollen?	① Yes, ② No,
4. I do monitor my family member drug regime.	① Yes, ② No,

Thank you for your participation.

The End

Appendix 6 Bepa Remuvhunzo wetsvakurudzo

BEPA REMUVHUNZO WETSVAKURUDZO

Mibvunzo yeVachengeti veMhuri yeVanhu vane Chirwere chepfungwa

CHAKAMU CHEKUTANGA

ZVEKUITA

- Pindura Mibvunzo yese nekuenderana kweruzivo rwako.

- Shandisa (X) kuratidza mhinduro yawasarudza pane denderedzwa rine nhamba yega rinoenderana.
- Kana uka kanzura, shandisa (II) pamusoro (X) uye ratidza mhinduro yawasarudza zvakare.
- Pamibvunzo inoda kuti upe mhinduro chaiyo, nyora mhinduro yako munzvimbo dzakapihwa.

Musati mapindura mivhunzo, taridzai kuti mabvuma musina kumanikidzwa kupindura bepa iri uye munowirirana nezvataurwa pamusoro pezvetsvakurudzo iyi.

Ndinobvuma kuti ndine makore gumi nesere kana kudarika uye kuti ndabvuma ndoga ndisina kumanikidzika kubatsira pa tsvakurudzo iyi nekupindura mivhunzo iri pano

(Nyorai (X) mukabhokisi aka musati maenda mberi) ☐

Muenzaniso securitizes mhinduro yako

Mubvunzo	Kupindura
1. Unofarira mota ipi?	① Toyota, ② Mazda, ③ Benz
2. Makamboita muridzi weMota Ngani?	**3** Motokari
3. Ndechipi chekamu cheMota chamunoda?	① Luxury, ② Sports, ③ Off Roads

CHIKAMU CHECHIVIRI

Muvhunzo Pamusoro Pemamiriro enyu Uyezve neMurwere Wenyu

Nyorai (X) mukadenderedzwa rinenhamba inoenderana nemhinduro yenyu

Mubvunzo	Mhinduro
1. Ukama hwenyu nemurwere ndehupi?	① Mubereki, ② Muchato kana Roora, ③ Mwana Mukuru, ④ Mukoma or Hanzvadzi, ⑤ Muchengeti Wepamutemo
2. Mune makore mangani?	…… Makore
3. Makafunda kusvika pachinhano chipi?	① Primary, Secondary and High school, ② Ndine Diploma, ③ Ndine University dhigiri rekutanga neepamberi pacho ④ Handina kumboenda kuchikoro
4. Muri munhui?	① Murume, ② Mukadzi
5. Chirwere ichi chakadzoka kangani mugore rapfuura (kana kubva paakaongororwa)?	① 0, ② 1, ③ 2, ④ kanodarika 3

CHIKAMU CHETATU

Ruzivo Mafungiro uye Maitiro

Mubvunzo	Mhinduro
Ruzivo Ratidza kuti unotenda kuti zvirevo zvinotevera ndezvechokwadi here kana kuti nhema	
1. Kana munhu adamantane nedambudziko rekuona zvinhu zvisipo, kana kunzwa zvinhu zvisina mumwe munhu anonzwa (kufungidzira), kutenda zvinhu zvisiri zvechokwadi (kunyepedzera), kana kutaura nenzira yakaoma kutevera kana kunzwisisa (kutaura kusina kurongeka) , izvi zviratidzo zvepfungwa.	① Chokwadi, ② Nhema, ③ Handizive
2. Chirwere chepfungwa ichi chinokonzereswa nekuita chironda mupfungwa kana utachiona mupfungwa	① Chokwadi, ② Nhema, ③ Handizive
3. Kushandisa zvinodhaka, kutadza kurara kwenguva refu uye majini zvinogona kukonzera chirwere chepfungwa ichi.	① Chokwadi, ② Nhema, ③ Handizive
4. Kusvetuka uye kusabvunza nyanzvi yezvechiremba nyanzvi kuchengetedza kana kuwedzera chiwere ichi	① Chokwadi, ② Nhema, ③ Handizive
5. Kusamwa mishonga yakanyorwa nanaChiremba unowedzera chirwere ichi	① Chokwadi, ② Nhema, ③ Handizive
6. Chirwere ichi chinorapwa nemishonga inorairwa na Psychiatrist.	① Chokwadi, ② Nhema, ③ Handizive
7. Chirwere ichi chinorapwa nekuteedzera zvinotaurwa na Psychologist	
8. Vachengeti vemurwere vakakosha mukurapwa mwechirwere ichi	① Chokwadi, ② Nhema, ③ Handizive
Mafungiro Ratidza chiyero chako chekubvumirana nemashoko anotevera *1=Handitsigiri Zvakanyanya,* *2= Handitsigiri, 3=Zviri pakati nepakati 4=Ndinotsigira, 5=Ndinotsigira zvakanyaya*	
1. Ndinonzwa ndakasununguka kukurukura nezvepfungwa nenyanzvi dzehutano hwepfungwa.	① Handitsigiri Zvakanyanya, ② Handitsigiri, ③ Zviri pakati nepakati ④ Ndinotsigira, ⑤ Ndinotsigira zvakanyaya
2. Ndinotenda kuti kutsvaga rubatsiro rwenyanzvi kunobatsira.	① Handitsigiri Zvakanyanya, ② Handitsigiri, ③ Zviri pakati nepakati ④ Ndinotsigira,

