An-Najah National University
Faculty of Graduate Studies

KNOWLEDGE AND ATTITUDES OF PHYSICIANS AND NURSES TOWARDS MENTAL DISORDERS AND RELATED HEALTH SERVICES: A CROSS-SECTIONAL STUDY IN PALESTINE

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Dedication

I would like to extend my deepest appreciation to Dr. Nizar Said for his exceptional guidance and invaluable feedback throughout my thesis work. His expert advice was instrumental in shaping my research and bringing it to completion.

I am also profoundly grateful to the esteemed professors, doctors, and committee members who participated in my research. Their insightful contributions and feedback have significantly enhanced the quality of my work.

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Lastly, I extend my deepest appreciation to my parents. Their unwavering support and care have been a continuous source of strength and motivation. Their belief in me and encouragement throughout my academic journey have been fundamental to my success.

Declaration

I, the undersigned, declare that I submitted the thesis entitled:

KNOWLEDGE AND ATTITUDES OF PHYSICIANS AND NURSES TOWARDS MENTAL DISORDERS AND RELATED HEALTH SERVICES: A CROSS-SECTIONAL STUDY IN PALESTINE

I declare that the work provided in this thesis, unless otherwise referenced, is the researcher's own work, and has not been submitted elsewhere for any other degree or qualification.

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KNOWLEDGE AND ATTITUDES OF PHYSICIANS AND NURSES TOWARDS MENTAL DISORDERS AND RELATED HEALTH SERVICES: A CROSS-SECTIONAL STUDY IN PALESTINE

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Abstract

Background: The provision of mental health services faces several financial and health challenges, while the healthcare professionals (HCPs) should acquire the appropriate levels of knowledge and attitude towards mental disorders and mentally ill patients, which the current study aimed to identify, as well as the most common demographic and professional factors that related to them.

Method: The study utilized a cross-sectional, quantitative design, in which the researcher recruited a convenient sample of 89 doctors and 232 nurses from private and governmental hospitals and primary health clinics (PHC) in Nablus – Palestine. The study questionnaire consisted of demographic data, Mental Health Knowledge Schedule (MAKS) and Attitude to Mental Disorders (AMI) tools, which were analyzed using SPSS.

Results: The median age of recruited HCPs was 31 years old (IQR = 8), 46.4% males, 60.4% married, 58.3% of more than 5 years of experience, and 60.1% not received a course on mental disorders. The median knowledge score was 68.42% (IQR = 12.63), with 69.5% having a moderate knowledge level, which was not significantly related to any factor (p-value > 0.05). The median attitude level was 63.70% (IQR = 11.85), with 62.0% having moderate attitude level, and was significantly higher in females (p-value < 0.001), lower income (p-value = 0.002), other social status (p-value = 0.016) and non-hospital workplace type (p-value < 0.001). A significant, moderate, positive correlation between knowledge and attitude was found (r = 0.252, p-value < 0.001).

Conclusion: The Palestinian nurses and doctors in Nablus city have moderate knowledge and attitude levels towards mental disorders. More focus on mental disorders is needed and recommended by the policymakers, health sector, universities and HCPs themselves.

Further research is needed in the Palestinian context, including longitudinal and qualitative approaches.

Keywords: mental health; mental disorders; psychiatric disease; knowledge; awareness; perception; attitude; doctors; physicians; nurses.

Chapter One
Introduction and Literature Review

1.1 Background

The term related to “mental illness” is broadly defined and includes a wide range of mental health conditions that affect mood, thinking, and behavior, like, for example, depression, anxiety disorders, schizophrenia, eating disorders, and addictive behaviors, and can affect personal, social and economic well-being, as well as the ability to function in daily life (Manderscheid et al., 2010). The understanding and treatment of mental disorders have developed over time, however they continue to set significant challenges for healthcare systems, patients, and caregivers alike, like the self-stigma regarding mental disorders, also known as “internalized stigma”, which was defined by Lucksted and Drapalski (2015) as the process by which individuals with mental disorders incorporate others' prejudices and stereotypes about mental illness into their own beliefs about themselves.

It is important to discriminate between mental disorders and psychiatric disorders, where the term “mental illness” refers to a wide range of conditions that affect mood, thinking, behavior, or overall psychological functioning, and it is a broad term that is used to describe mental health conditions that impair an individual’s ability to cope with the ordinary demands of life. Depression, anxiety disorders, schizophrenia, and bipolar disorder are examples of the most common mental disorders (Telles-Correia et al., 2018), and the term is also sometimes used in a more informal or public health context.

The psychiatric disorder, on the other hand, is a more clinical term used by mental health professionals, particularly in the medical and diagnostic context, and are typically classified and diagnosed according to well-known medical criteria, such as the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) or International Classification of Diseases (ICD) (Clark et al., 2017). Therefore, the term specifically refers to disorders that are recognized and treated by psychiatrists, which involve neurochemical imbalances, genetic factors, or structural brain abnormalities, including disorders like schizophrenia, major depressive disorder, and obsessive-compulsive disorder (OCD) (Surís et al., 2016).

1.1.1 Mental health and disorders in a global context

Mental disorders are classified, and prevalence rates have been found in various statistics. For example, the National Institute of Mental Health (NIMH) stated that an estimated 57.8 million adults aged 18 or older in the United States (US) were reported to have Any Mental Illness (AMI), representing 22.8% of all U.S. adults, of which Serious Mental Illness (SMI) affected approximately 14.1 million adults, which is about 5.5% of the U.S. adult population, and are notably higher among females than males and was most prevalent in young adults aged 18-25 (National Institute of Mental Health, 2021). The statistics were supported by the National Alliance on Mental Illness (NAMI), who stated that that 1 in 5 U.S. adults experiences mental illness each year, and 1 in 20 experiences serious mental illness, and that 50% of all lifetime mental illness beginning by age 14 and 75% by age 24, indicating the significant impact of mental disorders (Mental Health America, 2023; National Alliance of Mental Illness, 2023).

In Palestine, 22 specialized psychiatric and community health clinics (15 of which are in West Bank) take the responsibility of caring of mentally ill patients, of which the Annual Health Report by the Palestinian Ministry of Health (PMoH) has stated that 4,078 psychiatric patients have been newly registered in 2022, giving an overall incidence rate of 81.0 per 100,000 population, with 2,558 patients in West Bank (incidence rate = 88.9 per 100,000 population) and 1,520 in Gaza Strip (incidence rate = 70.2 per 100,000 population). As reported in West Bank by the mentioned report, 18.2 per 100,000 population of the incidence rate is held by neurotic disorders, followed by mental retardation (16.1 per 100,000 population), mood (affective) disorder (12.3 per 100,000 population) and schizophrenia (12.2 per 100,000 population), with the most commonly age group of reported cases are between 25 and 49 years old, larger in males (n = 540) than females (n = 396), representing 71% of the cases in overall psychiatric patients by males. Lastly the report stated that the average length of stay (LOS) for mental and psychiatric patients in related hospitals is 58.5 days in West Bank (one hospital in Bethlehem holding 140 beds), compared to 19 days in Gaza Strip (one hospital holding 41 beds) (Ministry of Health, 2023).

1.1.2 The burden of mental disorders

An ecological study of healthcare system response showed that 60% of the global disability-adjusted life-years (DALYs) are related to non-communicable diseases (NCDs), of which 12% are related to mental, neurological and substance abuse disorders, and self-harm (MNSS), which is compared to 78% for NCDs, of which 19% are for MNSS, in the Americas, with 2.4% of governmental health spending and 80% of hospital allocations are for mental health, which were significantly correlated with higher real gross domestic product (GDP), and therefore, it is concluded that there is an imbalance in the health expenditure on mental health in comparison with their actual burden, mainly affecting lower income countries (Vigo et al., 2019). The high burden of mental disorders in Pakistan, for example, which reached and estimated 2.7 billion pound, has encouraged the healthcare advocates to call for cost-effective psychological interventions, which aim to adhere to the United Nations' Sustainable Development Goals (SDGs), targeting the prevention of self-harm and suicide, such as the implementation of culturally adapted manual-assisted problem- solving training (C-MAP) (Alvi et al., 2023).

Another related study stated that the effect of mental disorders in the financial aspects are mainly approximated implicitly, with DALYs as the main outcomes, and a total economic productivity dropout to reach 16.3 trillion US dollars between 2011 and 2030 on the global perspective, in addition to the computation of the value of statistical life (VSL), concerning the probability of injury or death due to mental disorders, which rated them as equivalent to cardiovascular diseases and higher than cancer (Frank, 2021). The quality of which the mental health services are provided depends on several variables, including the quality of clinic management, availability and number of counselors per facility, as well as variables among the mental health staff themselves, including the training coverage of adult primary care and clinical communication skills, with other variables related to stigmatization, referrals and reduction in depression scores as measured by valid tools, like the Patient Health Questionnaire (PHQ-9) (Janse van Rensburg et al., 2021). While 6.54% of the patients admitted to various healthcare facilities are mentally ill, the gap between the costs of healthcare services among mental compared to non-mentally ill patients is large, reaching 34% higher among mentally ill patients, which significantly increased from 1.60% in 2009 to 10.51% in 2013, with no negligence of the loop impact

of healthcare costs on the mental status of the mentally ill patients, especially among deprived patients (Michel et al., 2019).

Historically, the 1960s witnessed the major shifts in the positive direction of the mental health nursing training, which included hospital beds reduction, the rise in patient activism, the improvements in the pharmacological treatment, as well as the growth of community services, which highlights the growing literature that shows the essential roles of nurses in treating mentally ill patients, both in the community and hospital-based settings, and calling for the focus on their attitudes toward this vulnerable category of patients (Nolan, 2021). Patients with mental disorders are considered vulnerable groups as they have shorter life span and higher prevalence of chronic diseases, like diabetes mellitus (DM) and cardiovascular diseases (CVD), in comparison with the general population (De Hert et al., 2009).

The provision of healthcare focused services, with the suitable regulations and financing were found to significantly affect the mental health system's performance in a continuous way, with the routine measurements of such outcomes as the best assessment method, either on the cross-sectional or longitudinal way, in spite of the differences that are found on the country levels, as found in Europe for example, leading to the necessity of the presence of rigorous regulations on the local level to achieve effective policies and outcomes (Nicaise et al., 2019).

1.1.3 Mental health disorders awareness of community members and healthcare providers

As in the general community members, healthcare professionals (HCPs) also show some stigma acts toward patient with mental disorders, and this highly affect the attitude level toward them. A study found that three levels of stigmatized acts have been shown among HCPs toward mentally ill patients, in which the individual level consisted of negative perceptions of stereotypes about the patients, patient blaming regarding their physical health and thoughts of recovery and social integration, while the interpersonal level included negligence of symptoms and lack of skills related to their interaction with the patients, and the structural level was concerned with lack of proper training and healthcare system-related factors (Rivera-Segarra et al., 2019). Among the general population, a review found that people of Japan mainly think that psychiatric disorders are caused by

personality weaknesses, rather than biological factors, with little percentages thinking that mentally-ill patients can recover from the symptoms, and the overall attitude of the general population was the avoidance and keeping distance from patients, with highest stigmatizing attitude toward patients with schizophrenia than depression (Ando et al., 2013).

Several factors were found to affect the level of knowledge among general people and HCPs about mental disorders, including higher educational and confidence levels, gender, cultural background, previous contact with individuals with mental disorders, better socioeconomic status and familiarity with mental disorders (Gupta et al., 2019; Potts & Henderson, 2020), which all have shown to contribute to a better knowledge level, while religious beliefs showed a negative correlation with level of knowledge, mostly related to the measurement of knowledge from a scientific perspective, rather than the perspectives that people may commonly acquire from religious background or non-clinical data (Furnham et al., 2016).

Some factors were found to affect the attitude levels of people toward patients with mental disorders, where, in general, people who know or have previous contact with such patients have shown less stigma and better attitude (Commey et al., 2022), including among HCPs (Ando et al., 2013), while another study showed that doctors have shown the best attitude, while lay people showed the worst, with the most positive overall attitude was towards patients with PTSD, while the lowest was towards patients with schizophrenia (Arbanas et al., 2019). Another study showed that several barriers affect the health care delivery to patients with severe mental disorders, including care-induced stress, emotional fluctuations, mental stereotypes, unhealthy lifestyle, breaks in family bonding, lack of awareness among family and community members, biomedical-oriented healthcare systems, financial incapabilities and educational and awareness promotion difficulties (Karimirad et al., 2022), with difficulties found among family members related to their social isolation that needs to be focused on (Labrum & Newhill, 2021), which are accompanied by high levels of stigmatization and burden, calling for the need of psycho-educational programs targeting family members who are caregivers of patients with mental disorders (Ebrahim et al., 2020).

