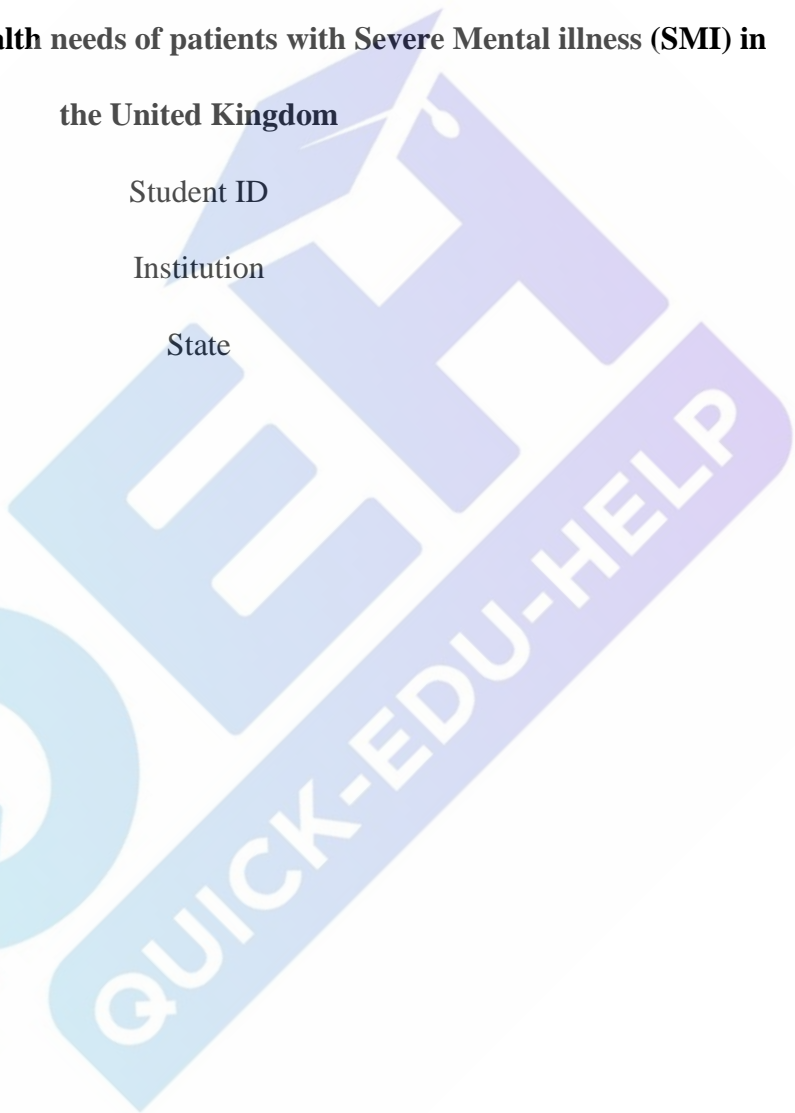


**A Meta Synthesis exploring the challenges facing Mental Health Nurses in
addressing the physical health needs of patients with Severe Mental illness (SMI) in
the United Kingdom**

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EXECUTIVE SUMMARY

Meta-synthesis is a qualitative secondary study that aims to provide a generalised deductive analysis of the research question. This study aims to synthesise the findings by the analysis of qualitative literature addressing the challenge faced by Mental Health Nurses (MHN) in addressing the physical needs of patients with severe mental illnesses (SMIs) in the UK. Literature has reported various risk factors of increased physical morbidity among mental health patients, while the comprehensive meta-synthesis of the qualitative studies can provide a generalised analysis of the specific findings. The aims of the research were achieved through a meta-synthesis research design. The findings of the study were retrieved through thematic analysis in the form of three main themes. The NHS prescribes an integrated care plan for satisfactory patient outcomes addressing the patient's mental and physical health needs (NHS, 2015). Tense implications of the integrated measures are being addressed in the National policies because of the interlinked effect of the physical disease on mental health and vice versa. Several studies have reported that patients with chronic disease have a high rate of anxiety and depression. On the other hand, Firstly, mental health nurses related performance challenges, secondly, patient-perceived challenges of effective physical health management. Thirdly, organisational challenges of the inappropriate implementation of physical monitoring. Moreover, subthemes were also evolved, addressing the opportunity for educational and professional development among nurses, increasing patient awareness of the physical health status, medication reconciliation strategy, mental health nursing leadership, organisational program and strategic policy implementation. The challenge reported by the studies helps the researchers to provide intervention measures. The long-term goal of this challenge can address the social, economic and healthcare-based inequalities faced by patients with severe mental illnesses (SMI) in the UK.

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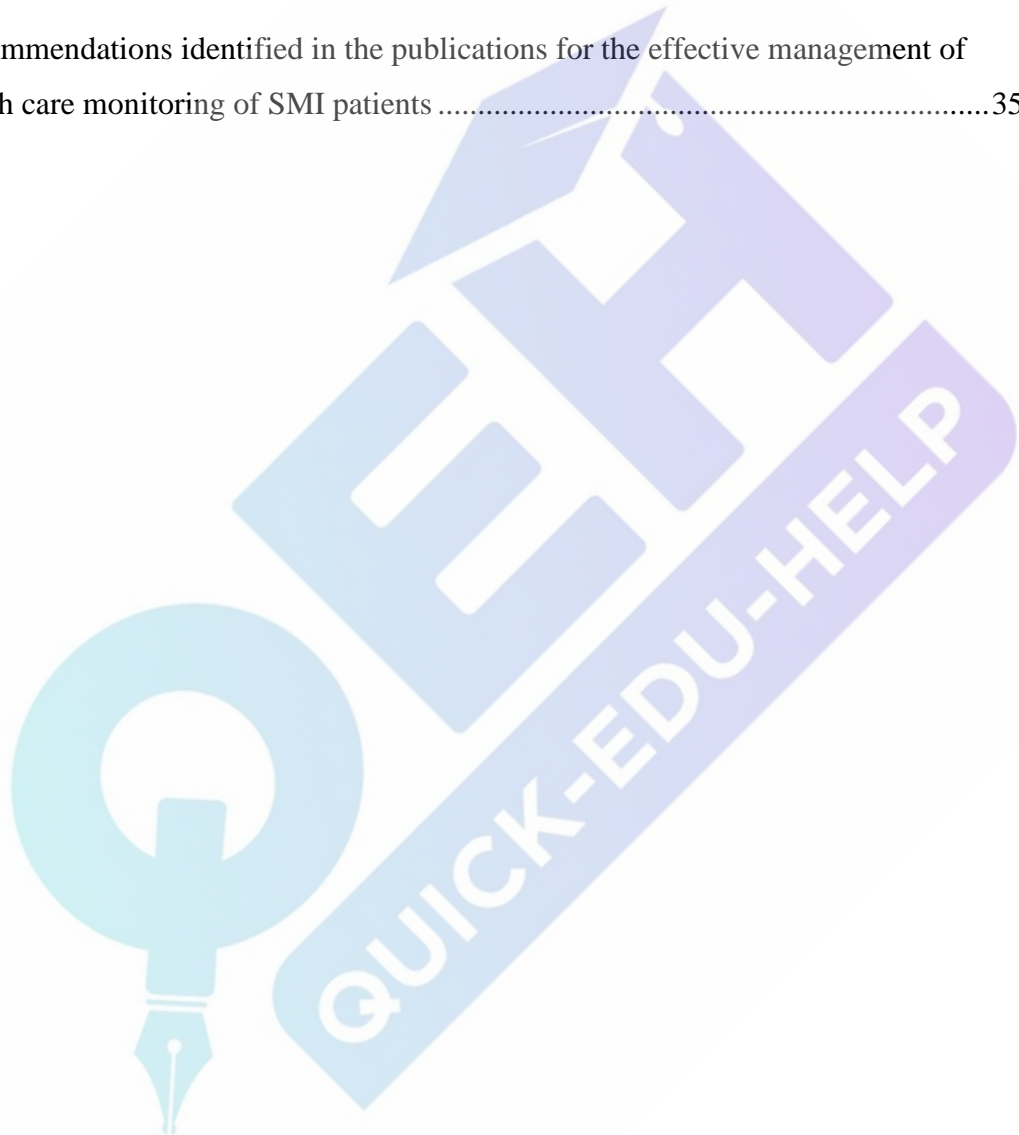
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INTRODUCTION

Physical and mental health is interlinked, and many scholars have studied the integrated importance of physical and mental health effects in the past. Those with severe mental illnesses (SMI) such as psychosis, manic disorder or bipolar disorder are likely to fall physically ill more than the general population (Vancampfort et al., 2015). Research has revealed greater levels of physical sickness led to a 7–20-years decrease in life span (Chesney et al., 2014). Persons with SMI have at most double the chance of overall mortality as compared to persons without a psychiatric condition (Haddad et al., 2016). There is a need to tackle physiological health inequities among persons with SMI. Considering this, execution of physical health promotion and assessment continues to be inadequate (Bramberg et al., 2018). Considering that nurses working in mental health care units have the most face-to-face interactions with patients with SMI, it is logical to expect that caregiver characteristics may create hurdles to successful physical health treatment delivery.

Mental health nurses have crucial opportunities to help people improve their physical health alongside their mental health, both in inpatient settings and in the community, but evidence points to numerous challenges, including a deficit in their proficiency to meet these needs. Severe mental illnesses (SMI) are chronic mental conditions caused by dynamic social, economic, spiritual, physical, and cognitive factors affecting the motor and cognitive abilities of the individuals leading to behavioral changes (Davidson and Guy, 2012). There is overwhelming evidence from the Marmot Review (2020) on health inequalities that addressing lifestyle factors alone will not increase the life expectancy of people with mental health problems. Mental health nurses have an important role in addressing all determinants of health through assessing, referring, delivering and facilitating psychosocial, psychological and physical interventions. Therefore, there is a need to address the underpinning factors of mental and physical health deterioration including economic, social, physiological and psychological to adapt efficient integrated outcomes of the mental health well being in SMI patients. According to the scholar's consensus reported in a study by Delespaul (2013) patients with severe mental illnesses tends to have a psychological condition with underlying impairment of the social, cognitive and economic functionality and physiological dysfunctions as well.