ISSN No. 2454-6186 | DOI: 10.47772/IJRISS | Volume IX Issue IV April 2025

	⑤ Ndinotsigira zvakanyaya
3. Ndinoona sekuti ibasa rangu kuongorora mashandisiro anoita murwere mishonga yaapihwa nachiremba	① Handitsigiri Zvakanyanya, ② Handitsigiri, ③ Zviri pakati nepakati ④ Ndinotsigira, ⑤ Ndinotsigira zvakanyaya
4. Ini ndinotenda kuti chirwere ichi chakakurumidzirwa kuongororwa nenyanzvi dzepfungwa chinorapika	① Handitsigiri Zvakanyanya, ② Handitsigiri, ③ Zviri pakati nepakati ④ Ndinotsigira, ⑤ Ndinotsigira zvakanyaya
5. 5. Ndinotenda kuti kutsvaga rubatsiro rwenyanzvi panyaya dzehutano hwepfungwa kwakakosha sezvehutano hwemuviri.	① Handitsigiri Zvakanyanya, ② Handitsigiri, ③ Zviri pakati nepakati ④ Ndinotsigira, ⑤ Ndinotsigira zvakanyaya

Maitiro Pindura mibvunzo inotevera	
1. Ndakatsvaga rubatsiro kunyanzvi murwere paakatanga kurwara mumazuva makumi matatu ekutanga ezviratidzo zvechirwere ichi	① Hongu, ② Kwete,
2. Ndakatsvaga rubatsiro kuna psychologist mushure mekubvunza chiremba wepfungwa?	① Hongu, ② Kwete,
3. Ndinotarisa kuti murwere amwa mushonga wake uye akuumedza	① Hongu, ② Kwete,
4. Ndinotarisa kuti mapiritsi memurwere akupera here uye	① Hongu, ② Kwete,

Ndinokutendai

Magumo

Appendix 7 Research Permission Request

University of Zimbabwe
P O Box MP167
Mount Pleasant
HARARE
Zimbabwe

Email: psychology@sociol.uz.ac.zw
Telephone: +263-242-303211 Ext 14025/6
Website: www.uz.ac.zw

UNIVERSITY OF ZIMBABWE

APPLIED PSYCHOLOGY DEPARTMENT

26 March 2024

TO WHOM IT MAY CONCERN

RE: PERMISSION TO CONDUCT AN ACADEMIC STUDY

Michael Marandure: R136331R is a Postgraduate University of Zimbabwe student in the Department of Applied Psychology doing an MSc in Clinical Psychology. He wishes to undertake a study entitled **"Mediating Role of Attitudes between Knowledge and Health Seeking Behaviour among Family Caregivers Towards Psychosis Management at Parirenyatwa Mental Health Hospital."**

The findings of the study will be used for academic purposes only and will remain anonymous. Should you have any issues that require clarification do not hesitate to contact:

The Chairperson
Department of Applied Psychology
University of Zimbabwe
P O Box MP167
Mount Pleasant
HARARE
Tel: 303211 Ext 14025/6

The Department greatly appreciates your kind assistance to the student.

Yours faithfully

DR S MHIZHA
CHAIRPERSON, DEPARTMENT OF APPLIED PSYCHOLOGY

UNIVERSITY OF ZIMBABWE
Department of Applied Psychology
OFFICIAL

Appendix 8 Research Approval Letter

All communications should be addressed to
"THE GROUP CHIEF EXECUTIVE"
Telephone: 701520-701554/7
Fax: 706627
Website:www.parihosp.org

PARIRENYATWA GROUP OF HOSPITALS
P.O Box CY 198
Causeway
Zimbabwe

03 April 2024

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH STUDY AT

PARIRENYATWA GROUP OF HOSPITALS – MICHAEL H. MARANDURE

The above matter refers.