1.1.4 Mental health in Palestine

In the Palestinian context, mental health is strongly affected by the ongoing political conflict, leading to unique challenges in mental health care provision and significant impacts on the population's mental well-being, with several factors related to fragmentation, limited resources, and a severe shortage of mental health professionals (Marie et al., 2016). The burden of mental health conditions in Palestine is high, with a significant prevalence of depression, anxiety, and PTSD among Palestinians, worsened by exposure to violence, movement restrictions, and economic hardship (Bdier et al., 2023). A Palestinian review stated the need to increase the availability and quality of mental healthcare services in Palestine, which should be achieved on different levels, starting with meeting the needs of mental healthcare services and professionals on the policies and regulations levels, in addition to the broader context of ending the occupation and having freedom of movement, and the civilian level which needs meeting their basic needs and increase their awareness level and integration with other healthcare services, resulting in increased resilience and community capacity of mental health team, professionals and patients themselves, which starts with increasing the allocation of resources to develop this important field of healthcare services in Palestine, focusing on providing sufficient training and supervision to mental HCPs (Marie et al., 2016).

A partnership between the Royal College of Psychiatrists in the United Kingdom (UK) and the UK-charity Medical Aid for Palestine (MAP) was conducted to develop a visionary of improving mental health among Palestinian children and adolescents, where they face a higher risk of developing mental disorders due to overcrowded areas and the ongoing conflicts, especially with the ongoing siege and violence acts in Gaza Strip. The visionary was created after meeting several Palestinian stakeholders, including the only Child and Adolescent Mental Health Services in Halhoul, Hebron, of which they have found an accumulation of decades of burden of violence, hardships and conflicts, from the parents and grandparents, and while many children showed remarkable resilience due to social, and community relations, there is a lack in the clear protection protocols, as well as limited availability of counselling and therapy. Accordingly, the visionary of such a partnership focused on four main pillars, which are community integration and contribution, prevention and promotion, rights and regulations, and capacity building and clinical services (Dabbagh et al., 2023).

Therefore, the current study aims to investigate the attitude levels among the Palestinian doctors and nurses toward mental health and people with mental disorders, as well as to discover the most related sociodemographic and professional factors to this attitude level.

1.2 Problem Statement

Reviews have shown that in spite of the growing literature regarding the historical role of nurses in the mental health care, little have been written and published by the nurses themselves about the attitude of nurses toward mental health and mental ill patients, which includes the focus on their attitudes (Nolan, 2021). Mentally ill patients have also been found to suffer from the stigma culture, and yet little is done to expose and investigate the factors behind this inequities, which made them more of a vulnerable population (Rivera-Segarra et al., 2019).

Despite efforts to improve mental health services in Palestine, including the shift towards community-based care and training programs for mental health professionals, services remain underfunded and underdeveloped, struggling to meet the extensive needs of the population (Bdier et al., 2023). In terms of the doctors' and nurses' attitudes towards mental health and mentally ill people in Palestine, the literature lacks sufficient coverage of this area. This was also concluded by a systematic review that covered the Arab Gulf area, where more in-depth qualitative studies and high quality evidence are needed to assess the knowledge and attitude levels among HCPs (Elyamani & Hammoud, 2020).

1.3 Significance of the Study

The current study will participate in enriching the literature related to mental health and attitudes of doctors and nurses toward patients with mental disorders from Palestine, and the most commonly related sociodemographic and professional factors, which may help the policymakers in the Palestinian health sector to compare the findings with what general population have regarding attitude levels, and enhance the perception of doctors and nurses, which will result in better attitude and outcomes among the patients with mental disorders.

Determining the related factors and barriers of attitude levels among nurses and doctors will also help in establishing training and educational sessions to them, including the modification of current curriculum during the university phase. Also, participating in the

scientific evidence of such a topic will help bridge the gap between mental health needs and services that are delivered to mentally ill patients by the HCPs in the Palestinian area.

1.4 Aims of the Study

The current study aims to:

1. Assess the knowledge of Palestinian nurses and doctors of mental health disorders and health services in Nablus city – Palestine.
2. Assess the attitude level of Palestinian nurses and doctors towards mental health disorders and health services in Nablus city – Palestine.
3. Investigate the most common sociodemographic (age, gender, residency, socioeconomic status, and income) and professional (job title, experience in job and current workplace, health institution type, and whether received a specific training) factors and predictors of the Palestinian nurses and doctors that are related to their knowledge level of and attitude towards mental disorders and health services.
4. Test the correlation between Palestinian nurses and doctors' knowledge and attitude towards mental disorders and health services in Nablus city – Palestine.

1.5 Questions of the Study

The current study will try to answer the following questions:

1. What is the level of knowledge of Palestinian nurses and doctors of mental health disorders and health services in Nablus city – Palestine?
2. What is the attitude level of Palestinian nurses and doctors towards mental health disorders and health services in Nablus city – Palestine?
3. What are the most common sociodemographic and professional factors and predictors of the Palestinian nurses and doctors that are related to their knowledge level of and attitude towards mental disorders and health services?
4. Is there a correlation between Palestinian nurses and doctors' knowledge and attitude towards mental disorders and health services in Nablus city – Palestine?

1.6 Hypotheses of the Study

H_0: There is no significant relationship between Palestinian nurses' and doctors' sociodemographic and professional factors and their knowledge levels of mental disorders and health services in Nablus city – Palestine at a significance level of 0.05.

H_0: There is no significant relationship between Palestinian nurses' and doctors' sociodemographic and professional factors and their attitude levels towards mental disorders and health services in Nablus city – Palestine at a significance level of 0.05.

H_0: There is no significant correlation between Palestinian nurses and doctors' levels of knowledge and attitude towards mental disorders and health services in Nablus city – Palestine at a significance level of 0.05.

H_0: There are no significant predictors of Palestinian nurses and doctors' knowledge and attitude towards mental disorders and health services in Nablus city – Palestine at a significance level of 0.05.

1.7 Conceptual and Operational Definitions

1.7.1 Knowledge (in the context of mental disorders)

Conceptual definition

"Knowledge" in the context of mental disorders is often conceptualized as the understanding and awareness of the aspects related to mental health conditions, which includes the recognition of their symptoms, understanding causes, knowing available treatments, and understanding the impact of mental disorders on individuals and society, therefore, it includes both scientific facts and personal experiences, and integrates objective data and subjective understanding (Telles-Correia et al., 2018).

Operational definition

Operationally, knowledge of the mental disorders can be measured through specific and observable criteria of symptom recognition, understanding their etiologies, awareness of their treatment and perception of its impact (Borsboom, 2017), which was achieved in the current study using close-ended questions on a 5-point Likert scale to quantify the knowledge level.

1.7.2 Attitude (in the context of mental disorders)

Conceptual definition

"Attitude" in the context of mental disorders among healthcare professionals is concerned with their beliefs, perceptions, and preferences towards patients with mental disorders, focusing on cognitive (beliefs about mental disorders), affective (feelings towards individuals with mental disorders), and behavioral components (actions or intentions towards those with mental disorders) (Reavley et al., 2014).

Operational definition

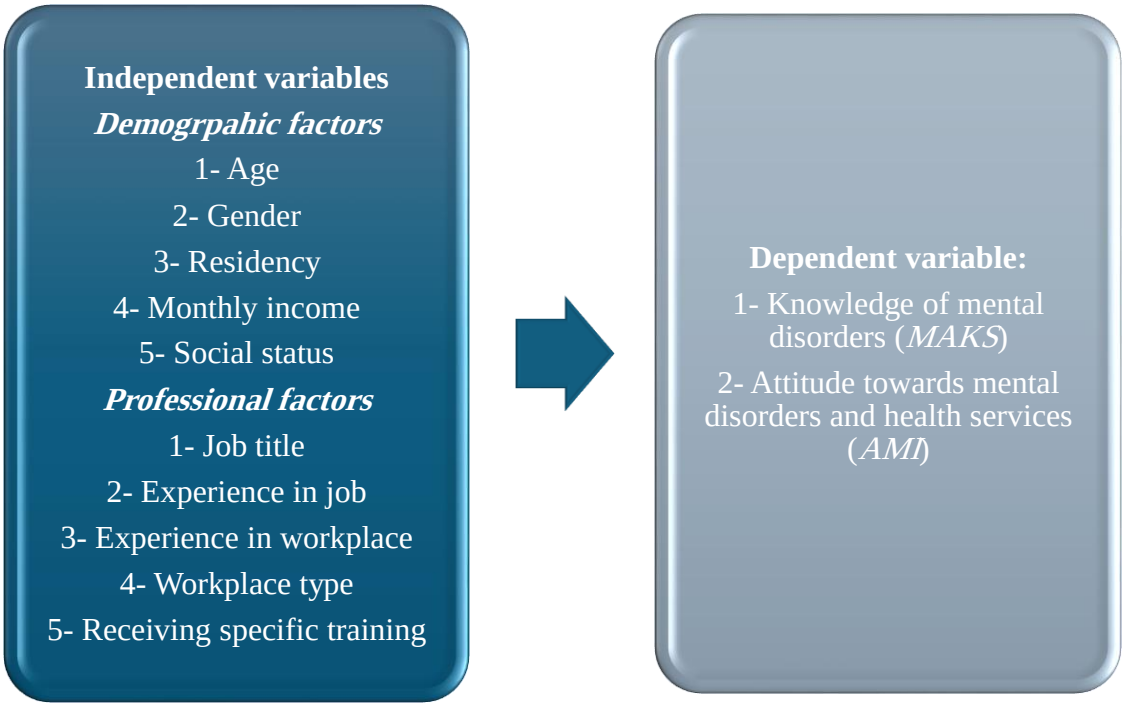
Attitude is measured in such context using quantifiable and measurable criteria of the cognitive, affective and behavioral attitudes (Gabbidon et al., 2013), which is also conducted in the current study using a set of statements that are rated on a 5-point Likert scale to give a quantifiable measurement of attitude levels that can be tested in its differences across various factors and correlation with knowledge and other scale factors.

1.8 Conceptual Framework

In the current study, the conceptual framework contains the main factors related to the study context and aims. These included the main sociodemographic and professional factors as the independent variables, and knowledge and attitude levels as the dependent variables. The level of knowledge was measured using a valid tool of Mental Health Knowledge Schedule (MAKS), composing of 14 close-ended questions, while attitude level was assessed using Attitude to Mental Disorders (AMI) scale, which is 27-item scale, both scales' statements are rated on a 5-point Likert scale from "Strongly disagree" to "Strongly agree", with higher scores indicating higher level of knowledge and better attitude levels, respectively.

Figure 1

Conceptual framework of the current study



1.9 Literature review

The following review of literature was based on searching scientific databases of PubMed, ScienceDirect and Google Scholar of studies that are mostly related to the knowledge and attitude of nurses and doctors toward mental disorders and related health services, which have been published in peer-reviewed journals in the recent years, using the following keywords: mental health, mental disorders, psychiatric disorders, psychiatric disease, knowledge, awareness, perception, attitude, doctors, physicians, nurses.

1.9.1 Attitudes of HCPs towards mental disorders in comparison with the general population

Many of the studies related to the assessment of knowledge and attitude levels of HCPs toward mental disorders and patients were conducted with the aim of comparing theirs with the attitudes of general population. The overall target of such a comparison was to form a view of the differences and related factors, as well as the focus on the role of dealing with and exposure to mentally ill patients in enhancing the attitude toward the patients.