As result, eight key areas for action was identified by Department of health in 2016 to improve health outcomes have been identified which Mental health nurses are required to play a key role in order to promote the holistic wellbeing of patients with severe mental illness.

These areas are as follows: Support to quit smoking, tackling obesity, improving physical activity levels, reducing alcohol and substance use, Sexual and reproductive health, Medicine optimisation, Dental and oral health and reducing falls (DH, 2016). The author of this proposed study having worked as community psychiatric nurse in recent past has undertaken numerous assessments and reviews of patients along with colleagues where essential questions about patients' physical health have been missed. Therefore, it will be invaluable to conduct a meta synthesis of current qualitative primary research to explore the barriers to addressing the physical health needs of patients with severe mental, illness. Current research have focussed separately on inpatient and community nurses' view on addressing the physical health needs of patients in the different settings. However, to tackle any shortfalls in addressing the physical health needs of patients with SMI it is important to produce comprehensive research which aggregate all the research findings to inform future policy and identify future research areas.

1.1 Background

Numerous qualitative research performed throughout the last 15 years indicate MHN scepticism about enhancing the physical health of persons with SMI. According to a study MHN tends to have less inclination toward addressing the physiological health demands of the SMI patients because of the poor professional training and organisational impairment (Scott and Happell, 2011). (Gray and Brown (2017) questioned 18 MHNs and 15 clients about their perspectives on working as a team to promote overall health. According to the researchers, nursing staff did not consider encouraging physical health as a primary goal. The patients believed their physical health demands were also not being met effectively. Likewise, Hyland et al. (2013) found that mental health clinical staffs were sceptical about their abilities to enhance the health and well-being of SMI patients residing in the area. These unfavourable staff sentiments are especially troubling since they could impact patient evaluation and management. Contacting mental health services does not always ensure people will have a physical health exam, have their physical health evaluated, or undergo the assistance and experience they require to live a healthy lifestyle. There appears to be a gap in agreement among experts on the function of mental health nurses in enhancing service consumers' adequate care, with ambiguous duties among inpatient and outpatient care in satisfying these requirements (All Parliamentary Group, 2015). According to the NHS Long Term Plan and NHS Mental Health Implementation Plan 2019/20 – 2023/24, they will construct massive and interconnected models of primary and preventive psychiatric services to provide more comprehensive treatment to patients while also promoting appropriate balance. For this, the

mental health providers must be aware of their tasks and functions and be prepared with the necessary abilities to meet patients' physical health requirements in both hospital and community-based settings.

As demonstrated in the studies from the United Kingdom (Robson et al., 2013), more participants in a study believed that mental disorders hindered enhancing the physical health of patients. For instance, many participants thought that people with mental illnesses were uninterested in boosting their overall health and were unmotivated to work out. Diagnostic overshadowing may be accountable for some of the physical health inequalities reported in patients with SMI. Prior research has found that patients with mental diseases who presented to health institutions with major physical ailments were less likely to be hospitalized and get proper care than those without a psychiatric condition (Shefer et al., 2014). Assessing if female patients have undergone cancer health screenings was not a common task for nurses in research conducted by Howard and Gamble (2011). People with SMI are more likely to develop certain malignancies and have poorer cancer prognosis (Howard et al. 2010), and diagnostic test is less common, specifically among women with psychopathology.

Current recommendations for numerous mental illnesses (NICE, 2014) and a reward for supplementary healthcare professionals to promote healthy mental well-being and care for the people with SMI (a Commissioning for Quality and Innovation payment framework - CQUIN) are examples of rational grounds and bonuses to resolve the prevention and recovery of individuals with SMI (NHS England, 2014). The CQUIN assists in ensuring that clients' psychosocial health and diagnoses are documented. It strives to improve communication among patients, healthcare workers, specialized mental health providers, and care recipients.

1.2 Problem Statement

Consequently, it has been proposed that one explanation for persons with SMI's inadequate physical health is the insufficient expertise and unfavourable mindsets of Mental Health Nurses (MHN), which may lead to patients' physical health requirements being disregarded (Robson and Haddad, 2012). The Five Year Forward View for Mental Health (2016) has underscored that service users with SMI have lower overall health than the general population and are frequently unable to reach the physical health services they require, resulting in additional health disparities. There has been an upsurge in qualitative research connected to doctors' attitudes toward the general medical treatment of patients with Severe Mental Illness. Still, there is a significant absence of coherence in the many studies. Butler et

al. (2020) developed a survey into the health professionals' attitudes toward the physiological condition of individuals with SMI in Local mental health teams, whereas other investigators have started to look at inpatient physicians' attitudes toward patients' physical well-being utilizing various methods and techniques. Consequently, generalizing the conclusions of the issues faced by mental health nurses is difficult. Therefore, the current study aims to synthesize primary qualitative findings from prior literature to investigate the challenges faced by MHN's in meeting the physical health needs of patients with SMI.

1.3 Rationale

Mental health nurses have significant possibilities in assisting individuals in making their physical health and mental health better, including both in the hospital setting and the communities, but data indicates several problems, such as a lack of expertise in meeting both requirements. The Marmot Review (2020) on health disparities supports the assertion that improving lifestyle variables will not raise the average lifespan of those with mental health disorders. Mental health nurses play a critical role in tackling all physiological changes by evaluating, recommending, administering, and promoting sociocultural, mental, and physiological therapies. Recovery-oriented facilities and peer-led strategies that fix the underlying causes of health inequality and injustice will support clients in interactive relationships, gain access to adequate education and jobs, and improve their health and quality of life and adaptability; all of these will positively impact their physical and mental health.

The most recent efforts aim to enhance coordinated care for patients with SMI when they use resources for underlying medical or physical health issues, such as help from a consultant psychiatrist in Urgent Care Clinics (Rodgers et al., 2018). However, there are fewer data available about comprehensive care programs that address the overall health needs of the population with SMI once they access mental health services, such as the way their physical health is addressed in a psychiatric ward or highly specialized mental health facility, therefore the current study aimed to fulfill the gaps that prior researchers left unfulfilled by identifying the challenges faced by MHNs while addressing physical health needs of patients with SMI particularly in the UK. The research focused on this topic mainly because several SMIs can be detected and treated earlier through regular health checks, albeit the frequency of screening among persons with SMI may be lower than in the overall population. According to a UK survey (Royal College of Psychiatrists, 2014), 33% of persons with schizophrenia had undergone appropriate coronary heart disease assessment in the preceding 12 months, and

participation in breast, cervical and gastrointestinal screening has been reported to be poorer amongst individuals with SMI globally.

1.4 Research aim

This research aims to synthesize and analyze prior primary qualitative literature related to the challenges faced by Mental Health Nurses (MHNs) in addressing the physical needs of patients with severe mental illnesses (SMIs) in the UK.

1.5 Research Objective

To investigate the barriers faced by mental health nurses to handle the physical health requirements of patients with severe mental illness by consolidating existing qualitative primary research results.

1.6 Research questions

The current study is aimed to investigate the research question:

What challenges do mental health nurses face in addressing the physical health needs of patients with severe mental illness in the UK?

1.7 Research significance

The identified challenges to the effective application of physical screening methods can be classified as budgetary restrictions, stressors, ambiguous individual professional limits, and a reported lack of management education and competencies. Authors of various studies identified various technical and financial barriers to the implementation of data collection, including restricted personnel time and difficulties in acquiring monitoring devices (Castillo et al., 2015; Yeomans et al., 2014). MHN's reportedly faced barriers in resources and time for performing physical health checks of patients with SMIs within the NHS services. Therefore, in the current research using the meta-synthesis of the primary qualitative studies technique, the goals were to evaluate and analyze challenges faced by MHN's while addressing the physical health needs of patients with SMI so that interventions can be explored that might enhance the adoption of or accessibility to, any physical medical checks among persons with SMI, as well as to understand what will remain effective for whom in what environment and why. The meta-synthesis of the studies will provide vital new information and provide a more comprehensive picture of the efficacy of the therapies.

In collaboration with peers, many psychiatric experts have conducted multiple examinations and evaluations of patients in which critical issues concerning patients' physical condition were overlooked. As a result, doing a meta-synthesis of existing qualitative primary research to investigate the challenges of treating the physical health requirements of psychiatric patients will be beneficial. The ongoing study has focused on hospital and community nurses' perspectives on treating patients' physical health requirements in varied contexts. Nevertheless, to overcome gaps in meeting the physical health requirements of patients with SMI, thorough research that aggregates all the study findings to facilitate future policymaking and suggest future research opportunities is required.

1.8 Research structure

The research was based on the following research structure:

1. Chapter 1 Introduction provided a background on the research issue, the rationale, research aim and the significance of the research in question.
2. Chapter 2 Background provided a comprehensive review of prior literature relevant to identifying the variables of a study and sets a background of the research process. Moreover, it also provides a gap analysis of the previous research providing the need for future research implications.
3. Chapter 3 Methodology discussed the research method employed to undertake this study. This section also provides a systematic literature search to analyse the requirement of the current study. The methodological approach used in this study such as the interpretive meta-synthesis of primary qualitative studies has also been selected through a detailed process of systematic literature search.
4. Chapter 4 Results will provide the thematic analysis of the qualitative studies selected after the systematic literature search. The chapter will describe the themes retrieved through the detailed analysis of selected publications.
5. Chapter 5 Discussion related the current findings with the research objective backing it with evidence and similar prior studies addressing the research question and aim. This chapter also identified the implications of research and its limitations.

6. Chapter 6 Conclusion chapter will provide the summary of the research systematic process and findings of the study addressing the need of the project and its implications in the current study as well.