The Parirenyatwa Group of Hospitals hereby grants you permission to conduct research on:-

Mediating role of attributes between knowledge and health seeking behaviour among family caregivers towards psychiatric management.

The permission is granted subject to the following conditions: -

1. The researcher will provide all sundries necessary for sample collections. ☑
2. The researcher sponsors all payments for the tests involved. ☑
3. The hospital incurs no cost in the course of the research. ☑
4. All relevant departments are notified in advance and the Head of section/ward signs acknowledgement of such notification. ☑
5. The conduct of the research does not interfer or interrupt the daily service provision by the hospital. ☑
6. Formal written feedback on research outcomes must be given to the Director of Clinical Services. ☑
7. Permission for publication of research must be obtained from the Director of Clinical Services. ☑

04 APR 2024
P. O. BOX 198, CAUSEWAY
HARARE, ZIMBABWE

DR M. MHLANGA
ACTING CLINICAL DIRECTOR

Appendix 9 Ethical Clearance Letter

All communications should be addressed to
"THE GROUP CHIEF EXECUTIVE"
Telephone: 701520-701554/7
Fax: 706627
Website: www.parihosp.org

PARIRENYATWA GROUP OF HOSPITALS
P.O Box CY 198
Causeway
Zimbabwe

ETHICAL CLEARANCE CERTIFICATE

Certificate Reference Number:	JREC09 1SZIN01
Project title:	**The Mediating Role of Family Caregivers Attitudes in the Relationship between Knowledge and Healthcare-Seeking Behaviours for Effective Psychosis Management**
Nature of Project:	Academic Research
Principal Researcher:	Michael Marandure (R136331R)
Supervisor:	Regina Banda

On behalf of Joint Research Ethics Committee for the University of Zimbabwe Faculty of Medicine and Health Science and the Parirenyatwa Group of Hospitals (JREC). I hereby give ethical approval in respect of the undertakings contained in the above-mentioned project and research instrument(s). Should any other instruments be used, these require separate authorization. The Researcher may therefore commence with the research as from the date of this certificate, using the reference number indicated above.

Please note that the JREC must be informed immediately of

- Any material changes in the conditions or undertakings mentioned in the document
- Any material breaches of ethical undertakings or events that impact upon the ethical conduct of the research

The Principal Researcher must report to the JREC in the prescribed format, where applicable, annually, and at the end of the project, in respect of ethical compliance.

The Ethical committee retains the right to

- Withdraw or amend this Ethical Clearance Certificate if
  - Any unethical principal or practices are revealed or suspected
  - Relevant information has been withheld or misrepresented
  - Regulatory changes of whatsoever nature so require
  - The conditions contained in the Certificate have not been adhered to
- Request access to any information or data at any time during the course or after completion of the project.

The Ethics Committee wished you well in your research.

Yours sincerely

PARIRENYATWA GROUP OF HOSPITALS
APR 2024
P. O. BOX CY 198, CAUSEWAY
HARARE, ZIMBABWE

Dr T. Gurure
Principal Clinical Officer

4 April 2024

JREC form
Version 2.0
28 October 2021

Appendix 10 Research conduct confirmation

All communications should be addressed to
"THE GROUP CHIEF EXECUTIVE"
Telephone: 701520-701554/7
Fax: 706627
Website: www.parihosp.org

PARIRENYATWA GROUP OF HOSPITALS
P.O Box CY 198
Causeway
Zimbabwe

19 April 2024

RE: REQUEST FOR PERMISSION TO CONDUCT RESEARCH STUDY AT PARIRENYATWA GROUP OF HOSPITALS - MICHAEL H. MARANDURE (R136331R)

The above matter refers.

The Parirenyatwa Group of Hospitals hereby acknowledge that Michael H. Marandure conducted research from the 8th to the 19th of April 2024; -

The Mediating Role of Family Caregivers Attitudes in the Relationship between Knowledge and Healthcare-Seeking Behaviours for Effective Psychosis Management.

The permission was granted subject to the following conditions:

1. The researcher will provide all sundries necessary for sample collections.
2. The researcher sponsors all payments for the tests involved.
3. The hospital incurs no cost in the course of the research.
4. All relevant departments are notified in advance and the Head of section/ ward signs acknowledgement of such notification.
5. The conduct of the research does not interfere or the daily service provision by the hospital.
6. Formal written feedback on research outcomes must be given to the Director of Clinical Services.
7. Permission for publication of research must be obtained from the Director of Clinical Services.

PARIRENYATWA GROUP OF HOSPITALS
APR 2024
DR M. MHLANGA
ACTING CLINICAL DIRECTOR
P. O. BOX CY 198, CAUSEWAY
HARARE, ZIMBABWE