A good example of the previously mentioned idea is the study of Yuan et al. (2017) in Singapore, who aimed to compare the attitudes of mental HCPs to the general population toward mental disorders, and used the valid tool of AMI on the sample of 379 mental HCPs, and compared the results with a previous study that was implemented in the general population. Results showed that mental HCPs significantly have better attitude levels as indicated by mean scores in domains of tolerance/support for community care, social restrictiveness and prejudice and misconception, but not in the domain of social distancing than in the general population, respectively. Lastly, results showed significantly better attitude levels among doctors than other HCPs in prejudice and misconception and social restrictiveness, while married HCPs showed worse attitudes than never married in social distancing scores, as well as that higher educational levels are associated with better attitudes in prejudice and misconception domain. The researchers recommended conducting studies of how the exposure to psychiatric patients and culture may affect the attitude levels.

The same objective was applied in the Czech Republic, but on a larger and more representative sample of medical doctors (n = 1200) and general population (n = 1810), and used the CAMI questionnaire. The tool consisted of 27 items related to the stigmatizing attitude towards mentally ill patients, of which all of them showed better attitude scores among the doctors than general population. Also, the regression model showed that better stigmatizing attitude is predicted by female gender, age between 35 and 54 years old, and being a medical doctor compared to general population. The study concluded a high stigmatizing attitude among the Czech population, and that medical doctors tend to have a positive feeling towards mental healthcare that is hospital-based (Winkler et al., 2016).

1.9.2 Knowledge and attitudes off nurses and doctors towards mental disorders and health services in the global and regional context

Starting with the systematic review design as the peak in the evidence-based science, Elyamani and Hammoud (2020) conducted a systematic review on seven cross-sectional studies that included a total of 3516 participants, all are HCPs, including nurses, pharmacists and physicians. The aim of the review was to conclude the overall levels of knowledge and attitudes towards mental health and disorders among those HCPs in the Arab Gulf area, and included studies that involved one or more of the following

components: knowledge and/or stigma levels towards mental disorders, and confidence and/or behavior of helping mentally ill patients. While the quality assessment of the included studies concluded a low-quality level of outcomes, it is worth concerning the findings, which mostly found low levels of knowledge, negative attitudes, moderate to high stigmatization, and low confidence and/or behavior of the HCPs, which calls for the need to conduct more studies with higher quality in terms of design, sampling and outcomes included, in addition to the use of highly-valid tools to assess such outcomes.

In a study by Ordan et al. (2018) focused on a specific group of mentally ill patients that nurses should acquire a professional attitude toward them, who are postpartum women with severe mental illness. The study included 61 postpartum nurses and were asked to answer three questionnaires related to specific topics, which are the stigma among HCPs toward mental disorders, the attitude toward parenthood and nursing interventions to promote becoming a mother, as well as a qualitative part. The descriptive results showed fair levels of stigma towards mentally ill postpartum women and attitude towards parenthood among those patients, but high scores of nursing intervention that promotes becoming a mother. Mainly, there were significant correlations between less stigma among the nurses and high attitude towards parenthood and parenting skills, with a significant correlation between parenting skills domain and nurses' involvement in mental healthcare.

Nursing students are the future nurses, and therefore, assessing their knowledge, attitudes and practices towards mental disorders is important, which is achieved in a Jordanian study among 169 nursing students. The study used MAKs tool for knowledge level among other tools for attitude and practices and found moderate knowledge level, with moderate attitude and practice. The study also found that stigma among nursing students towards mental disorders was significantly predicted by lower family income, lower father's educational level and having no experience dealing with mental disorders and patients. The study concluded the importance of enhancing nursing curriculum that covers the mental disorders issues, as well as the importance of continuously assessing nursing students' aspects of mental disorders (Abuhammad et al., 2019).

A cross-sectional study was conducted in Qatar on a sample of 406 nurses and 92 physicians to assess the level of attitudes towards mental disorders and mentally ill

patients, and used a valid 16-item tool called the Mental Illness Clinician's Attitude Scale (MICA-4). Results showed that the mean score of MICA was significantly higher among nurses than physicians, which indicates significantly higher stigmatizing attitudes among the nurses. Among nurses, lower stigmatizing attitudes were significantly predicted by being an Asian ethnicity, holding higher education's degree compared to diploma degree holders, working at a mental health facility compared to who work at general medicine, emergency and other departments, who had personal experience with people with mental disorders, and daily frequency of taking care of patients with mental disorders compared to who never does or less frequently. Among physicians, lower stigmatizing attitudes were found among females, having higher income, having a consultant degree compared to residents and fellows, who work at mental health facilities, more years since graduation, and who takes care for people with mental disorders on any frequency. The study concludes a presence of stigmatizing attitudes among HCPs, which was higher among nurses, with the necessity of taking the related factors into concern to implement specific interventions to eliminate this phenomenon (Ghuloum et al., 2022).

Another cross-sectional study was conducted in Brunei on a sample of 62 primary healthcare nurses to assess their knowledge and attitudes towards mental disorders, using two valid tools: the Mental Health Problem Perception questionnaire and the Community Attitudes to Mental Illness questionnaire, which is divided into three domains. Results found a moderate attitude levels among the sampled nurses, which was higher in the domains of authoritarianism and social restrictiveness than benevolence (or else known as kindness), with significantly correlated scores between higher authoritarianism and lower benevolence and higher social restrictiveness, while the correlation between benevolence and social restrictiveness was invers. Lastly, higher level of knowledge was significantly correlated with better attitudes, including lower scores of social restrictiveness. The study concluded that the negative attitudes among nurses towards mental disorders is still considered a challenge, with the need to increase the educational initiatives and contact time, focusing on the holistic care improvement for patients with mental disorders (Shahif et al., 2019).

1.9.3 Knowledge and attitudes off nurses and doctors towards mental disorders and health services in the Palestinian context

In 2010, a Palestinian study was conducted to investigate the attitude of mental HCPs (n = 78) towards patients who experience mental disorders, and they received the Attitudes Toward Acute Mental Health Scale (ATAMHS 33). The results showed that the most negative attitude statements among the participating HCPs were in their agreement of the use of psychiatric drugs to control disruptive behaviors, absent self-control among alcohol abusers and the difficulty to negotiate care plans with the patients in the acute environment, followed by that substance abusers should not be admitted to acute wards, and the risk that mentally ill patient have on community members, while the highest positive attitude statements were in their agreement that psychiatric disorders should gain the same attention level as the physical disorders, followed by the effect of talking manner with patients on their mental status, and that mental disorders are result of social circumstances and that many normal people would become mentally ill if they were exposed to very stressful situations. In conclusion, the study highlighted more negative than positive attitudes of mental HCPs towards people with mental disorders, which is an area of further research, and the need for qualitative research (Ahmead et al., 2010).

The United Nations Relief and Work Agency for Palestine Refugees (UNRWA) pays a huge attention to the mental health of the patients who attend to their healthcare services as a major public health priority, and started to implement related mental health and psychological support (MHPSS) as an integrated part of their primary healthcare services in 2017. In this context, a Jordanian cross-sectional study was conducted to investigate the knowledge, attitude, practices and perceived barriers towards mental health services, focusing on the MHPSS program. The results showed that 73% of the participants perceived having insufficient level of knowledge of such policies and programs, with 65.9% stating that they have not received related training, especially on the nonpharmacological aspect of mental health, in addition to higher percentages on training related to mental health issues for children and adolescents 85.5% and on the use of psychotropic medicines 95.5%. In terms of their attitudes, two thirds of the participants 66.8% agreed on the increase in the number of patients they see with signs and symptoms of mental disorders, with 88.2% agreeing on the need for more training on mental health programs. The results also showed significantly higher mean scores of attitudes among

participants who reported having enough knowledge on the previous aspects, with the highest agreement on barriers related to limited mental health guidelines (87.3%), followed by limited availability of mental health professionals (86.4%) and limited availability of resources (85.5%), like time, treatment costs and insurance. The study concluded an overall low perceived knowledge and positive attitude towards mental health programs, with a high need for training (Turki et al., 2020).

Chapter Three
Methods

This chapter describes the methodological aspects that were adopted in the current study in terms of design, location, sampling, variables, data collection and analysis and ethical consideration.

2.1 Study Design

The study was conducted using a cross-sectional, quantitative study in which the researcher has collected the data from a sample of HCPs (nurses and doctors) who were asked to fill in a structured questionnaire related to the knowledge and attitude towards mental disorders and health services, where the data was collected in a single time point without a follow-up. This design is time and cost effective and allows the researcher to search for multiple variables and explore the relationship between independent and dependent variables (Kesmodel, 2018; Wang & Cheng, 2020).

2.2 Site and Setting

The study was conducted at all hospitals and health clinics in Nablus city, West Bank - Palestine. These included the governmental hospitals of Al-Watani Medical and Rafidia Surgical hospitals, as well as the private hospitals of Arab Specialized Hospital (ASH), An-Najah National University Hospital (NNUH), St. Lukes Hospital and Nablus Specialized Hospital. The settings also include all primary health care (PHC) and UNRWA clinics in Nablus city. The inclusion of all hospitals and clinics in Nablus city helped the researcher to collect a representative sample of the overall population of HCPs in the targeted city, which was also appropriate for the quantitative approach of the current study. On the other hand, the researcher did not have the ability to recruit HCPs from other cities, because of the current war and restrictions to transportations.

The targeted settings are also suitable for the current study, as they include doctors and nurses with various experiences with mental disorders and patients, increasing the possibility of generalizing the findings on the overall population of the study.

2.3 Sample and Sampling

The study population included all nurses and doctors who currently work at the targeted settings, regardless to their age, specialty, gender, experience, … etc. The sample was calculated using Raosoft Sample Size Calculator, based on 5% margin of error, 95% confidence level, and a population size of the total human resources, according to MoH. According to the latest report, the number of HCPs working in PHC clinics in Nablus city is 46 doctors, 103 nurses and 14 midwives, and the number at Al-Watani Hospital is 16 doctors, 114 nurse and no midwife, compare to 81 doctors, 218 nurse and 35 midwives at Rafidia Hospital. The total number of nurses and midwives in the UNRWA settings in West Bank is 246, without a specification in the MoH report for Nablus city, and the private hospitals were contacted to determine the total number of doctors and nurses who are working in each of them.

Accordingly, the sample size was calculated using the Raosoft Sample Size Calculator, which resulted in a recommended sample size of 290 nurses and doctors, while the researcher was able to recruit a total of 321 participants in the final sample, which was suitable for the quantitative approach of the current study.

2.4 Eligibility Criteria

2.4.1 Inclusion criteria

The study included nurses and doctors who were currently working as full-time HCPs in the targeted settings, regardless of age, gender, experience in profession or previously with mentally ill patients, or residency.

2.4.2 Exclusion criteria

All HCPs who refused to participate, did not have the experience of treating or dealing with mentally-ill patients and/or who were in their annual, sick or maternal leaves were excluded from the data collection.

2.5 Study Variables

2.5.1 Independent variables

sociodemographic factors (age, gender, residency, socioeconomic status, and income) and professional factors (job title, experience in job and current workplace, health institution type, and whether received a specific training).

2.5.2 Dependent variable

The knowledge of and attitude towards mental health disorders and related services as measured by the study tools.

2.6 Data Collection Tool and Process

Data collection was done using a self-administered questionnaire that contains three main sections (Appendix A). The first section is related to the sociodemographic and professional independent variables of the doctors and nurses, followed by the second part that included the MAKs tool to assess the knowledge level, which was developed by Sarah Evans-Lacko and colleagues in 2010 to assess stigma-related mental health knowledge among the general public, is considered a brief and feasible instrument designed to evaluate knowledge about mental health problems, focusing on reducing stigma and tracking the effectiveness of interventions (Evans-Lacko et al., 2010). The tool originally included 12 items that were rated on a 5-point Likert scale that ranged from 1 (Strongly disagree) to 5 (Strongly agree), with higher scores indicating better level of knowledge of mental disorders.

The third section contained the AMI questionnaire that was developed by the Department of Health in the UK. The tool consists of 27 items that are graded on a 5-point Likert scale, from 1 (Strongly disagree) to 5 (Strongly agree) and covers a wide range of statements that are concerned with attitudes toward people with mental disorders, as well as opinions of the participants towards the services that are provided for those people. Based on the scoring system of the scale, a higher score indicates more positive attitudes of the nurses and doctors towards mental disorders and psychiatric patients.

The levels of knowledge and attitude were calculated by summing up the codes of the sentences (from 1 to 5) and giving a total score that is then converted to out of 100, with higher scores indicting better knowledge and more positive attitude.