2. LITERATURE REVIEW

A literature review is an important part of academic research, built on existing prior work and the extent of knowledge advancement in a particular field (Kivunja, 2018). This section provides the background of the current study, addressing the need of the project and analyse the emerging research questions. The literature review also helps justify the background of a study, identifying gaps in the literature, providing convincing interpretations, and generalizing the existing findings (Xiao and Watson, 2018). The summary of the literature reviewed in the background identifies the gaps in the study proposing the emerging research questions and further aids the development of the research hypothesis (Kivunja, 2018).

Severe mental illnesses (SMI) are chronic mental conditions caused by dynamic social, economic, spiritual, physical, and cognitive factors affecting the motor and cognitive abilities of the individuals leading to behavioural changes (Davidson and Guy, 2012). The most common SMI conditions are schizophrenia, chronic depression, panic disorder, and manic depressive disorder (Murphy et al., 2012). The increase in life expectancy has increased the risk of SMI from chronic and acute causes (De Hert et al., 2014). SMI patients face a higher rate of premature deaths, around 15-20 years of the onset, mainly associated with inequalities in physical health (Firth et al., 2016). The literature identifies several important aspects associated with understanding SMI and proposes the research questions and addresses the aim of the study. This section identifies the challenges and intervention measures associated with the gaps in the literature and the research limitations.

2.1. Importance of physical health monitoring in the patients with severe mental illnesses (SMI)

The physical and mental health of the individuals is interlinked, providing overall well-being. The initiatives of the "triple integration" care plan implemented by the National Health Sciences (NHS, 2015) emphasize the integration of health and social care plans with the primary specialist care provisions, including physical and mental health care. The report published by the NHS independent Mental Health Taskforce of England also addressed the spanning integration of people's needs based on their physical, mental and social needs (Naylor et al., 2016). According to the biopsychosocial framework, the integrated care system is based

on trends of sub-specialization of education, cultural barriers, institutional barriers, and a separate payment system for physical and mental health care (Nylor et al., 2016).

2.1.1. Physical health aspects of the psychological or mental health conditions

In order to understand the implications for SMI patients in the literature, it is important to analyze the importance of physical assessment in the literature. The community-based management of patients with severe mental illnesses is a particular challenge for the relevant stakeholders. The delivery of acceptable safe, and efficient care is the responsibility of the health care providers (Murphy et al., 2012). According to the Nursing and Midwifery Counselling codes of ethics, the nurses are responsible for providing safe, effective, efficient, and person-centred care addressing the physical and mental health issues (NMC, 2014). The Department of Health of the UK also promotes the regular monitoring of severe mental health patients with clinical assessment, body mass index and sexual dysfunction in order to effectively guide the antipsychotic agent's prescription (Davidson and Guy, 2012). Study conducted by Bradshaw and Pedley, (2012) show that people with severe mental illnesses (SMI) have a high mortality rate from chronic diseases compared to those with mental health. Mental Health Nurses (MHN) are concerned with providing effective care to psychotic patients in hospital care settings.

There has been an increase in qualitative studies related to clinicians' attitude to the physical health care of patients with Severe mental Illness, but the lack of synthesis in the different studies is noticeable. Butler et al (2020) conducted qualitative research into the attitude of Community mental health teams' clinicians to the physical health of patients with SMI whilst other researchers have looked at in-patient clinicians' attitude to patients' physical health using different methodological approaches. As a result, making it impossible to generalise the findings of the challenges being faced by mental health nurses.

As reported by De Hert et al., (2012), antipsychotic drug agents like thioridazine, and ziprasidone, mainly used antipsychotic drugs, causes metabolic disorders, increased weight gain, and cardiovascular implications. Several antipsychotic drugs are associated with increased weight gain, insulin dysregulation, glucose imbalance, and impaired regulation of the hormones (Bradshaw and Pedley, 2012). According to another study, after eight weeks of the treatment, the patient suffers from insulin resistance, glucose, and cholesterol dysregulation, and weight gain conditions worsening with the treatment duration to accumulation of low-density lipoproteins, and triglycerides, leptin, and ghrelin levels

(Abdallah et al., 2016). Therefore, the primary health practitioners and psychiatrists must monitor the physical health indicators for any symptomatic changes in metabolic markers. However, still, the researches lack the proper mechanism of the metabolic disorders interlinked with the SMI conditions of the patients (Abdallah et al., 2016). Still, In the light of the evidence of the adverse side effects of the long-term treatment medication of the psychotic disorders in SMI patients, the researchers have identified certain risk factors. The most common risk factors are poor lifestyle, smoking, alcohol, drug abuse, excessive weight gain, diabetes, and cardiovascular implications, causing a negative view of the patients themselves and poor adherence to the treatment (Cooper et al., 2016).

Patient with serious mental illnesses (SMI) also suffers from physical health conditions, including cardiovascular disease, obesity, diabetes, or dyslipidemia. Poor ability to configure normal routine and importance of health status, the eventual everyday issues of illicit drug abuse, lack of physical exercise, inappropriate dietary habits, and adverse effects of medication affect the dynamics of health recovery (Glover et al., 2013). The complex health condition of SMI patients requires multisectoral management of the physical and mental symptoms compared to the general population groups (Yogaratnam et al., 2013). The morbidity and mortality rate are comparatively higher in patients with severe mental illnesses than in the general population groups (Murphy et al., 2012). Clinicians are recommended to incorporate the physical assessment as a part of mental health treatment because of correlation. Patients with schizophrenia have a 20% mortality risk from medical conditions, with two-thirds of the patients dying from cardiovascular complications (De Hert, 2012).

Although the mechanism of the development of cardiovascular and metabolic implications lacks the effective strategic implications although it does address the risk factors of the associated lifestyle choices with increasing symptoms of obesity, cardiovascular disease, and diabetes in SMI patients (Murphy et al., 2012), a previous analysis of the 1.7 million UK primary care patients identified that people diagnosed with schizophrenia and bipolar disorders have a high risk of hypertension, diabetes and cardiac implications as compared to the general population (Happell et al., 2012). Therefore, the increased rate of SMI patients affecting the quality of life and increased risk of mortality and morbidity in SMI patients requires addressing potential mitigating factors.

2.1.2. Psychological health effects of the physical health conditions

The integrated care system is not only required for mental health patients but also for patients suffering from long-term chronic diseases. Therefore, the integrated care plan should comprise the diverse diagnostic criteria of the physical and mental symptoms (Nylon et al., 2016). Physical diseases like diabetes, obesity, and chronic cardiac complications often affect the patients in terms of depression and fear of long-term disease (Chaddha et al., 2016). Physical disabilities like pulmonary diseases and cardiovascular complications also affect the social and economic disparities, with social isolation bringing the mental complications out-front (Bashiri et al., 2016). According to the patient's reported perceptions, the integrated care plan must include meaningful psychological support to effectively adapt to physical conditions (Bashiri et al., 2016).

On the contrary, failure to achieve integrated psychological care for patients with physical conditions can cause a severe prognosis of the disease as well (Nylon et al., 2018). The most common mental health implantations reported in patients with chronic diseases are depression, anxiety, and fear of social isolation. As reported earlier, SMI patients have underlying comorbidities, causing an increased risk of psychotic events. Therefore, it is necessary to provide an integrated care plan for patients reducing socio-economical and efficient care challenges.

2.2. Factors affecting the physical health status of SMI patients

The high significance of the premature mortality rate among patients with severe mental illnesses (SMI) is attributed to the natural causes and underlying physical diseases rather than mental health (Murphy et al., 2012). There is a need to identify the factors associated with poor physical health monitoring in SMI patients. The literature reports that the factors related to the nervous system, proinflammatory factors, metabolic factors, and hypothalamic factors are associated with causing a high risk of diseases in SMI patients (Firth et al., 2016). Several factors, including lifestyle choices and eating patterns, affect the extent of diseases in SMI patients. According to an estimate, the smoking rate is 80% high in psychiatric populations than compared the others (De Hert et al., 2012). Illicit drug abuse, unhealthy eating habits, increased appetite, and a sedentary lifestyle, are also common among patients with poor mental health (Smith et al., 2021). Lack of exercise is a health indicator for various diseases and negative health outcomes. The patients with SMI have less engagement with the exercise

because of the perceived barriers of the psychiatric medication side effects and physical comorbidities (Glover et al., 2013).

The socio-economic factors also affect the physical health status of SMI patients. According to Thornicroft (2011), patients with severe mental illnesses, including schizophrenia, have less access to medical care and report physical symptoms as the primary cause of illness, which increases the risk of chronic physical conditions among SMI patients. Moreover, most SMI patients are unemployed, which affects impacts of social-economic deprivations with the inability to buy their own food, clothing, housing, and bear healthcare expenses (Katon, 2022). The ailments of chronic mental illness having higher implications for determining the patients' physical health are often neglected by the physicians and healthcare providers. Chronological stress and depressive disorders also pose a health risk of behavioral and psychobiological changes causing chronic medical disorders with sudden symptoms of burden, functional impairment, and metabolism complications (Firth et al., 2016). The combination of increased stress along with the nature and severity of the mental illness and unhealthy dietary patterns increases the subsequent obesity and sedentary behavior in patients (Henderson et al., 2015).

According to Henderson et al. (2015), the frequently challenged frontline staff lacks the ability to plan and implement the appropriate physical health interventions in SMI patients. Henderson et al. (2015) also address that the literature lacks the underlying multicausal factors of social, environmental, and economic nature affecting the severity of the mental illness. According to Mwebe (2017), the ad hoc manner of dependency on several factors, including competency of the nurses, attitude and behavioral aspects of the physicians, interservice collaboration at the healthcare, and resource availability, affects the physical health status monitoring. The nurse's health beliefs and patients' vulnerability towards the understanding of health care impacts the physical health status as well (Kaufman et al., 2012). Moreover, the collaboration between the general practitioners, nurses, and other healthcare professionals providing integrated health care is essential for the efficient management of severe mental illness patients.

2.3. Barriers to poor physical health management in SMI patients.

The UK healthcare department aims to provide efficient care to SMI patients, even though the care practices face certain barriers, challenges, and lags in the efficient implications. The SMI patients are reported to have limited access to healthcare because of the limitations

of psychopathology, cognitive impairment of the patients, social status, inappropriate health care system, and poor-quality care (Kaufman et al., 2012). The shortage of the nurses, staff, training, and confused role of the concerned stakeholders integrate a literature gap in addressing the challenges in addressing the physical health of severe mental illness patients (Rodgers et al., 2018). Unfortunately, the incapacity of the knowledge and skills of the primary nurses related to mental health care and fear of non-acceptability of the care poses a gap in the practice of efficient physical and mental care of the SMI patients (Way et al., 2018). However, the obligatory role of MNH or other mental health services does not entail any specific physical health goals in SMI patients, and it lacks evidence of the implementation of physical health standards and care practices by MNH as a routine practice (Davidson and Guy, 2012). Therefore, conducting a comprehensive metanalysis and clinical qualitative studies on the role of MHH and general primary care nurses with SMI care can provide a better analysis of the physical and mental health care practices.

The physical health needs of the patients with mental illness are often ignored or attributed to less importance. According to De Hert et al. (2010), the poor attitude of the health care professionals, lack of awareness of the physical health diseases, and lack of skills or knowledge cause poor healthcare management of the patients with severe mental illness (SMI). There is also evidence that people having SMI faces disadvantages of the healthcare provisions in terms of inequality, poverty and unhealthy lifestyle choices affecting their access to care and assessment measures (Henderson et al., 2015). The nurses are often reported to be ambivalent about their role in the physical assessment and monitoring of patients with severe mental illnesses (SMI) (Bradshaw and Pedley, 2012). Evidence also suggests that the nurses lack the proper training and confidence in the physical intervention measures (Henderson et al., 2015). The hindrances in prompt screening, diagnosis and management of physical health cause improper management of mental health. According to Glowacki et al. (2019), promoting physical activity and optimal health status by incorporating lifestyle changes faces immense barriers to the patient's beliefs, risk of consequences, environmental context and inappropriate resource availability. The inclusion of the systematic change in the physical healthcare of SMI patients requires training, skill and resources.

According to Muralidharan et al. (2019), the lack of frontline mental nurse leadership with skill and knowledge of high-quality care for the residents of SMI care units poses a large challenge for efficient care practices. The staff training overlaps with the development of skills, knowledge and professionalism of the nurses with strategic training and curriculum are

required. The organisational barriers of the health care units in the provision of care, including lack of communication, fragmented care and unable to build a good relationship with the patients, reduce the effective care practices (Bixen et al., 2016). The qualitative aspects of the study identified a significant aspect of the nurse-patient relationship that affects the physical health status of SMI patients overlapping with the themes of effective communication, development of trust, chaotic family history, advocacy of the health issues around pain and comfort, need for support and perceptions of no right place to die (Morgan, 2016). The education of nurses (MNH), psychiatric stakeholders and palliative care nurses are required, with collaboration and communication development.

Another study reported that the personal barriers of stress, isolation, lack of family support, community unacceptance, and stigma of the disease-related complications affect the physical health, increasing the risk of obesity (Bixen et al., 2016).

2.4. Evidence-based intervention measures for the SMI care

Managing SMI by professional stakeholders requires addressing mental health issues through cognitive, pharmacological and behavioural management strategies. The underlying chronic diseases require several strategies of medication adherence, reconciliation, and self-management practices, including dietary and lifestyle change measures (Way et al., 2018). The management of SMI and underlying physical health conditions require behavioural and medication intervention measures. The study by Blixen et al. (2015) addressed that the nurses should be trained with educational and skill-building measures to promote a positive experience, improvising self-management skills, optimising knowledge of SMI and comorbidity, and increase confidence in the care practices. The research has identified certain intervention measures in clinical studies through nurse reports and SMI patients reports. The study conducted by Mwebe (2017) identified that the nurses need to implement the related behavioural and lifestyle changes in the SMI patients. The provision of physical activity advice to the SMI patients is also included in the individualised SMI care benefiting the workers and patients (Happell et al., 2012). However, the relationship between the nurses and patient lead beliefs is still limited in the reported studies.

The peer support intervention has gained effective outcomes in the clinical setting expanded over the countries. The peer staff provides evidence-based mental healthcare by effectively engaging with the patients, reducing the use of emergency rooms, hospitals, promoting positive self-disclosure, role modelling and conditional regard to the patients with a

sense of community belonging to reduce depression and psychosis and increase the quality of life (Davidson and Guy, 2012). Exercise and physical activity have also been associated with significant clinical outcomes in severe mental illness patients (SMI) who face the challenge of poor adherence to the exercise interventions and participation by the patients. The quantitative study on the factors contributing to the description of barriers in SMI management was losing weight in 83% of patients, and 91% acknowledged the effects of exercise in improving health and 81% found motivation for the exercise in improved mood and 78% for the benefit of reducing stress (Firth et al., 2016). The evidence-based meta-analysis and qualitative literature have reported that exercise also improves psychological health by improving body image and acceptance in obese SMI patients (Brämberg et al., 2018).

Therefore, awareness of the beneficial effects of exercise on physical and mental health can improve the patient acceptance of the exercise regime with constant motivation by the nurses and professional staff.

2.5. Need for the research

The literature addresses the need for nursing professionals to improve medical care provisions for severe mental illness patients in primary and community care. The physician-patient relationship and coordinated care plan provide efficient mental health measures. The management of severe mental illnesses requires the collaboration of the physicians, family members and patients (Howard and Gamble, 2011). Patients with chronic depression tend to have members number of physician visits because of the longer discussion requirements of the previous diet, exercise, meditation and acute complaints of headache and abdominal pain (De Hert et al., 2012).

The researchers have identified the significant role of physicians and nurses in addressing the physical health symptoms of the SMI patients; however, the literature lacks the clarification on the role of nurses in undertaking the physical health promotion (Howard et al., 2011). The literature also found a gap in the appropriate skill set, knowledge and training measures required for the nurses to assess the comorbid physical health implications in SMI patients (Scott and Happell, 2011). Antipsychotic drugs as a cause of metabolic disease have been identified and supported by various pharmacological journals. However, the lack of clinical trials, recommendations and metanalysis of the factor for SMI patients requires further research (Rodgers et al., 2018).

The current practices of the nurses in terms of attitudes and behaviours of the stakeholders in addressing physical health monitoring are studied by the researchers for SMI patients. Still, there is a need to explore the risk analysis and causes of the unprecedented challenge of the poor physical health status of SMI patients. The perceived barriers to the delivery of the care and monitoring practices also need to be studied. The nurses reported challenges of the lack of training, skills, knowledge and awareness of the roles have also been identified as the factors affecting the poor physical health of SMI patients (Murphy et al., 2012). On the other hand, the impact of the poor service provision and the attributed challenges of the care practices are still left unaddressed. The level of service integration and significance of teamwork or coordinated physical health monitoring also needs to be addressed as a potential intervention measure (Yogaratnam et al., 2013). Therefore, the understanding of the nurses' care practices and care experience needs to be analysed to improve the environmental aspects of patient care, efficient provision of resources and development of nurse care models for SMI patients (Zolnierek and Clingerman, 2012).

However, the lack of meta-synthesis addressing the challenges, barriers and opportunities in SMI physical and mental healthcare requires a more comprehensive investigation of the studies. Moreover, the literature also lacks report diverse findings on reporting the effectiveness of the identified challenges, barriers and risk factors of the SMI physical health-related comorbidities. Therefore there is a need to accumulate the qualitative findings on the commonly faced barriers of the physiological need analysis of the SMI patients by the mental health nurses at the primary and mental healthcare units of the UK

2.6. Summary of literature review

In conclusion, severe mental illness (SMI) patients possess extreme challenges of social, economic and inequitable health care provisions because of the poor management of physical health status. The literature identifies a correlation between the physical and psychological health indicators affecting the overall well-being of the patients (Nylon et al., 2016). SMI patients often have long term adherence to the antipsychotic drugs causing hormonal dysregulation, cardiovascular diseases, insulin dysregulation, obesity and diabetes, along with other physical discomforts (Firth et al., 2016; De Hert et al., 2014). There are numerous barriers to the effective management, screening and diagnosis of the physical symptoms because of organisation, individual (nurse-based) and patient-based factors. There is a need to address the barriers nurses face while providing efficient care, emphasised by the

triple integration care plan of the National Health Sciences (NHS, 2015). Therefore, this study addresses the secondary reporting of the investigations conducted by researchers addressing the challenges of effective physical assessment carried out in SMI patients.



3. METHODOLOGY

Research is described as a scientific inquiry, which plays an important role in scientific discoveries in various fields (Thomas and Hobbes, 2010). The research is based on the theoretical framework describing the essence of the study in terms of required tools, instruments, and processes for addressing the aims of the study (Osanloo and Grant, 2016). According to Jensen (2020), the integration of the theoretical framework of research in the methodological implications of the study helps the researcher to assess the goals, refine the research questions, and develop a realistic methodology research design for achieving the aim of the study. Therefore, the methodology section holds immense importance in order to conduct research effectively and efficiently; in case of failure to use appropriate methodology, the risk of invalid results is significant (Kumar, 2018). The essential element of selecting a research methodology include validity, less risk of biasness, reproducibility, synchronization with the research aims and objectives, and less risk of invalid results (Osanloo and Grant, 2016).