In this study, participants' scores out of 100% were classified into three levels: poor, moderate, and high, where scores less than 60% were categorized as poor, scores between 60% and less than 80% were considered moderate, and scores of 80% and higher were classified as high. This classification was not directly adopted from previous studies or the questionnaire's manual, but was developed based on general academic grading standards and the specific objectives of this research, and has an overall advantage in that it provides a clear and meaningful interpretation of the data, and a better understanding of the levels of knowledge and attitude, in addition to that it aligns with common practices in educational and psychological assessments where similar percentage ranges are used to categorize performance levels.

The researcher used an online version of the questionnaire using Google Forms to collect the data from the targeted settings, and tracked the proportional distribution of the sample according to job title, in which the researcher aimed to collect questionnaires from each setting in proportion to its contribution to the overall population. The researcher sent the link to Google Form to head nurses and chief doctors of the targeted settings and were asked to send it to the nurses and doctors who were currently working there, and by the use of such method, the response rate was enhanced through authority channels of them, as the nurses and doctors feel more encouraged to respond. Also, the use of Google Form allowed for more efficient distribution, and real-time tracking of data collection, in addition to cost-effectiveness, accessibility throughout mobile phones and desktops, response anonymity, inflexibility.

The questionnaire was perceived by the nurses and doctors to be easy to answer and comprehend, which appeared in that the average time was 10-15 minutes using a specific feature in Google Form. The use of this platform also allowed for proper data management, where the responses were kept in a secure database that is linked to the researcher's Google account, and therefore are secured until the start of data analysis, which enhances the anonymity of the collected data. The data collection was conducted over a three-month period, from 5th of April to 5th of July, 2024.

2.7 Piloting

Before the official data collection, a sample of nurses and doctors outside the targeted settings, representing 10% of the calculated sample size, were asked to participate in a piloting phase, in which the questionnaire was filled by those nurses and doctors, and was followed by feedback questions about the suitability of the questions, what parts found difficult, and calculate the mean time to complete the questionnaire. Overall, the questionnaire was perceived as moderately long, with a mean time of 15 minutes to answer it. On the other hand, the piloting sample reported that the tool sufficiently covered the areas of knowledge and attitude towards mental disorders, with minimal adjustments on the translated statements from a grammar side.

2.8 Validity and Reliability of Study Tool

For the MAKS tool, it was developed and validated by Evans-Lacko et al. (2010) as the first tool to assess level of knowledge of mental disorders among the public community members, and can be used on other populations, with a moderate-to-substantial level of internal reliability and test-retest reliability, as well as high validity level supported by external reviews of experienced HCPs and international experts in stigma research. Although been translated to Arabic language in a Tunisian study by Ben Amor et al. (2023), it was not used in the current study as it was validated on culturally different population, and among nursing students rather than HCPs. Therefore, an Arabic version using translation and back-translation method was used in the current study.

The attitude tool was validated by the UK Department of Health, during the 2014 "Attitude to Mental Illness Survey", which reviewed the use of the tool from 1994 to 2014, that included sample sizes between 1554 to 5071 in each year. The methodology of validation includes Computer Assisted Personal Interviewing (CAPI) for real-time data collection and validation, extensive post-interview data checks for range and consistency, and weighting of data to accurately reflect the population profile. These accurate validation steps support the questionnaire's use as a reliable tool for assessing public attitudes towards mental disorder, making it suitable for research aiming to understand and address stigma in mental health (Health & Social Care Information Centre, 2014).

The study tools were translated and back-translated in a registered English-to-Arabic translation center, in order to ensure that the translation to Arabic terms have a reliable

aspect. In addition, the translated form was reviewed by a panel of 5 experts in the area of mental disorders, including 2 faculty doctors, 2 experienced mental health nurses and a specialized doctor (psychiatrist).

For the reliability testing, the internal consistency of both MAKS and AMI tools was tested using Cronbach's alpha test, which had the result of 0.813 for MAKS tool, and 0.884 for AMI, which indicated a high level of reliability for the used tools among the targeted sample, and that the items are inter-correlated and consistently measure the intended constructs, with the advantage of the ability to use them in future research.

2.9 Data Analysis

For the purpose of data analysis, Statistical Package for Social Sciences (SPSS) software version 25.0 was used to produce the descriptive and analytical results of the study's data. The descriptive results included frequencies and percentages of the nurses and doctors' responses to their demographic factors and items of MAKS and AMI tools, as well as median and interquartile range (IQR) of scale variables and scores of MAKS and AMI tools, taking into account that non-parametric tests were used as the normality test using Kolmogorov-Smirnov and Shapiro-Wilk tests showed the rejection of null hypothesis regarding the normal distribution of the study data (p-value < 0.001).

In the analytical part, the relationship between independent variables and the dependent variable was tested to test the study's hypotheses, using inferential tests that included Mann-Whitney U and Kruskal-Wallis to test the differences in mean ranks of knowledge and attitude scores across the categories of the demographic factors, while Spearman Correlation test was used for the test of correlation between scale demographic factors and scores of knowledge and attitude, as well as between knowledge and attitude scores themselves, with 0.05 as the cut point of p-value to consider significant relationships. Lastly, the multivariate analysis, using linear regression, was used to determine the predictors of knowledge and attitude scores, which included the significantly related factors from the univariate analyses.

2.10 Ethical Considerations

Every study process followed the guidelines set forth in the Helsinki Declaration for research with human beings. Approval was granted from the Institutional Review Board (IRB) of An-Najah National University before the start of the data collection and ref number for IRB is (Mas. April 2024/6), which was followed by the approval from the MoH for starting data collection from the governmental settings, and from each of the private settings individually. Also, before any data was collected, an Arabic consent form (Appendix C) was received from each participant, indicating that answering the online form questionnaire was considered an implied consent to participate.

The names and phone numbers of the participants were kept anonymous, and the data were used by the researcher and the supervisors for research purposes only. Finally, the patients had the ability to withdraw from the participation at any time, without the need to declare any reasons.

Chapter Three

Results

This chapter reviews the descriptive and analytical results of the current study related to the levels of knowledge and attitude of nurses and doctors towards mental disorders and related health services, where the descriptive results are focusing on the frequencies and percentages of categorical demographic data and the responses of the participants on the scales' items, and medians and IQR for the scale variables, including knowledge and attitude scales scores, as the distribution of the data did not follow the normal distribution curve. The analytical results are concerned with testing the study's hypotheses, where they allow for investigating the relationship between participants' demographic factors and their levels of knowledge and attitude, as well as the correlation between knowledge and attitude scores.

3.1 Part 1: Demographic data

The descriptive results of the demographic data of the nurses and doctors who participated in the current study (n = 321) show that most of them were between 26 and 35 years old 63.2%, with a median age of 31 years old (IQR = 8), ranging from 21 to 56 years old. The sample had 53.6% of females, with more than half of them 52.6% living in villages/towns. Mostly the participants have a monthly income of ≥ 1000 USD, and more than half of them 60.4% are married.

In terms of occupational data, the sample consisted mostly of nurses 72.3%, and more than half of them had an occupational experience of more than 5 years both in their job 58.3% and the current workplace they work at 56.1%. More than half of the sample was recruited from Rafidia Surgical Hospital 22.4%, An-Najah National University Hospital 25.9% and the governmental primary health care clinics 11.8%. Lastly, more than half of the participants stated that they did not receive a training or course related to mental disorders and mental health services within the last two years. Table 1 distributes the demographic data of the participants, while the following figures illustrate them.

Table 1

Distribution of participants' demographic data (n = 321)

Variable	Values	Frequency	Percentage
Age	21 - 25 years old	44	13.7%
	26 - 30 years old	115	35.8%
	31 - 35 years old	88	27.4%
	36 - 40 years old	44	13.7%
	> 40 years old	30	9.3%
	Median (IQR), min – max	31 (8), 21 – 56	
Gender	Male	149	46.4%
	Female	172	53.6%
Residency	City	120	37.4%
	Village/Town	169	52.6%
	Camp	32	10.0%
Monthly income	< 1000 USD	63	19.6%
	≥ 1000 USD	258	80.4%
Social status	Single	123	38.3%
	Married	194	60.4%
	Other	4	1.2%
Job title	Doctor	89	27.7%
	Nurse	232	72.3%
Experience in job	< 1 year	31	9.7%
	1 - 5 years	103	32.1%
	> 5 years	187	58.3%
Experience in current workplace	< 1 year	37	11.5%
	1 - 5 years	104	32.4%
	> 5 years	180	56.1%
Current workplace	Rafidia Surgical Hospital	72	22.4%
	Al-Watani Governmental Hospital	28	8.7%
	An-Najah National University Hospital	83	25.9%
	Nablus Specialized Hospital	32	10.0%
	Arab Specialized Hospital	35	10.9%
	Evangel Hospital	17	5.3%
	Governmental PHC	38	11.8%
	UNRWA PHC	16	5.0%
Mental disorder course last 2 years	Yes	128	39.9%
	No	193	60.1%

Note: IQR = Interquartile range, USD = United States Dollar, PHC = Primary Health Care, UNRWA = United Nations Relief and Works Agency for Palestine Refugees.

3.2 Part 2: Level of knowledge about mental disorders

In the level of knowledge part regarding mental disorders and related health services, around one third of the participants were neutral in their opinion regarding the idea of mentally ill people seeking a job 30.8%, and more than one third of the participants 35.8% agreed to giving advice to a relative or friend having mental disorder to ensure getting the proper guidance that is needed, with 39.3% agreeing that medica treatment (especially medications) can be effective in the cases of mental disorders. A higher percentage 45.2% agrees that psychological treatment can be effective in such disorders.

Around one fourth of the participants disagree 24.6% that most people with mental disorders seek help by going to healthcare professionals, with 31.5% of them disagreed that mental disorders are signs of weakness. Other perceived weaknesses are also disagreed by the participants, including depression 28.3%, mental disorders as emotional weakness 28.0%, depression as an emotional weakness 26.2%, seeking treatment for mental disorders 33.3% and medical treatment as an emotional weakness 34.0%, and psychological therapy 35.2%.

Lastly, there was more agreement regarding consideration of specific issues as mental disorders, including depression 30.8%, schizophrenia 34.3%, bipolar disorders 34.9%, drug addiction 28.3% and loss 22.7%, while 29.3% having neutral opinion regarding psychological stress.

Table 2

Distribution of participants' answers to questions about level of knowledge of mental disorders and related health services (n = 321)

Statement	SD		D		N		A		SA		Mean
	F	%	F	%	F	%	F	%	F	%	
1- Most people who suffer from mental and psychological problems want a paid job	40	12.5%	58	18.1%	99	30.8%	64	19.9%	60	18.7%	3.14
2- If you have a friend that you know suffers from a mental health issue, you know the proper advice to give to ensure that he/she gets the proper career guidance he/she needs	21	6.5%	56	17.4%	55	17.1%	115	35.8%	74	23.1%	3.51
3- Medical treatment (medication) could be an effective treatment for mental and psychological disorders	12	3.7%	33	10.3%	60	18.7%	126	39.3%	90	28.0%	3.78
4- Psychological therapy could be an effective treatment for mental and psychological disorders	12	3.7%	32	10.0%	46	14.3%	145	45.2%	86	26.8%	3.81
5- People who suffer from mental and psychological disorders can be totally cured	35	10.9%	56	17.4%	86	26.8%	90	28.0%	54	16.8%	3.22
6- Most people with psychological or mental health disorders go to a healthcare professional for help	39	12.1%	79	24.6%	79	24.6%	73	22.7%	51	15.9%	3.06
7- Mental and psychological disorders are a sign of weakness	84	26.2%	101	31.5%	56	17.4%	45	14.0%	35	10.9%	2.52
8- Depression is a sign of personal or emotional weakness	71	22.1%	91	28.3%	56	17.4%	55	17.1%	48	15.0%	2.74
9- Mental and psychological disorders are a sign of personal or emotional weakness	66	20.6%	90	28.0%	77	24.0%	52	16.2%	36	11.2%	2.69
10- Madness/ depression is a sign of personal or emotional weakness	65	20.2%	84	26.2%	88	27.4%	42	13.1%	42	13.1%	2.73
11- Seeking treatment for mental and psychological disorders is a sign of weakness	106	33.0%	107	33.3%	55	17.1%	24	7.5%	29	9.0%	2.26
12- Medical treatment (medications) for mental and psychological disorders is a sign of personal and emotional weakness	97	30.2%	109	34.0%	51	15.9%	32	10.0%	32	10.0%	2.36
13- Psychological therapy for mental and psychological disorders is a sign of personal and emotional weakness	108	33.6%	113	35.2%	62	19.3%	23	7.2%	15	4.7%	2.14
Precise if you consider the following as mental and psychological health disorders											
Depression	48	15.0%	30	9.3%	60	18.7%	99	30.8%	84	26.2%	3.44
Psychological stress	38	11.8%	60	18.7%	94	29.3%	66	20.6%	63	19.6%	3.17
Schizophrenia	29	9.0%	32	10.0%	65	20.2%	110	34.3%	85	26.5%	3.59
Bipolar disorders	26	8.1%	34	10.6%	66	20.6%	112	34.9%	83	25.9%	3.60
Drug addiction	35	10.9%	46	14.3%	82	25.5%	91	28.3%	67	20.9%	3.34
Loss	39	12.1%	64	19.9%	82	25.5%	73	22.7%	63	19.6%	3.18

Note: SD = Strongly disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly agree, F = Frequency.