It is also described that analytical methods appraise the research aims in terms of calibration methods, suitability, the sensitivity of the research design, requirement of the standardized measures, and ease of analysis (Shrivastava and Gupta, 2011). This research aims to synthesize the comprehensive analytical findings of primary qualitative literature addressing the challenges of care practices faced by Mental Health Nurses (MHN) in the physical health needs of patients with severe mental illness (SMI) in the UK. This is a secondary study identifying the challenges of physical health assessment faced by MNHs reported in various primary investigations. The primary studies reported qualitative findings of the lived experiences of MHNs, opinions, and perceptions of MHN's by conducting online or face-to-face surveys and interview reporting. The current study analyzed the primary investigations to provide a meta-synthesis of the challenges faced by the Mental Health Nurses (MHNs) in dressing the physical health assessment and underlying conditions of the SMI patients.

3.1. Rationale of the research methodology

The qualitative studies contain a broad range of extensive data answering the questions of 'why' and 'how,' providing a human experience of the physical phenomenon (Ryan, 2018). The extensive nature of the qualitative research and its interpretation analysis needs to be reviewed and comprehensively analyzed through metanalysis or meta-synthesis. The research design identified appropriate for the current study is meta-synthesis. Meta-synthesis is qualitative research as metanalysis but has a certain different set of implications. The aim of

the meta-synthesis literature review is interpretive rather than deductive (Walsh and Downe, 2005). According to Zimmer (2006), meta-synthesis is cumulative qualitative research that attempts to integrate the findings of several primary investigations with an interpretive intent rather than aggregating. On the other hand, the meta-analysis addresses the quantitative studies and provides an aggregating intent of the study, with a purposeful accumulation of the empirical findings of primary studies (Walsh and Downe, 2005). Therefore, the secondary data collected by reporting the primary qualitative studies have been interpreted by the meta-synthesis into the cumulative findings of the study. Therefore, the nursing researchers urge to conduct a well-designed meta-synthesis to generate comprehensive findings for policy formulation in clinical practices. They also encourage meta-synthesis for the skillful and unbiased criteria of the selection of policy measures to make it more readily available (Hoon, 2013). Moreover, nurses are encouraged to utilize the findings analyzed through meta-synthesis in evidence-based clinical practices and formulation of health care policies (Zimmer, 2006).

3.1. Research Methodology

The research methodology is the protocol of research strategy that delineates the research process and undertaken tools of the research as well (Burns and Groove, 2014). The research methodology is comprised of research philosophy, research strategy, research design, and underlying tools for data collection and analysis. The current study is secondary research aiming to analyse the qualitative research on the research subject. The secondary study can be conducted through systematic literature reviews, meta-synthesis, and meta-analysis. The systematic literature review provides the reproducible aspects of the findings reducing the biasness of the data collection process (Dziopa and Ahem, 2011). The meta-synthesis qualitative interpretive analysis of the primary research addressing the personal experience of the Mental Health Nurses (MHNs) is conducted in this research. The reason behind the selection of meta-synthesis is that it provides a cumulative interpretive approach to the individual research findings as compared to the meta-analysis, which reports the quantitative studies. The research aims to identify the challenges experienced by MNHs in the assessment and monitoring of the physical health status of patients with severe mental illnesses (SMIs). The experience reported by the MHNs, psychiatrists, and other mental health and primary care professionals can provide a better understanding of the objectives.

3.2. Research philosophy

This research is based on the Interpretivism research philosophy. The data collected through the research needs to be interpreted into the generalized interpretations of the study in order to provide insight on what are the challenges faced by mental health nurses in providing physical care in addition to mental care to the patients with severe mental illnesses. According to Alharahsheh and Pius (2020), interpretivism provides an in-depth analysis of the variables of the study and identifies the factors associated with contextual phenomenon considering the human experience as the core of the phenomenon. Moreover, the philosophy of interpretivism considers that human experience is not a physical phenomenon and cannot be considered and measured on the physical standards (Ryan, 2018). The interpretivism approach provides the explicit meaning to the underlying experiences that are unaddressed in the general experiences, interviews, and questionnaire-based studies (Ryan, 2018). The current study also reported the research providing lived experience of the mental health nurses and other health care professionals in the light of challenges faced in the physical assessment and monitoring of the severe mental illness patients. The studies have reported the challenges and barriers of resources, individual and organizational integrated with the physical and mental health care of the SMI patients.

3.3. Research approach

According to Walsh and Downe (2005), the aim of the meta-synthesis is to provide a review and preserve the initial meaning of the qualitative findings rather than providing a deductive analysis. The inductive approach provides a general conclusion of the specific findings, while the deductive approach provides a specific conclusion to the generalized findings of several studies (Gregory and Muntermann, 2011). The approach used in the current study is deductive reasoning as the extensive qualitative findings of various studies providing a specific conclusion for the primary investigations have been analyzed into the general conclusion and interpretation of the meta-synthesis, providing significance to the participation of each primary study. Therefore, the articles selected for the purpose of analysis are analyzed in terms of challenges and barriers posed by individuals (MHNs), organizations (primary care setups), and SMI patients.

3.4. Research strategy

The current study recruited specific search strategy criteria for locating the qualitative studies exploring the health care practices and experiences, attitudes, behaviors, and beliefs of

the Mental Health Nurses (MHN) and other professional stakeholders. The experience of professionals reported through primary investigation, interviews, observational studies, questioner-based studies, and surveys was included in the research. The care practices specifically related to the 'physical health monitoring' were included in the search strategy. The qualitative studies having significant keywords were included in the secondary data collection. The studies included in the search strategy were not based on the language and geographical constraints. All international publications were included in the search strategy.

3.5. Research design

Reporting the qualitative studies in comprehensive forms destroys the integrity of the reported human experiences and therefore faces a risk of marginalization by the researchers and concerned policymakers (Walsh and Downe, 2005). The qualitative meta-synthesis provides the qualitative studies to formalize the knowledge and enhance the contribution to scientific discoveries. It also increases the usefulness of qualitative studies by providing a comprehensive review of the phenomena under study (Finfgeld-Connett, 2010). The diverse advantages of meta-synthesis, including generalizability, ensuring validity through systematic sampling, maintenance of well-documented audits, and development of theoretical implications, make it more acceptable in extensive qualitative studies (Hoon, 2013).

The rigor of meta-synthesis provides a careful interpretation of the data across studies based on the content, population, and factors (Finlayson and Downe, 2013). These integrated interpretational findings form a systematic process of study selection and analysis that reduces the risk of biasness and researcher's favouritism towards the selection of certain studies as well (Mohammed et al., 2016). Therefore, meta-synthesis has certain methodological similarities to the process of data collection and analysis as in meta-analysis. The meta-synthesis can be aggregative and deductive, but in the case of less or no prior information on the phenomenon, the inductive approach can also be used (Finlayson and Downe, 2013). The undertaken inductive method of meta-synthesis is used to generate hypotheses, theoretical grounds, and policy formulations. The qualitative studies with direct findings are not generalized but generate hypotheses. In meta-synthesis, the comprehensive analysis is developed on the theoretical grounds (Hoon, 2013). Therefore, there is a greater potential for obtaining information on the practice, underpinning strategic measures, and influencing policies of change at the organization as compared to the primary qualitative studies.

3.6. Data collection

The data was collected through an Online database search of the electronic database. Preferred reporting items for systematic reviews and Metanalysis (PRISMA) framework was used to narrow down the concerned publication. The online database of Google Schola, Cinhal, Scopus, Medline, and Pub Med was explored for the relative key terms. The primary key terms are 'mental health nurses,' 'severe mental illness patients (SMI),' and 'physical health monitoring' were searched. The secondary keywords of 'experience,' 'challenges,' and 'barriers' were sued for further screening. The PRISMA framework search findings has been attached in the Appendix 1. In addition to PRISMA screening of the articles, the quality appraisal tools were also recruited for the selection of final articles. The ENTREQ tool was used to enhance the quality of selected publications i.e. Enhancing transparency in reporting the synthesis of qualitative research. This tool consists of 21 items group checklist for the appraisal of the publications into introduction, methods, methodology, findings and literature search appraisal (Tong et al., 20122). The identified articles were screened through the abstract analysis identifying the important aspects of the study, i.e., qualitative study, reports on professional experience, primary investigation, and SMI patient's experience the physical assessment and monitoring. Articles not addressing the challenges of SMI physical care were excluded. Papers addressing the challenges of the non-SMI patients, or general psychiatric patients were also excluded from the study inclusion criteria. The identified articles were further explored for the relative analysis of themes and sub-themes.

3.7. Data analysis

In qualitative research, the instrument of measurement is the human rather than physical data. The data analysis in qualitative research Is the result of the integration of the human reported data and the researcher's perceptions (Finlayson and Downe, 2013). The data were analyzed through a thematic analysis of the reported findings. In this study, the aim of the data collection was to identify the challenges faced in inappropriate monitoring of physical health symptoms in patients with severe mental illness patients. The thematic analysis provides efficient tools for the analysis of individual findings and reports significant interpretations of the study. According to Braun and Clarke (2012), thematic analysis is a highly accessible, flexible, and effective tool used in qualitative data analysis for reporting the qualitative interpretations into generalized findings. It is also an easy method to use and interpret the data

based on similarities and differences. Thematic analysis is used in qualitative studies when the researcher's aim is to analyze the relationship between variables and establish a comparison of the evidence in terms of main interpretations (Alhojailan et al., 2012). The current study also reports the primary investigations of the researchers extensively describing the implications of the status of the physical health status of the SMI patients. The data has been analyzed into themes and sub-themes categorized into tabular forms. Three step thematic analysis was conducted, Firstly, the line-by-line coding of the original reporting of authors in the form of interpretations and quotes was analysed. The process of coding involved summarising the findings from the results and discussion of the original investigations into more descriptive issues (i.e., known as codes). The ascribed codes will provide the meaning to descriptive themes. Secondly, the grouping codes were analysed into more descriptive themes. Moreover, the pre-existing themes and sub themes of the original articles was analysed into the current themes and subthemes as well as codes to ascribe the patient-based barriers, organisational based challenges and mental health nurses based challenges.

3.8. Ethical considerations

Ethical considerations are also an important part of research consisting of human's subjects (Arifin, 2018). The current study qualitative research is also based on reporting the mental health nurses' attitudes, perceptions and lived experiences. Although the study is a secondary research based on the primary investigations of the other researchers. Therefore, there are no issues of ethical considerations needed to be addressed in this study.

4. RESULTS AND FINDINGS

The literature search of the online electronic databases identified seven qualitative studies reporting the challenges of physical health care assessment and monitoring in patients with severe mental illnesses (SMI). This section provides the findings of the thematic analysis constructed through the critical analysis aspects of the research. The main themes of the individual studies, studies selected through a standardized process criterion, have been derived into the tabular form. The descriptive findings have been categorized into primary themes and sub-themes or subcategories of the findings. The UK healthcare department aims to provide efficient care to SMI patients, even though the care practices face certain barriers, challenges, and lags in the efficient implications. The SMI patients are reported to have limited access to healthcare because of the limitations of psychopathology, cognitive impairment of the patients, social status, inappropriate health care system, and poor-quality care (Kaufman et al., 2012).

The analysis of the reported studies identified mainly three themes, having subthemes, extensively summarising the challenges faced by the mental health nurses in the effective physical health care and monitoring of the patients with severe mental illnesses. Table 1 reflects the finding of thematic analysis extensively explored in terms of research design, derivations of the studies and themes identified in the individual study. Table 2 further summarises the challenges posed by patient mental health nurses and the organisational culture of ineffective physical healthcare for patients with severe mental illnesses. The main themes identified are first, nurses related performance challenges, secondly, patient-perceived challenges of effective physical health management Thirdly, organisational challenges of the inappropriate implementation of physical monitoring.

4.1. Results:

The initial theme analysis step included the coding of the individual findings of each original publication. The results and discussion section of each study was investigated for retrieving codes illustrated in the table 2. Moreover, the stage two of thematic analysis required the further description of the themes identified after the initial coding. The table 1 illustrates the descriptive codes and themes of each study. Furthermore, the analysis of the original publications themes and subthemes were also included in the descriptive thematic analysis of the current findings.

Table 1: Thematic analysis of the identified publications. The analysis of the individual studies has been categorised into research design, derivations of the study's primary themes and sub-themes.

Author	Research design	Derivations	Themes	Sub-themes
Shuel et al., (2010)	Qualitative study, semi-structured interviews. Analysis of the retrospective documentation audit and qualitative evaluation of the	Physical health issues identified with body mass index, breast self-examination, waist circumference, pulse and diet	Difficult management of the physical health indicators of diet and exercise Lack of awareness of	Increasing the focus on physical health monitoring in SMI patients

	<p>31 community SMI patients and 9 MNH clinicians trained for health improvement profile, 4 consultant psychiatrists and 12 general practitioners</p>	<p>Physical health issues were high, Patients had high rate of smoking and alcohol consumption, Les number of patients were aware of the physical health monitoring</p>	<p>the nurses and patient reduced the physical health monitoring</p>	
<p>Mark and Smith (2012)</p>	<p>Online survey of 4000 mental health nurses in England, Only 870 nurses responded to the mail sent for the survey analysis</p>	<p>Lack of interest of the nurses in effective care practices The nurses reported high job demands, over-commitment and extrinsic factors affect the job-related anxiety and stress The demand-control-support and effort-reward factors also contribute to the effectiveness of physical monitoring</p>	<p>Organisational factors affect the work-related performance</p>	<p>A high rate of workload is related to inefficient patient physical care</p>

Hardy (2012)	Qualitative study, questionnaire analysis, mental health nurses and general practioner reported attitudes and misconceptions of the physical health monitoring of MHN	The nurse severe less motivated to work for the physical health monitoring Poor understanding of the role of the mental health nurses in addressing the physical health needs of severe mental illness patients	Poor understanding of the role of nurses	Lack of awareness of role of mental health nurses in physical and mental health monitoring Poor training of the MHN in addressing the holistic care needs of SMI patients
Mwebe (2017)	Qualitative exploratory study conducted on registered mental health nurses (MHN)	Nurses were unequivocal in addressing the standards of physical health monitoring and screening intervention strategies in the patients with severe mental illness (SMI), confusion about the role of MHN in care practices. Lack of training and awareness of	Perceived barriers to the physical health monitoring posed by medical health nurses (MHN)	Nurses have a vital role in the assessment of the physical health status of SMI patients. Opportunities for educational measures

		the integrated physical and mental health are		
Voort et al., (2022)	A qualitative generic descriptive study conducted on 15 mental health nurses via interviews	The nurses reported that: physical screening and monitoring is considered an important intervention practice for the SMI patients An apparent discrepancy exists between the nurse's reported perceptions and actual practice of the stakeholders Mental health care is the primary concern and physical health monitoring is the secondary concern of the MHN Lack of therapeutic	Perceived barriers	Physical health assessment and monitoring are not a primary concern despite the recognition of the importance of physical health. Lack of implementation of effective practices Lack of patient-nurses trust relationship

		relationship between nurses and patients		
Bressington et al., (2016)	Qualitative study, purposive sampling, interview-based data collection, and thematic analysis	Service-related challenges of frustration from a referral, lack of integrated care practices and lifestyle interventions strategies among the patients create difficult physical care assessment in the SMI patients Lack of motivation of the patients and severe side effects of the medication causes poor adherence to dietary and exercise measures Lack of availability of the local parameters	Perceived patient related challenges of poor lifestyle and motivation	Implications of behaviour changes among the patients are needed The motivation of patients for application of intervention measures Introduction of lifestyle changes by the nurses are required Requirement of the standardised care practices at local organisations

		of physical assessment and care practices		
Gronholm et al., (2017)	Qualitative study, interview-based data collection, community mental health nurses	The coordination of the care interventions improves the physical health monitoring and distinguishes the roles of nurses, psychiatrists and physicians	Nurses related Barriers to physical health assessment	Care coordination is an effective approach for SMI intervention measures
		The nurse-patient therapeutic relationship is an essential factor of physical health assessment	Organisational challenges to physical health assessment	

Table 2: Challenges reported by the publications based on patients, mental health nurses and organisational factors

Patient-related challenges	Poor self-monitoring, lack of exercise, high risk of obesity, poor dietary habits (mainly lack of 5 portions of vegetables and fruits in a day) (Shuel et al., 2010)
	Individual negligence to the intervention adherence, for example, ignorance towards non-smoking and non-drinking alterations (Mwebe, 2017).

	<p>Lack of motivation by patients because of side effects of medication and poor health status reduces the implementation of lifestyle interventions as well (Bressington et al., 2020).</p>
	<p>A patient's mental health also affects the patient's perception of health status and optimal physical health that further leading to poor management of the physical health issues (Gronholm et al., 2017).</p>
	<p>Patient's clinical illness and its severity of symptoms, psychosis events, side effects of medication, and the subsequent effect on the physical health along with poor patient-nurse coordination increases the risk of morbidity and mortality from physical health effects (Gronholm et al., 2017)</p>
	<p>Patient's illness and factors associated with illness, severity, medication side effects, and definition of physical health also impact the physical health status importance among patients (Gronholm et al., 2017)</p>
Nurses related challenges	<p>The organisational stress, workload, anxiety, depression, increased commitment, extrinsic factors of organisational resources pose a challenge to the effective SMI patient care (Mark and Smith, 2012)</p>
	<p>Lack of nurse motivation, interest and awareness of the roles related to physical health monitoring causes a gap of maintaining physical health status of the SMI patients (Mwebe, 2017)</p>
	<p>The nurse reported lack of awareness training and standardised physical health monitoring standards pose a challenge to the provision of effective care practices for SMI patients (Hardy, 2012)</p>
	<p>Perceived challenges of the lack of nurse educational, skill and training along with in-effective communication and collaborative</p>

	approaches also reduce the chances of right physical health care for the SMI patients (Mwebe et al., 2017)
	Lack of nurses-patient relationship, non-adherence to the effective mental and physical care practices and poor culture and behaviour aspects off the MHN prevents the physical health monitoring as a primary goal of MHN (Voort et al., 2020)
	Poor health education measures and frustration because of patient referral also pose a challenge to effective SMI care and physical assessment measures (Bressington et al., 2016)
Organisational related challenges	Organisational workload posed by the imbalance of nurses and mental health nurses (MHN), increased load of patients, poor availability of resources effects the care practices (Mark and Smith, 2012).
	The barriers of resource allocation, nurses' attitude and local organizational culture hinders the effective physical health monitoring in SMI patients (Mwebe et al., 2017).
	Lack of local organisational standardised care measures also cause a lack of cultural practices and nurses' attitude in physical assessment of SMI patients (Bressington et al., 2016)
	Organisational culture of poor coordination of professionals, issues of time-consuming electronic information storage system, poor reources of fudning and staffing, increased workload reduces the efficiency of physical health monitoring of SMI patients (Gronholm et al., 2017).

Table 3: Recommendations identified in the publications for the effective management of physical health care monitoring of SMI patients

Recommendations
Addressing the coping factors, work related stress factors and transactional stress model needs to be studied in research for developing mitigatory strategies (Mark and Smith, 2012)

Multifactorial research is needed to effectively develop organisational intervention measures for physical care practices (Mark and Smith, 2012).

A more integrated and collaborative approach to physical and mental health monitoring provides effective SMI care (Mwebe et al., 2017).

The requirement of integrated care plan and development of patient-nurse relationship is necessary for the physical health care of the SMI patients (Voort et al., 2020)

Health improvement profile is an effective method of addressing the physical and mental health care needs of the patients with severe mental illnesses (SMI) (Bressington et al., 2016)

4.2. Discussion

The patients with severe mental illness (SMI) faces challenges of mental health complications as well as underlying physical health related diseases (Hardy, 2012). The healthcare stakeholders, including nurse, mental health nurses, psychiatrists and physicians, are responsible for providing efficient and patient satisfactory care. Various factors of medication, sedentary lifestyle and chronic mental implications are responsible for causing high rate of physical health diseases (De Hert, 2012). However, the physical health status assessment and monitoring is often undermined in the SMI patients, because of several challenges of care faced by the nurses. This study reports the challenges faced by mental health nurses in the physical health status monitoring of the SMI patients reported through personal experience, interviews, and questionnaire-based findings. The findings of the study identified three main themes which are discussed below.