The median knowledge level is 68.42% (IQR = 12.63%), which is considered a moderate knowledge level, ranging from scores of 35.79% to 89.47%. When classified, more than two thirds of the participants 69.5% showed a moderate level of knowledge regarding mental disorders and related health services, with higher percentage of high level 16.5% than poor level 14.0% of knowledge. Table 3 distributes the frequencies and percentages of level of knowledge categories, and Figure 10 illustrates them.

Table 3

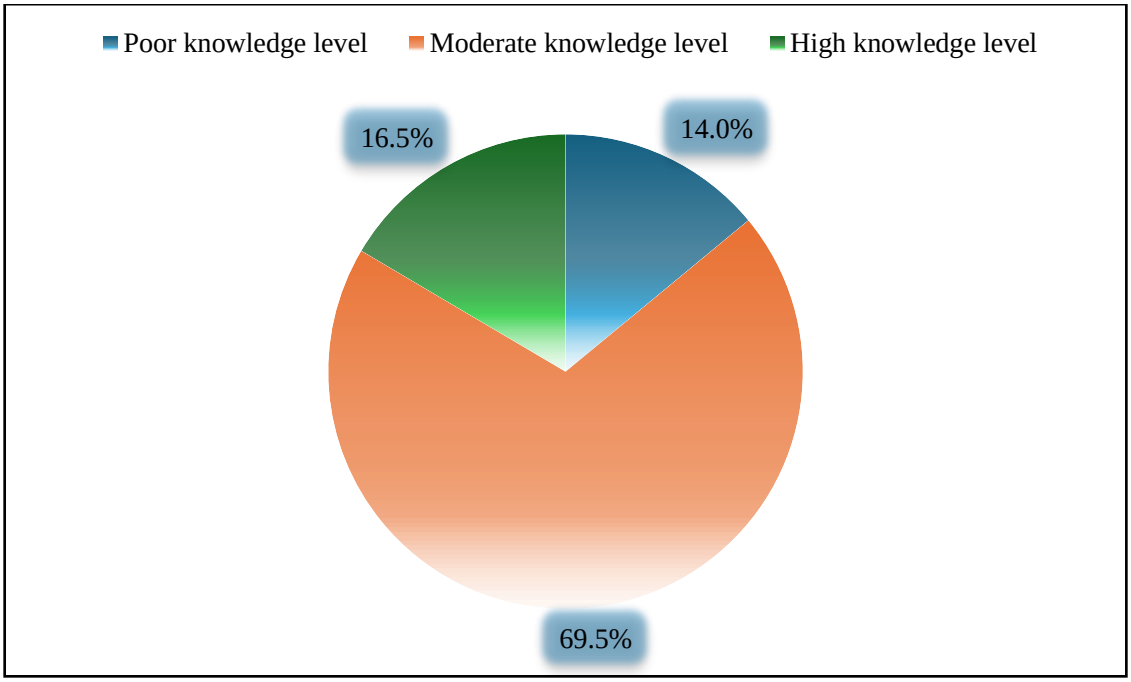
Distribution of categories of knowledge about mental disorders and related health services

Categories	Category score	Frequency	Percentage
Poor knowledge level	Score < 60%	45	14.0%
Moderate knowledge level	60% - <80%	223	69.5%
High knowledge level	≥80%	53	16.5%
Overall knowledge median (IQR), min - max		68.42 (12.63), 35.79 – 89.47	

Note: IQR = Interquartile range.

Figure 2

Distribution of participants' knowledge about mental disorders and health services



3.3 Part 3: Attitude towards mental disorders and related health services

In the attitude part towards mental disorders and mental health services, 25.2% of the participants agreed on the lack of self-discipline and will-power as one of the main causes for having mental disorders, and 31.8% agreeing that it is easy to tell mentally ill patients form normal people. On the other hand, 28.7% of the participants disagreed of hospitalization as soon as the person shown signs of mental disorders, with 33.6% agreeing that mental disorders are like any other disorders.

Conversely, 26.5% disagreed that protecting people from mentally ill people should receive less emphasis, and 25.5% disagreed on mental hospitals being an outdated method of treating mentally ill patients. More agreement 36.4% agree was on that anyone can become mentally ill, with less percentage 32.7% agreeing on that mentally ill people have been subjects for ridicule. More than one third of the participants agree 34.9% that there is a need to adopt a more tolerant attitude towards people with mental disorders, with 27.1% strongly agreeing that providing the best possible care for mentally ill people is our responsibility.

More than one fourth of the participants 26.5% strongly disagreed that mentally ill people do not deserve our sympathy. Also, 27.1% of the participants were neutral in their opinion regarding mentally ill people being a burden on the society, and 25.9% disagreed that spending on mental health services is a waste of money. In addition, 29.9% of participants disagreed on the sufficiency of existing services for people with mental disorders, with 23.1% disagreeing that no responsibility should be given to people with mental disorders, even if a person with mental disorder is fully recovered, a woman would be foolish to marry such a person.

Also, more than one third of the participants 38.3% were neutral towards living next to a person with mental disorders, with 41.4% showing neutral opinion regarding people with history of mental disorders should be excluded from taking public services. More agreement 22.4% was shown towards statements related to not excluding people with mental disorders from their neighborhood, with similar percentages of agreement regarding mentally ill people being less dangerous than most people suppose 22.4%. More disagreement was shown in terms of opinion related to women who were previously mentally ill being accepted as babysitters 31.2% disagree, with higher agreement that the

best treatment for people with mental disorders is to be a part of the community 33.6% agree.

Around 30% of the participants agreed that mental health services should be provided through community-based services, with more than one third of them 35.5% having neutral opinion related to not having to be afraid among residents when a person with mental disorder lives in their neighborhood. Also, 24.9% disagreed about being afraid that people with mental disorders live in residential neighborhoods, with 27.1% disagreed about having mental health services facilities downgrades the residential areas, and higher agreement 29.0% agree towards having the same jobs rights among people with mental disorders.

Table 4

Distribution of participants' answers to questions about level of attitude towards mental disorders and related health services (n = 321)

Statement	SD		D		N		A		SA		Mean
	F	%	F	%	F	%	F	%	F	%	
1. One of the main causes of mental disorder is a lack of self-discipline and will-power.	64	19.9%	59	18.4%	67	20.9%	81	25.2%	50	15.6%	2.98
2. There is something about people with mental disorder that makes it easy to tell them from normal people.	38	11.8%	40	12.5%	83	25.9%	102	31.8%	58	18.1%	3.32
3. As soon as a person shows signs of mental disturbance, he should be hospitalized.	55	17.1%	92	28.7%	85	26.5%	44	13.7%	45	14.0%	2.79
4. Mental disorder is an disorder like any other.	30	9.3%	60	18.7%	55	17.1%	108	33.6%	68	21.2%	3.39
5. Less emphasis should be placed on protecting the public from people with mental disorder.	41	12.8%	85	26.5%	82	25.5%	55	17.1%	58	18.1%	3.01
6. Mental hospitals are an outdated means of treating people with mental disorder.	47	14.6%	82	25.5%	69	21.5%	64	19.9%	59	18.4%	3.02
7. Virtually anyone can become mentally ill.	13	4.0%	41	12.8%	85	26.5%	117	36.4%	65	20.2%	3.56
8. People with mental disorder have for too long been the subject of ridicule.	29	9.0%	36	11.2%	89	27.7%	105	32.7%	62	19.3%	3.42
9. We need to adopt a far more tolerant attitude toward people with mental disorder in our society.	33	10.3%	31	9.7%	77	24.0%	112	34.9%	68	21.2%	3.47
10. We have a responsibility to provide the best possible care for people with mental disorder.	33	10.3%	31	9.7%	79	24.6%	91	28.3%	87	27.1%	3.52
11. People with mental disorder don't deserve our sympathy.	85	26.5%	70	21.8%	74	23.1%	51	15.9%	41	12.8%	2.67
12. People with mental disorder are a burden on society.	59	18.4%	78	24.3%	87	27.1%	48	15.0%	49	15.3%	2.84
13. Increased spending on mental health services is a waste of money.	82	25.5%	83	25.9%	69	21.5%	38	11.8%	49	15.3%	2.65
14. There are sufficient existing services for people with mental disorder.	51	15.9%	96	29.9%	96	29.9%	43	13.4%	35	10.9%	2.74
15. People with mental disorder should not be given any responsibility.	65	20.2%	74	23.1%	76	23.7%	46	14.3%	60	18.7%	2.88
16. A woman would be foolish to marry a man who has suffered from mental disorder, even though he seems fully recovered.	48	15.0%	61	19.0%	119	37.1%	42	13.1%	51	15.9%	2.96
17. I would not want to live next door to someone who has been mentally ill.	42	13.1%	76	23.7%	123	38.3%	39	12.1%	41	12.8%	2.88
18. Anyone with a history of mental problems should be excluded from taking public office.	46	14.3%	61	19.0%	133	41.4%	37	11.5%	44	13.7%	2.91
19. No one has the right to exclude people with mental disorder from their neighborhood.	40	12.5%	49	15.3%	97	30.2%	72	22.4%	63	19.6%	3.21
20. People with mental disorder are far less of a danger than most people suppose.	35	10.9%	43	13.4%	107	33.3%	72	22.4%	64	19.9%	3.27
21. Most women who were once patients in a mental hospital can be trusted as babysitters.	77	24.0%	100	31.2%	78	24.3%	25	7.8%	41	12.8%	2.54
22. The best therapy for many people with mental disorder is to be part of a normal community.	33	10.3%	35	10.9%	77	24.0%	108	33.6%	68	21.2%	3.45
23. As far as possible, mental health services should be provided through community-based facilities.	24	7.5%	27	8.4%	94	29.3%	96	29.9%	80	24.9%	3.56
24. Residents have nothing to fear from people coming into their neighborhood to obtain mental health services.	31	9.7%	45	14.0%	114	35.5%	86	26.8%	45	14.0%	3.21
25. It is frightening to think of people with mental problems living in residential neighborhoods.	46	14.3%	80	24.9%	105	32.7%	46	14.3%	44	13.7%	2.88
26. Locating mental health facilities in a residential area downgrades the neighborhood.	47	14.6%	71	22.1%	87	27.1%	60	18.7%	56	17.4%	3.02
27. People with mental health problems should have the same rights to a job as anyone else.	20	6.2%	47	14.6%	108	33.6%	93	29.0%	53	16.5%	3.35

Note: SD = Strongly disagree, D = Disagree, N = Neutral, A = Agree, SA = Strongly agree, F = Frequency.

The median attitude score was 63.70% (IQR = 11.85%), showing a moderate level of attitude towards mental disorders and mental health services, ranging from scores of 42.96% to 87.41%. Also, more than half of the participants 62.0% showed a moderate level of attitude, while more than one third of them 36.4% showed a poor attitude level, while only 1.6% of them showed a high attitude level. Table 5 distributes the frequencies and percentages of categories of attitude levels among the participants, while Figure 11 illustrates them.

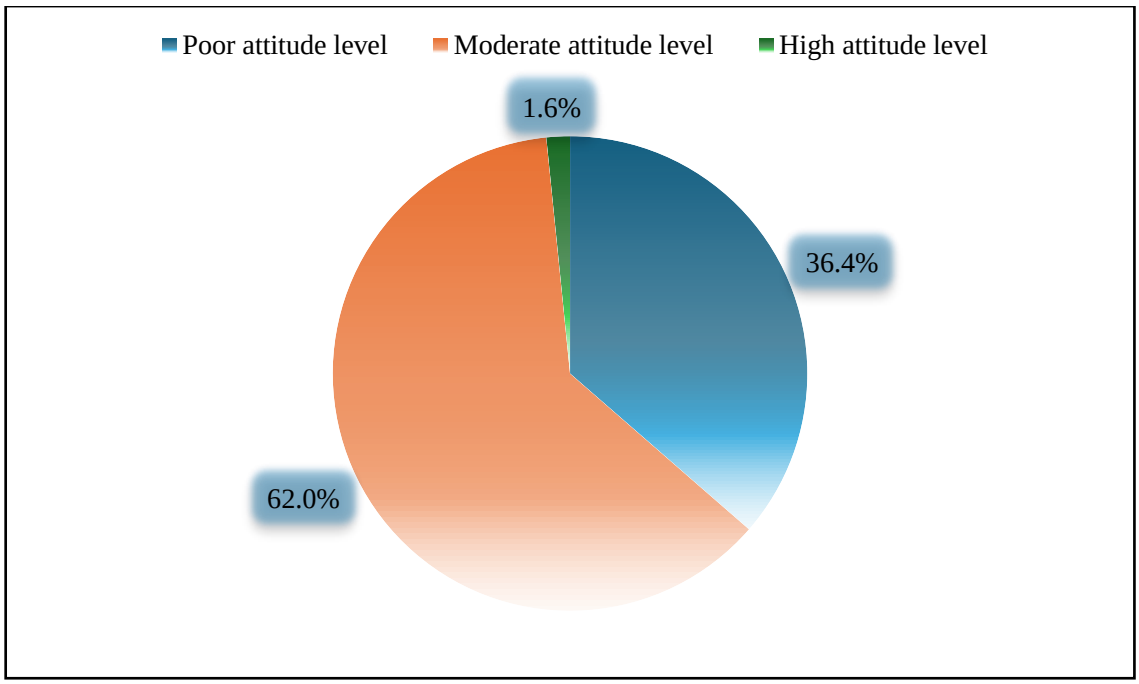
Table 5

Distribution of categories of attitude towards mental disorders and related health services

Categories	Category score	Frequency	Percentage
Poor attitude level	Score < 60%	117	36.4%
Moderate attitude level	60% - <80%	199	62.0%
High attitude level	≥80%	5	1.6%
Overall attitude median (IQR), min - max		63.70 (11.85), 42.96 – 87.41	

Figure 3

Distribution of participants' attitude about mental disorders and health services



3.4 Part 4: Analytical results

The analytical results of the relationships between participants' demographic and occupational factors and their knowledge level of mental disorders show that none of the demographic or occupational factors were significantly related to differences in level of knowledge (p-value > 0.05).

Table 6

Relationship between participants' demographic factors and level of knowledge of mental disorders and related health services

Factors	Categories	Mean rank	Test value	p-value
Age	20 - 25 years old	183.26	5.693	0.223
	26 - 30 years old	153.74		
	31 - 35 years old	149.78		
	36 - 40 years old	170.42		
	> 40 years old	175.27		
	Spearman correlation		r = 0.006	0.914
Gender	Male	156.45	12136.0	0.413
	Female	164.94		
Residency	City	151.51	2.565	0.277
	Village/Town	168.79		
	Camp	155.42		
Monthly income	< 1000 USD	157.15	7884.0	0.713
	>= 1000 USD	161.94		
Social status	Single	154.80	0.947	0.623
	Married	164.63		
	Other	175.63		
Job title	Doctor	165.34	9338.0	0.604
	Nurse	159.34		
Experience in job	< 1 year	169.44	0.616	0.735
	1 - 5 years	155.87		
	> 5 years	162.43		
Experience in current workplace	< 1 year	162.81	0.033	0.984
	1 - 5 years	161.71		
	> 5 years	160.22		
Workplace type	Gov. hospital	150.48	3.905	0.142
	Non-gov. hospital	160.70		
	PHC	181.41		
Mental disorder course last 2 years	Yes	168.09	11445.0	0.265
	No	156.30		

On the other hand, attitude scores showed significant differences across several demographic and occupational factors, with significantly higher attitude scores among participants in the age group of older than 40 years old (mean rank = 234.83, H = 27.170, p-value < 0.001), but no specific correlation was found between then (r = 0.031, p-value = 0.576).

Also, female participants significantly showed higher attitude towards mental disorders and health services (mean rank = 179.77) compared to male participants (mean rank = 139.33, U = 9585.5, p-value < 0.001). In addition, participants with monthly incomes of more than 1000 USD showed significantly less attitude than who have less than 1000 USD (mean rank = 152.91 vs 194.13, U = 6040.0, p-value = 0.002), with significantly higher attitude among participants who are widowed or divorced (mean rank = 269.88) than who are single (mean rank = 170.24) or married (mean rank = 152.89, H = 8.214, p-value = 0.016). Lastly, the workplace type showed significant relationship with attitude scores, with significantly higher attitude among participants who work at PHCs (mean rank = 223.36) than who work in hospitals, whether they were governmental (mean rank = 150.74) or non-governmental (mean rank = 146.98, H = 29.447, p-value < 0.001).

Table 7

Relationship between participants' demographic factors and level of attitude towards mental disorders and related health services

Factors	Categories	Mean rank	Test result	p-value
Age	20 - 25 years old	164.45	27.170	< 0.001
	26 - 30 years old	165.23		
	31 - 35 years old	144.13		
	36 - 40 years old	129.89		
	> 40 years old	234.83		
	Spearman correlation		r = 0.031	0.576
Gender	Male	139.33	9585.5	< 0.001
	Female	179.77		
Residency	City	172.42	3.502	0.174
	Village/Town	151.98		
	Camp	165.80		
Monthly income	< 1000 USD	194.13	6040.0	0.002
	>= 1000 USD	152.91		
Social status	Single	170.24	8.214	0.016
	Married	152.89		
	Other	269.88		
Job title	Doctor	146.29	9014.5	0.078
	Nurse	166.64		
Experience in job	< 1 year	151.52	1.203	0.548
	1 - 5 years	168.76		
	> 5 years	158.30		
Experience in current workplace	< 1 year	158.03	1.916	0.384
	1 - 5 years	171.30		
	> 5 years	155.66		
Workplace type	Gov. hospital	150.74	29.447	< 0.001
	Non-gov. hospital	146.98		
	PHC	223.36		
Mental disorder course last 2 years	Yes	161.72	12259.5	0.909
	No	160.52		

Moreover, the correlation between participants' knowledge and attitude toward mental disorders and health services was significant (r = 0.252, p-value < 0.001), showing a moderate, significant correlation between increased knowledge and higher attitude towards mental disorders and health services.

Table 8

Correlation between knowledge and attitude scores towards mental disorders and related health services

	Correlation with attitude score	
	Correlation coefficient	p-value
Knowledge score	0.252	< 0.001

The demographic and occupational factors that were significantly related to attitude scores of mental disorders and health services in the previous univariate analysis were included in a multivariate analysis using linear regression to identify the possible predictors of attitude among the participants. The regression model shows that female gender (B = 2.398, p-value = 0.004, 95% CI = 0.768 – 4.028), lower monthly income (B = -3.374, p-value = 0.001, 95% CI = -5.438 - -1.311), non-hospital-based workplace type (B = 1.752, p-value = 0.006, 95% CI = 0.518 – 2.986) and higher knowledge of mental disorders (B = 0.181, p-value < 0.001, 95% CI = 0.101 – 0.261) were significant predictors for a higher attitude levels towards mental disorders and health services among the participants.

Table 9

Predictors of attitude levels towards mental disorders and related health services among the participants

Predictors	B	Std. Error	t	p-value	95% CI
(Intercept)	51.218	3.800	13.479	< 0.001	43.741 – 58.694
Age	0.703	0.459	1.530	0.127	-0.201 – 1.607
Gender	2.398	0.828	2.894	0.004	0.768 – 4.028
Monthly income	-3.374	1.049	-3.218	0.001	-5.438 - -1.311
Social status	-1.475	1.000	-1.474	0.142	-3.443 – 0.494
Workplace type	1.752	0.627	2.794	0.006	0.518 – 2.986
Knowledge score	0.181	0.041	4.459	< 0.001	0.101 – 0.261

3.5 Summary

The sample consisted of 321 participants with a median age of 31 years old (IQR = 8), who are 53.6% females, 52.6% living in villages, 80.4% having a monthly income of ≥ 1000 USD, 60.4% married, 72.3% nurses, 58.3% and 56.1% having > 5 years of experience in their job and current workplace, respectively, and 60.1% did not receive a course or training for mental disorders.

The overall knowledge about mental disorders was moderate, with a median score of 68.42%, and 69.5% of the participants having moderate level of knowledge category. On the other hand, none of the demographic factors significantly related to differences in mean scores or mean ranks of knowledge scores.

The overall attitude score was 63.70%, indicating a moderate overall attitude level, with 62.0% and 36.4% of the participants having moderate and poor levels of attitude, respectively. Significantly higher attitude levels were found among participants who are not between 31 and 40 years old, not correlated with age, as well as among females, having < 1000 USD of income, other than single or married social status, and who work at PHCs.

There was a significant, moderate, positive correlation between knowledge and attitude scores regarding mental disorders, with attitude levels significantly predicted by female gender, lower monthly income, non-hospital workplace and higher knowledge scores, as investigated by the regression model.

Chapter Four
Discussion and Conclusions

The following chapter is dedicated to discussing the results of the current study, by comparing them to the findings of the previously reviewed literature and providing critique comments from the researcher's point of view.

4.1 Discussion of methodological aspects of the current study

Starting with the sample of the study, the sample size reached 321 nurses and doctors, which is a appropriate size to be used for the quantitative approach, and this aligns with some of the previous studies in the context of mental health. For example, Giandinoto et al. (2018) concluded in their systematic review that recruiting larger samples of HCPs is recommended in such a field, while Demirören et al. (2015) stated that recruiting several hundred is commonly used in studies related to attitudes of HCPs, in addition to that previous studies related to the current study used sample sizes of greater than 100 and reach over 1000 participants (Anthoine et al., 2014). When measuring complex constructs, like the attitude towards mental disorders and psychological disorders in general, a sample size of several hundred achieves some benefits, like the increase in statistical power, improved generalizability, reduced margin of error and balanced representation of subgroups, which achieves reliable and valid results (Anthoine et al., 2014; Ghuloum et al., 2022; Schuster et al., 2021).

One of the most important findings in the sociodemographic and professional data is related to the high percentage of nurses and doctors who reported not have been received a course that is specifically covering mental disorders 60.1%. This percentage is relatively high, and is similar to the percentage found by Turki et al. (2020) in Jordan 65.9%, and therefore, the researcher highly recommends to integrate training programs for nurses and doctors that cover mental disorders and how to deal with the mentally-ill patients. This is also important as mentally ill patients may also seek pure medical care in the hospitals or clinics that are specifically targeting psychological disorders.

Also, previous studies found that providing training programs for HCPs on the mental disorders is important and highly recommended, which result in positive consequences, like the long-term increase in nurses' knowledge, attitude, self-efficacy and behavioral

intentions regarding mental disorders (Irvine et al., 2012), improved psychological practice skills that positively impact patients' outcomes (Garzonis et al., 2015), improving the nurse-patient relationship by enhancing the communication skills between them (Papageorgiou et al., 2017), as well as increased competency level among HCPs who deal with mentally ill patients (Kim & Salyers, 2008).

For a training program in the context of mental disorders that target HCPs, it should be learner-centered, including interactive approaches, based on real-world challenges, involve experts in its development, include interdisciplinary group work, timely flexible and integrates knowledge into routine practices, with the use of e-learning. Moreover, several factors contribute to effective implementation of such programs, like the need of pre-training assessment to effectively guide trainers to make relevant content, in addition to the need for continuous evaluation and feedback, and the importance of receiving support from leaderships and policy makers (Blanco-Vieira et al., 2018).