4.2.1. Theme A: Mental Health Nurses related performance challenges

The mental health nurses are the stakeholders of efficient mental and physical health care for SMI patients. The evaluation of the performance of MHN in addressing the physical health needs of the patients is important to address. Nurses are obliged to provide safe, efficient, and optimum timely care practices to the patients (NHS, 2015). Nurses recognize the role of integrated care in SMI patients. Mental health nurses are recognized to have an integrated role in physical and mental health care according to the implications of NHS (2015); however, the practical setting analysis of the publications identified that nurses are not aware of their roles in the SMI care practices. The poor nursing performance is implicated by the organizational barriers and patient negligence, and lack of motivation as well.

The nurse reported in an interview that: "With the recent shift to physical health monitoring, it's a great tool as it covers everything (Shuel et al., 2010)".

SMI patients often have a high rate of underlying physical health diseases that leads to a high rate of mortality and morbidity of the patients (Glover et al., 2013).

The general practitioners (GP) reported comments: "It's sometimes beneficial to monitor patients with schizophrenia for their general health/well-being due to reluctance to attend for bloods (Shuel et al., 2010)."

According to Mwebe (2017), the nurse reported behavior aspects including lack of motivation, poor interest in the job, job dissatisfaction, and awareness of the role of MHN in addressing the physical health needs of the patients is a perceived challenge in the efficient care practices of the SMI patients.

As reported in a study by the mental health nurse professional stated: I feel that sometimes nurses give up too easily when patients refuse to participate in physical health monitoring. I remember one time I had to approach the patient so many times for blood sugar monitoring; eventually, he agreed (Mwebe, 2017)

According to Hardy (2012), the lack of awareness of the role of nurses and professional training for standardized physical health monitoring pose a challenge to the effective care of SMI patients. The sub-themes derived from the analysis identified that the nurse related key categories of poor physical health monitoring are 'high work load', 'over commitment', 'keeping busy', 'lack of awareness', 'lack of motivation', 'inappropriate job description', 'job dissatisfaction' and 'lack of professional trainings. These fundamental factors often leads to poor management of diabetes, cardiovascular complications and other metabolism diseases and increased risk of morbidity and mortality (Mwebe, 2017; Gray and Brown, 2017).

Moreover, the lack of patient-nurse therapeutic relationship also increases the risk of unmanaged underlying physical morbidity (Voort et al., 2020). The inter-personal skills of the nurses involving communication, coordination and trust building relationship with the patients are effective therapeutic strategies (Blythe and White, 2012). The nurses having

insufficient knowledge of the physical health monitoring is unable to deal with patients of severe mental illnesses (Newman et al., 2015).

Some studies have also identified the challenges of the lack of educational and professional training measures for MHN are related to high costs of training, access to the clinical rotations, electronic health records use at hospitals, increased time investment at the patients, increased workload and financial constraints of the nurses (Creamer and Austin, 2017). Therefore, the nurses related challenges of integrated mental and physical health care are important to address. The mental health leadership also lack efficient transformational skills and complex learning that also increases job dissatisfaction and poor performance in the healthcare practices (Newman et al., 2015).

4.2.2. Theme B: Patient-perceived challenges of effective physical health management

The patients with severe mental health illnesses (SMI) are reported to have a higher risk of mortality ascribed to physical health complications (De Hert, 2012). The frequently discussed patient's motility morbidity has certain implications of physical health changes that have been analysed by various researchers. The SMI compilations also affect the patient's perceptions of physical health (Gronholm et al., 2017). The antipsychotic drugs have high rate of side effects causing obesity, behaviour changes, sedentary lifestyle, lack of consciousness and poor functioning of motor nerves which can impact the decision-making ability of the patients as well (Velligan et al., 2017). Individual negligence to the intervention adherence, for example, ignorance towards non-smoking and non-drinking alterations (Mwebe, 2017). According to the survey analysis of Mangurian et al., (2018) the SMI patients have less screening for diabetes, only 55% of the patients, despite the high prevalence of diabetes in SMI patients consuming antipsychotic drugs. Moreover, the patients having poor dietary practices and smoking also have less screening for the physical health assessment. Patient's lack of motivation because of the deteriorating health effects, psychosis events and fear of consequences also effects the poor adherence to the intervention measures prescribed by MHNs (Gronholm et al., 2017). The barriers of engagement of the patients with nurse and intervention practices also challenge the individual medication and health system status. The factors of individual care coordination,

stomatology of the disease, socio- economic factors, role of family support and therapist-patient relationship along with difficulty adjusting to the clinical environment and fear of not achieving physical health goals are being identified as patient-perceived challenges to physical health status optimisation (Melamed et al., 2019).

Patient's illness and factors associated with illness, severity, medication side effects, and definition of physical health also impact the physical health status importance among patients (Gronholm et al., 2017). SMI patients have high impact of the poor lifestyle, smoking and psychotic medications effecting the physical health indicators (Creamer and Austin, 2017).

4.2.3. Theme C: Organisational challenges of the inappropriate implementation of physical monitoring.

Healthcare organisations are obliged to provide efficient, timely and safe care practices addressing the physical and mental health needs of the patients (NHS, 2015). The organizations pose certain challenges to the performance of nurses. Organizational culture plays a significant role in health care practices, patient satisfaction, and disease outcomes. According to Williams et al. (2015), factors of staff management, workload, quality of the workforce, lack of authority to change, and lack of resource affects the organizational culture development. The lack of employers' training preferences, organizational insufficiency for the leadership resources, insufficient incentives for the work, work fatigue and the requirement of the increased clinical sites with complex learning demands of the stakeholders also pose significant relapse of the physical health monitoring in the local organizing practices (Creamer and Austin, 2017). The system-based factors of care coordination, fragmented care system, the challenge of multiple appointments, financial constraints and lack of social support reduce the implications of effective organizational management of the physical health needs of the SMI patients (Melamed et al., 2019). The organisational culture of poor coordination of professionals, issues of

time-consuming electronic information storage system, poor resources of funding and staffing, increased workload reduces the efficiency of physical health monitoring of SMI patients (Gronholm et al., 2017).

The organisational workload posed by the imbalance of nurses and mental health nurses (MHN), increased load of patients, and poor availability of resources affect the care practices (Mark and Smith, 2012). According to Braithwaite et al. (2017), the overall positive organizational and workplace culture has a significant effect on the patient outcome with reduced mortality rate, fewer hospital-acquired infections, optimum adherence to intervention measures, and increased patient satisfaction. Organizational stress, workload, anxiety, depression, increased commitment, and extrinsic factors of organizational resources pose a challenge to effective SMI patient care (Mark and Smith, 2012). However, interprofessional teamwork and integrated coordination of the stakeholders of health care measures can enhance the physical health status of the individuals with SMI and incorporate a satisfactory patient culture of the organization (Korner et al., 2015). It can be said that the coordination of the professionals can reduce the risks of poor health assessment, reduce work-related stress and improve job satisfaction among professional mental health nurses as well.

CHAPTER 5: CONCLUSION, RECOMMENDATIONS AND LIMITATIONS

5.1. Conclusion

Severe mental illness (SMI) patients have a high risk of mortality as compared to the normal population group because of the perceived inequalities of the health care system. The most common illnesses included in SMI are schizophrenia, bipolar disorder, depressive disorders and anxiety. According to the literature, the epidemiological findings suggest that patients with severe mental illnesses have underlying physical health implications and co-morbidities causing poor quality of life. For instance, SMI patients are often found to have obesity, hyperlipemia, poor insulin control, metabolic diseases and cardiovascular complications. The main causative factors of the high risk of underlying physical morbidity in SMI patients can be poor dietary habits, smoking, poor lifestyle choices, side effects of the antipsychotic drugs and lack of motivation. In health care facilities, mental health nurses (MHN) are responsible for providing safe, effective, timely and efficient care to the patients.

The National Health Sciences regulations and nursing code of conduct also oblige nurses to practice patient satisfactory mental and physical health care for the patients. This

necessary addressing of the dual care practices is attributed because of the perceived interlinked effects of the physical and mental health issues. The literature reports that patients with physical health diseases like diabetes, obesity and other morbid conditions face a high risk of depression and anxiety. On the other hand, mental health patients having antipsychotic drugs most often develop obesity, cardiac impairment and insulin dysregulation. This research aims to synthesise and analyse prior primary qualitative literature related to the challenges faced by Mental Health Nurses (MHNs) in addressing the physical needs of patients with severe mental illnesses (SMIs) in the UK.

This study was based on the meta-synthesis approach addressing the challenges faced by the mental health nurses (MHN) in physical health status assessment and monitoring of the SMI patients. Meta-synthesis only included primary qualitative studies published in the last decade. The database search identified seven publications in this study. The thematic analysis of the seven studies identified three main themes. Firstly, mental health nurses related performance challenges; secondly, patient-perceived challenges of effective physical health management; Thirdly, organisational challenges of the inappropriate implementation of physical monitoring. The nurses-based barriers and challenges of the SMI physical assessment included poor educational and skilful training, less motivation, increased workload, work related anxiety, lack of professional coordination, lack of integrated care system, and standardised protocol of the assessment at the health care organisations. Moreover, the organisational stress, workload, anxiety, depression, increased commitment, and extrinsic factors of organisational resources pose a challenge to effective SMI patient care. Lack of nurses-patient relationship, non-adherence to the effective mental and physical care practices and poor culture and behaviour aspects off the MHN prevents the physical health monitoring as a primary goal of MHN. The research also identified that lack of nurses-patient relationship, non-adherence to the effective mental and physical care practices and poor culture and behaviour aspects off the MHN prevents the physical health monitoring as a primary goal of MHN.

On the other hand, the patient reported barriers of poor adherence, lack of motivation for exercise and dietary management, and lack of personal ignorance for physical assessment. Moreover, the mental health status also changes the perceptions of physical health; the adverse effects of medication, psychosis and severity of the disease also cause reluctance for physical assessment among SMI patients. The organisational factors also play a significant role in the SMI physical and mental health assessment, as it fosters a culture of care among its

stakeholders. The organisation's lacking protocol of care, less impotence for care coordination and increased load of patients, hinder effective care practices. The barriers to resource allocation, nurses' attitudes, and local organisational culture hinder the effective physical health monitoring in SMI patients. The social, economic and behavioural challenges of the patients also pose a significant impact on the cause of physical health assessment status. As the SMI patens having fewer resources tends to have a high rate of physical morbidity in addition to mental health implications. In order to address the identified risk factors, the mental health nurses-based implications can be recommended.

5.2. Recommendations

The challenge identified in the research through thematic analysis can be approached through evidence-based recommendations. These recommendations are based on the intervention practices to be adopted at the health care organisations. The aim of the interventions is to improve the strategic physical and mental health improvement among SMI patients. Provision of assessment manual, behaviour management, intervention programs and implementation evaluation measures has been identified in the literature as the evident practices for improving the mentioned challenge of the mental health nurses in the physical assessment of SMI patients.

- Screening of the individuals with SMI should be made a priority specifically for the underlying metabolic diseases, family history reporting and ensuring early detection of changes (De Hert, 2014)
- Patients having a weight gain of >5% should be monitored for the glucose abnormalities, hyperlipidaemia, medication adherence and adverse side effects (Smith et al., 2011)
- The organisational culture depended upon the behaviour aspects of the nursing practice. Therefore, the nurse's attitude and behaviour toward SMI patient care should be improved. The organisational, professional training and educational inclusion of the integrated care system enhance the efficient physical and mental health care of the SMI patients (Strath et al., 2013).
- The development of the therapist-patient relationship is also necessary for the MHN to provide satisfactory patient care. It also requires effective communication, addressing patient physical and mental health needs, timely provision of safe medication, and possession of evidence-based knowledge of the care practices (Cabassa et al., 2017).

- The change in nurses' attitudes, behaviours and practices also require effective transformational leadership in mental health nurses. Transformational leadership provide significant changes in the culture of the organisation toward satisfactory patient outcomes (Cabassa et al., 2017).
- The lack of patient motivation and ignorance can be increased by providing awareness from the MHN. Nurses can also provide effective exercise and dietary guidelines and motivate patients for physical health care (Mwebe et al., 2017).
- In order to merge the gap between the care coordination and communication among the professionals of the health care centre, the organisational policy of the integrated care can be introduced to address the mental and physical health care measures of the patients (De Hert et al., 2011).
- The patient-based behaviour management needs to be incorporated into the lifestyle interventions and dietary restrictions. Many metabolic diseases require certain nutritional guidelines that can be provided by the nurses for effective physical health care (De Hert et al., 2011).
- Support individual wellness, empowerment and self-management strategies to increase focus on health optimisation (De Hert et al., 2011).
- In addition, the implementation of the local programs, including smoking cessation, peer support programs, health lifestyle interventions, and multifaceted programs, depending upon the type of intervention, can be adapted for the SMI care (Cabassa et al., 2017).
- In the patients having antipsychotic drugs inducing weight gain and insulin dysregulation, the medication reconciliation strategy can be adopted. Nurse based continuous monitoring of the adverse side effects of the prescribed drugs reduces the risk of such conditions (Smith et al., 2011).

5.3. Limitations

The methodological quality reveals that the strengths of the evidence generated in the study are limited by the methodological constraints (Hodkinson and Hodkinson, 2010). These methodological constraints are studied in the limitation of the study, which is also an important part of every research. Limitations of the study are constrained by the research design, methodology and study parameters that limit the evaluation, analysis and assessment measures of the findings (Price and Murnan, 2004). It is also defined as the biasness of the study that the

researcher could not reduce, and it affects the findings of the study (Hodkinson and Hodkinson, 2001). This study was a meta-synthesis, which is a comprehensive generalisation of the qualitative studies reported on a subject or problem. The meta-synthesis is often ascribed to have fewer limitations, as the researcher sets a criterion of the screening for selection of publications in the research. However, the criteria of screening are often ascribed to have certain biasness of the key terms used and the yearly constraints providing a certain risk of biasness. This study reported the primary investigations conducted on the specific key terms. The limitations also provide the researcher with an analysis of further research and gaps in the findings (Pirce and Murnan, 2004). The primary studies reported a smaller number of longitudinal studies and retrospective studies in time that could provide a significant amount of effective understanding of the challenge faced by nurses in real-world settings.

It is often ascribed that the research must be valid, reproducible and reliable (Thomas and Hobbes, 2010). However, this reliability and validity are only implied in a similar group of people or a similar set of population groups. The implications of meta-synthesis are, however, generalised, which means it must provide similar aspects of findings in the ascribed settings. The meta-synthesis can include rigorous primary investigations to strengthen the generated evidence of the study. The included studies also had certain limitations that can be addressed in future research. Firstly, the lack of quantitative empirical findings on the problem needs to be studied. Secondly, a multifactorial study is needed for the identified multiple factors of physical and mental health optimisation. Thirdly, the lack of longitudinal and retrospective studies requires a more diverse analysis of the identified variables of nurse-based challenges. The researchers have identified the significant role of physicians and nurses in addressing the physical health symptoms of SMI patients; however, the literature lacks clarification on the role of nurses in undertaking physical health promotion. The perceived barriers to the delivery of the care and monitoring practices also need to be studied. The nurses reported challenges of the lack of training, skills, knowledge and awareness of the roles have also been identified as the factors affecting the poor physical health of SMI patients.

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APPENDICES

Appendix-1: PRISMA

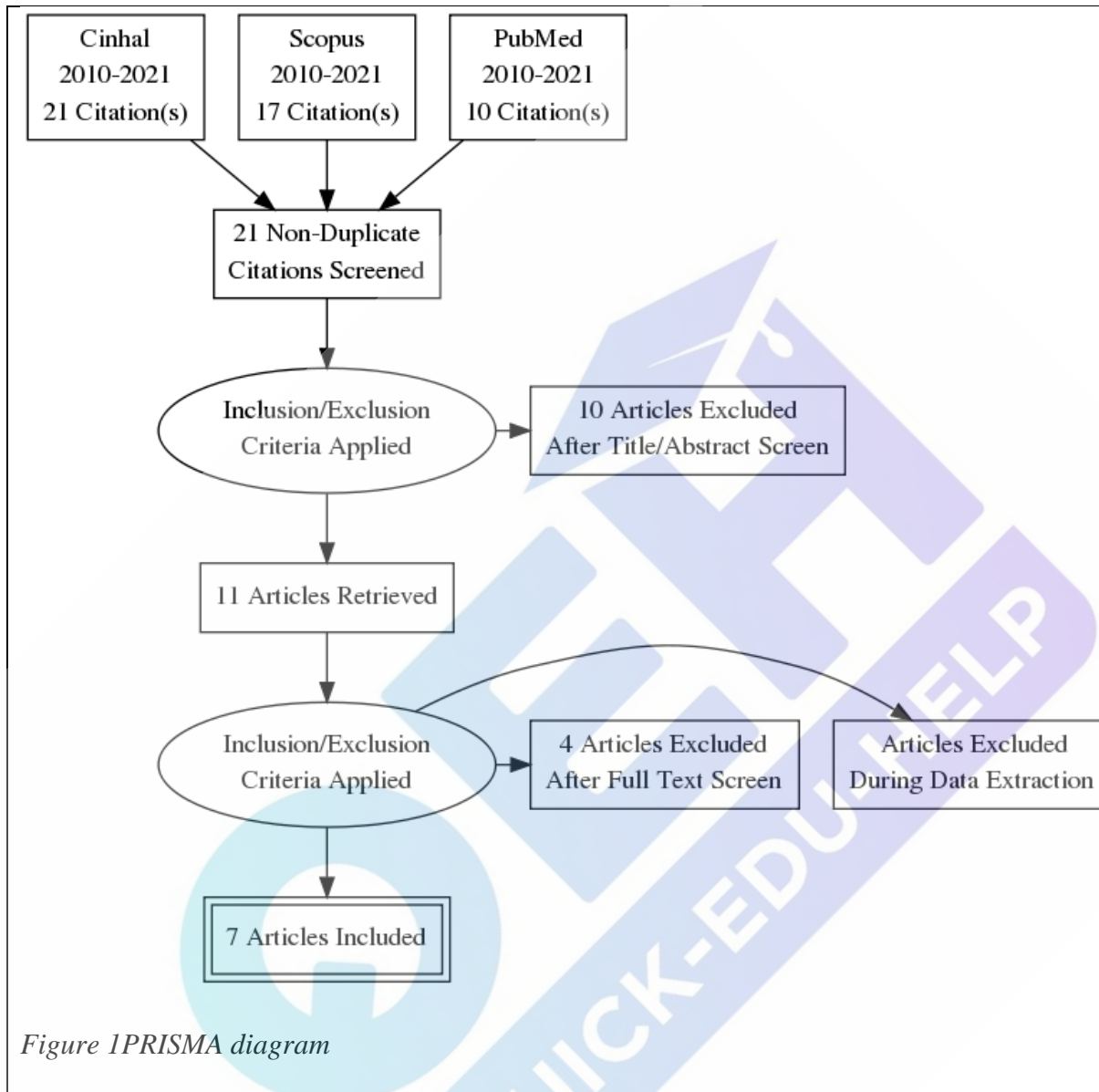


Figure 1 PRISMA diagram