4.2 Comparison of knowledge and attitude towards mental disorders with previous studies

The study of Yuan et al. (2017) in Singapore was conducted a sample of 379 HCPs, compared to 321 in the current study, while the previous study recruited nurses, doctors and other HCPs who were in the field of allied health sciences, and had 36.2% nurses and 13.5% doctors, which is similar in proportion to the current study, where the number of recruited nurses are almost three times the number of recruited doctors 72.3% vs 27.7%. On the other hand, the previous study is different in which they aimed to compare their findings with a previous study they conducted on the attitude of general population towards mental disorders, and they found an overall significantly better attitude among HCPs than general population, therefore, the researcher of the current study recommends to replicate this aim in the Palestinian context, because there are several factors that can be taken into consideration when assessing general population's attitude towards mental disorders, which of are unique in the Palestinian community, depending on their cultural differences and sociopolitical situation. The previous study used a summed score for the subscales of AMI tool, and it can be summed to a total of 64.36%, which is very similar to the median attitude level in the current study (63.70%). The similarities in some of the demographic factors between both studies may interpret the similarity in attitude score. The previous study did not compare the mean differences in the overall attitude level

across the demographic factors, which makes it more difficult to compare the findings of the current study with the previous findings.

On the opposite, the Czech study of Winkler et al. (2016) was conducted on a sample of doctors only, in addition to general population. The study found that the overall attitude of doctors was generally positive, which is similar to the current study, where the median score of attitudes 63.70% indicated an overall moderate attitude level of HCPs towards mental disorders. The previous study also found that attitude levels were significantly higher among female doctors, who are between 35 and 54 years old, and who are medical doctors, which is similar to the findings of the current study in that female HCPs significantly had higher mean ranks of attitude scores, while the significant variation across age was not similar, due to the different classification of age groups between them. Also, the current study did not compare between different doctors' titles, and only compared between nursing and doctor job titles, which was also not significantly different according to it. The differences in findings can also be related to the different attitude tool that was used in the previous study (CAMI questionnaire). Based on this discussion, the researcher recommends comparing between different job titles (including other HCPs rather than nurses and doctors), while the current study had the advantage of comparing attitude levels according to receiving specific courses related to mental disorders.

Different results were concluded in the systematic review of Elyamani and Hammoud (2020) than in the current study, where the previous review concluded an overall low knowledge and negative attitudes of HCPs in the Arab Gulf area, while the current study found moderate knowledge and attitude levels. Despite the proximity of Arab Gulf area to the Palestinian area, the differences in these results may be related to several factors, including the differences in attitude tools that were used in the reviewed studies, which can include non-valid tools that were developed by the researchers, compared the valid tool of AMI that was translated and back translated in the current study. Also, cultural differences play a role, as well as the differences in the nationalities that form the health sector, where the Gulf countries mostly hire foreign workforces, like East Asian nationalities, which come from different academic backgrounds and experiences with mental disorders.

The previously mentioned issue related to variation in nationalities in the Gulf area also appears in the Qatari study of Ghuloum et al. (2022), where Asian ethnicity was a significant predictor of higher stigmatization among the nurses, in addition to other factors. The study also found that nurses significantly have worse attitude (indicated by higher scores of stigmatization) than doctors, which was not found in the current study. Also, the rest of demographic factors that significantly affected attitude levels among the Qatari sample were not targeted in the current study. Another factor that may interpret differences in results is related to the use of different tools to assess attitude towards mental disorders, where the previous study used a 16-item MICA-4 tool, while the current study used a 27-item AMI tool, which may have resulted in broader coverage of ideas and attitude statements in the current study's tool. The previous study also included factors that are recommended to be used in future studies in Palestine in the context of mental disorders, like whether the HCP works at a mental health facility, the specific educational degree, and the personal experience with mentally ill patients.

A fair level of attitude towards postpartum patients with mental disorders was found in the previous study of Ordan et al. (2018), which is similar to the overall attitude level in the current study. The similarity in the main finding is found although many differences are found between both studies, including larger sample size in the current study (321 vs 61), including nurses and doctors compared to postpartum nurses only, and the lower percentage of nurses who did not receive courses on how to deal with patients with mental disorders 60.1% vs 94.7%, which are both higher than desired. The previous study found no significant relationship between demographic factors and attitude levels (p-value > 0.05), while the current study found several demographic factors to play a role in the HCPs' attitude levels, including age, gender, monthly income, social status, and workplace type, which can be related to the mentioned differences in the methodological aspects between both studies, in addition to cultural and religious differences between both populations. Moreover, the previous study used a different tool that also included the assessment on stigmatization and parenting skills among the postpartum nurses, and therefore it is recommended to conduct a similar study in Palestine that targets this vulnerable population (postpartum patients with mental disorders), because of the higher risks of postpartum depression and psychosis, that may reach self-harm.

The researcher also recommends the conduction of a study that assesses the knowledge and attitude levels towards mental disorders among medical and nursing students, which replicates the previously reviewed Jordanian study of Abuhammad et al. (2019), where they used the same tool to assess knowledge levels as in the current study (MAKS tool). The previous study had higher percentage of females 73.4% vs 37.4% and less sample size (169 vs 321) than the current study. The overall knowledge level of nursing students in the previous study was equivalent to a mean of 63.3%, which is less but close to the median knowledge in the current study 68.42%, while the attitude level had a mean equivalent to 72.22% in the previous study, compared to 63.70% in the current study. The close knowledge and higher attitude among Jordanian nursing students than Palestinian HCPs can be related to that students may have higher compassionate attitudes towards mentally ill patients, and that the employees who work at the health sector face higher amount of pressures, although they may deal with higher number of patients, therefore it is expected from them to have more positive attitude, but this can be interpreted by the finding that concludes no significant relationship between HCPs experience in job or current workplace with attitude levels in the current study (p-value > 0.05). This discussion of results supports the idea that attitude levels towards mental disorders is highly complex, and several other factors (rather than demographic and professional) may play more significant roles in attitude levels, including culture, religious capacity and individual differences.

The study of Shahif et al. (2019) also used a different tool to assess knowledge and attitude of their sample towards mental disorders, which may interpret the differences in some results. For example, both studies found that the overall attitude level was moderate, but the previous study tested the correlations between specific domains of attitude, which was not conducted in the current study. On the other hand, the previous study found that level of knowledge is significantly correlated with better attitude scores, which was also found in the current study, and supports the importance of acquiring the appropriate level of knowledge in the field of mental disorders in order to develop a better attitude towards patients.

In Palestine, the previous study of Ahmead et al. (2010) found an overall negative attitudes among nurses towards mental disorders. The current study found an overall moderate attitude level, which may indicate an improvement in the attitude of Palestinian

nurses towards mental disorders than 14 years earlier. The change may be related to effective academic curriculum that was developed in the last years, as well as improved overall culture towards the mentally ill patients. These findings are taken into consideration while the previous study recruited 79 mental HCPs, compared to 321 nurses and doctors in the current study who work at different non-specialized workplaces. Specific differences in the findings of both studies is that the previous study found a high agreement on the risk that mentally ill patients have on the community 74.4%, compared to 26.5% of the HCPs in the current study who disagree on less emphasis that should be taken on protecting the public from these patients, with 33.3% and 22.4% who had neutral and positive opinion towards the statement regarding the less danger of mentally ill patients than most people suppose. The previous study lacks the use of inferential statistics to investigate the differences in attitude levels across HCPs demographic factors.

4.3 Conclusion

Treating patients with mental disorders is considered a challenge for healthcare professionals, especially who are not specialized in the area of psychological disorders or not working in specialized facilities. HCPs also need to acquire the appropriate knowledge and positive attitude levels to deal with mentally ill patients. Therefore, the current study aimed to investigate knowledge and attitude of nurses and doctors in Nablus city – Palestine towards mental disorders, as well as the investigation of the most common demographic and professional factors that are related to them.

The researcher recruited doctors and nurses from six private and governmental hospitals and governmental and UNRWA primary health clinics, which covered a generalizable sample of the population in Nablus city – Palestine, and while the researcher did not target settings outside Nablus city, it is recommended to cover other cities in Palestine in future studies, which will help in the generalizability of results on the Palestinian population of nurses and doctors. The current political conflict in Palestine that is presented by the Israeli war on Gaza Strip holds multiple transportation limitations.

The sample of the study also included nurses and doctors from a variety of age groups, and not focused on young and novice HCPs, with a median age of 31 years old, which is more representative of the overall HCPs in Palestine. Also, the sample included similar percentages of males and females, and a representative percentage of married doctors and

nurses 60.4%. These characteristics support the advantages of sampling technique in the current study that significantly decreased selection bias.

The study utilized a cross-sectional, descriptive, quantitative design on a sample of 321 Palestinian nurses and doctors, and used two valid tools, for the assessment of their knowledge MAKS and AMI which were translated to Arabic language. Data were analyzed using SPSS and with full commitment to ethical considerations of anonymity and confidentiality.

The overall level of knowledge among the Palestinian nurses and doctors who were recruited in the current study had a median of 68.42%, with 69.5% of the participants had moderate level of knowledge of mental disorders, and while the level of attitude was similar, with a median score of 63.70% and 62.0% having a moderate attitude level, the distribution of poor and high levels of knowledge and attitude are not the same, where 14.0% and 16.5% of the participants had poor and high levels of knowledge, respectively, compared to 36.4% and 1.6% for the poor and high attitude levels, respectively, which means that the poor attitude of nurses and doctors toward mental disorders is more than twice in its percentage compared to the level of knowledge. On the other hand, the correlation between knowledge and attitude scores was significantly positive ($r = 0.252$, p-value < 0.001). In the statistical way, the correlation between them is moderate, and therefore, the correlation indicates that level of knowledge among nurses and doctors about mental disorders contributes to a small proportion of their attitude level, which may help in the explanation of the differences in poor and high categories.

Another explanation may also present in this correlation, where it scientifically indicates that increased knowledge is not the mere factor to have a good or high attitude towards mental disorders, which should be understood by the policy makers and stakeholders who are responsible for conducting training programs, as there are several other factors that may mediate the relationship between knowledge and attitude of HCPs, even though they are considered the higher type of people with understanding of mental disorders, including cultural beliefs, stigma, personal experiences, or societal norms (Chiles et al., 2017; Mårtensson et al., 2014).

Knowledge is more of a cognitive construct, and therefore, the absence of demographic factors that significantly affected it among the nurses and doctors of the current study can

be explained by the uniformity of knowledge distribution among HCPs, mostly related to the standardized and similar education and training programs they receive, whether in the academic or work phases. Attitudes, on the other hand, was found to be significantly related to several factors, indicating that attitude is a more complex inter-connection of personal, cultural and environmental factors (Chiles et al., 2017), and that it should be a focus in the training programs that may be implemented. To effectively target attitudes of stigma and improve the mental health culture among nurses and doctors, such interventions must be directed towards the multiple factors that influence attitudes.

4.4 Recommendations

Based on the discussion of study results, the researcher recommends the following:

4.4.1 For healthcare professionals

1. Participate in ongoing mental health training programs for both nurses and doctors, which focus on improving knowledge and enhancing attitudes towards mental disorders, which are advised by Blanco-Vieira et al. (2018) to be learner-centered, interactive and based on real-world scenarios.
2. Encourage interdisciplinary collaboration between different HCPs, including nurses and doctors, as well as other allied healthcare workers, which aims to support more comprehensive understanding of mental health issues and ultimately improve patients' outcomes.

4.4.2 For health sector and Ministry of Health (MoH)

1. Establish units in general hospitals that are more specialized in mental health services to let mentally ill patients receive appropriate care, including the integration with primary health care settings to reduce stigmatization and improve accessibility.
2. Ensure that all HCPs have clear guidelines to follow, which is done by developing and implementing standardized protocols about dealing with mentally ill patients across all healthcare settings.

4.4.3 For policymakers

1. Involve policies that mandate HCPs to receive the least appropriate level of knowledge and improve attitude towards mental disorders and mentally ill patients, which is done by regular updates and certifications, and is supported from leadership and policymakers.
2. Involve national health plans that are applied through campaigns that focus on reducing community and general population stigmatization, public awareness and ensuring the availability and accessibility of mental health services to all populations.

4.4.4 For universities teaching medical and nursing sciences

1. Continuously update and enhance the curriculum to include comprehensive mental health education that focuses on knowledge, attitudes and behaviors, including case studies, simulations and mental healthcare settings exposure.
2. Encourage the conduction of research on broader settings in Palestine on mental health education's impact on the students' attitude and knowledge, like the use of longitudinal studies to track changes over time and identify the most effective educational interventions.

4.5 Limitations

The current study was limited by the following points:

1. The inclusion of nurses and doctors from Nablus city only, which is limited by the current political situation that limits transportation between cities. This makes the generalization on the Palestinian population of nurses and doctors less available.
2. The exclusion of other HCPs, like pharmacists, psychiatrists, among others, as well as the limitation in the representation of healthcare settings, in which the study included general hospitals and PHC settings, and no specific focus on mental health services, or the comparison between general and mental health settings.
3. Cultural and contextual limitations related to influence of cultural beliefs and stigma, which cannot be clearly measured using a specific tool, as well as possible bias related to the sociopolitical situation of Palestine, which makes it harder to generalize the results on other more stable regions.

4. Design limitations that include the use of cross-sectional design rather than longitudinal design, which could have helped in having better picture of the impact of educational or training sessions on knowledge and attitude levels of nurses and doctors. Also, there was a lack of qualitative data, which may help in gathering more in-depth personal experience of HCPs. These limitations are more related to academic pressure and time constrains.

List of Abbreviations

Abbreviation	Meaning
AMI (classification)	Any Mental Illness
AMI (tool)	Attitude to Mental Disorders
ASH	Arab Specialized Hospital
ATAMHS	Attitudes Toward Acute Mental Health Scale
C-AMP	Culturally adapted manual-assisted problem-solving training
CAMI	Community attitude on mentally ill (questionnaire)
CAPI	Computer Assisted Personal Interviewing
CI	Confidence interval
CVDs	Cardiovascular diseases
DALYs	Disability-adjusted life-years
DM	Diabetes mellitus
GDP	Gross domestic product
HCPs	Healthcare providers
IQR	Interquartile range
IRB	Institutional Review Board
LOS	Length of stay
MAKS	Mental Health Knowledge Schedule
MAP	Medical Aid for Palestine
MHPSS	Mental health and psychological support
MNSS	Mental, neurological and substance abuse disorders, and self-harm
NAMI	National Alliance on Mental Illness
NIMH	The National Institute of Mental Health
NCDs	Non-communicable diseases
NNUH	An-Najah National University Hospital
OR	Odds ratio
PHC	Primary health care
PHQ-9	Patient health questionnaire
PMoH	Palestinian Ministry of Health
PTSD	Post-traumatic stress disorder
SDGs	Sustainable Development Goals
SMI	Serious Mental Disorders
SPSS	Statistical Package for Social Sciences
UK	The United Kingdom
UNRWA	United Nations Relief and Work Agency for Palestine Refugees
US	United States
USD	United Stated Dollar
VSL	Value of statistical life

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Appendices

Appendix A

Study questionnaire (English Version)

Section 1: Demographic and professional data

Questions	Answers
Age (in complete years)	
Gender	Male
	Female
Residency	City
	Village/town
	Camp
Monthly income	< 1000 USD
	≥ 1000 USD
Social status	Single
	Married
	Other (divorced/widowed)
Experience in profession	< 1 year
	1 – 5 years
	> 5 years
Experience in current setting	< 1 year
	1 – 5 years
	> 5 years
Institution type	Rafidia Surgical Hospital
	Al-Watani Governmental Hospital
	An-Najah National University Hospital
	Nablus Specialized Hospital
	Arab Specialized Hospital
	Evangel Hospital
	Governmental PHC
	UNRWA PHC
Did you receive a course about mental disorders?	Yes
	No

Section 2: The Mental Health Knowledge Schedule (MaKs)

Statement	Strongly disagree	Disagree	Neutral	Agree	Strongly agree	I don't know
1. Most people who suffer from mental and psychological problems want a paid job						
2. If you have a friend that you know suffers from a mental health issue, you know the proper advice to give to ensure that he/she gets the proper career guidance he/she needs						
3. Medical treatment (medication) could be an effective treatment for mental and psychological disorders						
4. Psychological therapy could be an effective treatment for mental and psychological disorders						
5. People who suffer from mental and psychological disorders can be totally cured						
6. Most people with psychological or mental health disorders go to a healthcare professional for help						
7. Mental and psychological disorders are a sign of weakness						
8. Depression is a sign of personal or emotional weakness						
9. Mental and psychological disorders are a sign of personal or emotional weakness						
10. Madness/ depression is a sign of personal or emotional weakness						
11. Seeking treatment for mental and psychological disorders is a sign of weakness						
12. Medical treatment (medications) for mental and psychological disorders is a sign of personal and emotional weakness						
13. Psychological therapy for mental and psychological disorders is a sign of personal and emotional weakness						
Precise if you consider the following as mental and psychological health disorders						
1. Depression						
2. Psychological stress						
3. Schizophrenia						
4. Bipolar disorders						
5. Drug addiction						
6. Loss						

Section 3: Attitude to Mental Disorders (AMI)

Statements	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1. One of the main causes of mental disorder is a lack of self-discipline and will-power.					
2. There is something about people with mental disorder that makes it easy to tell them from normal people.					
3. As soon as a person shows signs of mental disturbance, he should be hospitalized.					
4. Mental disorder is an disorder like any other.					
5. Less emphasis should be placed on protecting the public from people with mental disorder.					
6. Mental hospitals are an outdated means of treating people with mental disorder.					
7. Virtually anyone can become mentally ill.					
8. People with mental disorder have for too long been the subject of ridicule.					
9. We need to adopt a far more tolerant attitude toward people with mental disorder in our society.					
10. We have a responsibility to provide the best possible care for people with mental disorder.					
11. People with mental disorder don't deserve our sympathy.					
12. People with mental disorder are a burden on society.					
13. Increased spending on mental health services is a waste of money.					
14. There are sufficient existing services for people with mental disorder.					
15. People with mental disorder should not be given any responsibility.					
16. A woman would be foolish to marry a man who has suffered from mental disorder, even though he seems fully recovered.					
17. I would not want to live next door to someone who has been mentally ill.					
18. Anyone with a history of mental problems should be excluded from taking public office.					
19. No one has the right to exclude people with mental disorder from their neighborhood.					
20. People with mental disorder are far less of a danger than most people suppose.					
21. Most women who were once patients in a mental hospital can be trusted as babysitters.					
22. The best therapy for many people with mental disorder is to be part of a normal community.					
23. As far as possible, mental health services should be provided through community-based facilities.					
24. Residents have nothing to fear from people coming into their neighborhood to obtain mental health services.					
25. It is frightening to think of people with mental problems living in residential neighborhoods.					
26. Locating mental health facilities in a residential area downgrades the neighborhood.					
27. People with mental health problems should have the same rights to a job as anyone else.					

Appendix B

Study questionnaire (Arabic Version)

القسم الأول: المعلومات الشخصية والمهنية

السؤال	الخيارات
العمر	
الجنس	ذكر
	أنثى
الإقامة	مدينة
	قرية / بلدة
	مخيم
الدخل الشهري	< 1000 دولار
	> 1000 دولار
الحالة الاجتماعية	أعزب/عزباء
	متزوج/ة
	مطلق/ة أو أرمل/ة
المهنة	طبيب/ة
	ممرض/ة
الخبرة في مهنتك	< سنة
	1 – 5 سنوات
	> 5 سنوات
الخبرة في كان عملك الحالي	< سنة
	1 – 5 سنوات
	> 5 سنوات
مكان العمل الحالي	مستشفى رفيديا الجراحي
	مستشفى الوطني الحكومي
	مستشفى النجاح الوطني الجامعي
	مستشفى نابلس التخصصي
	المستشفى العربي التخصصي
	المستشفى الإنجيلي
	مراكز الرعاية الأولية الحكومية
	مراكز الرعاية الأولية التابعة لوكالة الغوث وتشغيل اللاجئين
هل تلقيت دورات محددة حول الأمراض العقلية؟	نعم
	لا

القسم الثاني: قياس مستوى المعرفة بالأمراض النفسية وكيفية التعامل معها

الجملة	لا أوافق بشدة	لا أوافق	محايد	أوافق	أوافق بشدة
1- معظم الناس الذين يعانون من مشاكل عقلية ونفسية يريدون وظيفة مدفوعة الأجر					
2- إذا كان لديك صديق تعرف أنه يعاني من مشكلة في الصحة العقلية ، فأنت تعرف النصيحة المناسبة التي يجب تقديمها لضمان حصوله على التوجيه المهني المناسب الذي يحتاجه					
3- يمكن أن يكون العلاج الطبي)الدواء) علاجا فعالا للأمراض العقلية والنفسية					
4- يمكن أن يكون العلاج النفسي علاجا فعالا للأمراض العقلية والنفسية					
5- يمكن علاج الأشخاص الذين يعانون من أمراض عقلية ونفسية بشكل كامل					
6- يذهب معظم الأشخاص الذين يعانون من أمراض نفسية أو عقلية إلى أخصائي الرعاية الصحية للحصول على المساعدة					
7- الأمراض العقلية والنفسية علامة على الضعف					
8- الاكتئاب هو علامة على الضعف الشخصي أو العاطفي					
9- الأمراض العقلية والنفسية هي علامة على الضعف الشخصي أو العاطفي					
10-الجنون / الاكتئاب هو علامة على الضعف الشخصي أو العاطفي					
11-البحث عن علاج للأمراض العقلية والنفسية علامة ضعف					
12-العلاج الطبي (الأدوية (للأمراض العقلية والنفسية هو علامة على الضعف الشخصي والعاطفي					
13-العلاج النفسي للأمراض العقلية والنفسية علامة على الضعف الشخصي والعاطفي					
14-هل تعتبر الأمراض التالية أمراضا عقلية ونفسية؟					
1- الاكتئاب					
2- الضغط النفسي					
3- الفصام					
4- الاضطرابات ثنائية القطب					
5- إدمان المخدرات					
6- الشعور بالضياع					

القسم الثالث: استبيان السلوكيات تجاه الأمراض النفسية والمرضى الذين يعانون من ذلك وخدمات الصحة النفسية

الجملة	لا أوافق بشدة	لا أوافق	محايد	أوافق	أوافق بشدة
1. أحد الأسباب الرئيسية للمرض العقلي هو الافتقار إلى الانضباط الذاتي وقوة الإرادة.					
2. هناك شيء ما حول الأشخاص المصابين بمرض عقلي يجعل من السهل تمييزهم عن الأشخاص العاديين.					
3. بمجرد أن يظهر الشخص علامات الاضطراب العقلي ، يجب إدخاله إلى المستشفى.					
4. المرض العقلي هو مرض كغيره من الأمراض					
5. يجب التركيز بشكل أقل على حماية الجمهور من الأشخاص المصابين بمرض عقلي.					
6. المستشفيات العقلية هي وسيلة قديمة لعلاج الأشخاص المصابين بمرض عقلي.					
7. تقريبا أي شخص يمكن أن يصاب بمرض عقلي.					
8. كان الأشخاص المصابون بمرض عقلي لفترة طويلة موضع سخرية.					
9. نحن بحاجة إلى تبني موقف أكثر تسامحا تجاه الأشخاص المصابين بمرض عقلي في مجتمعنا.					
10. تقع على عاتقنا مسؤولية توفير أفضل رعاية ممكنة للأشخاص المصابين بمرض عقلي.					
11. الأشخاص المصابون بمرض عقلي لا يستحقون تعاطفنا.					
12. الأشخاص المصابون بمرض عقلي يشكلون عبئا على المجتمع.					
13. زيادة الإنفاق على خدمات الصحة العقلية هو مضيعة للمال.					
14. هناك خدمات قائمة كافية للأشخاص الذين يعانون من مرض عقلي.					
15. لا ينبغي إعطاء الأشخاص المصابين بمرض عقلي أي مسؤولية.					
16. سيكون من الحماقة أن تتزوج المرأة من رجل يعاني من مرض عقلي ، على الرغم من أنه يبدو أنه تعافى تماما.					

17. لا أريد أن أعيش بجوار شخص مريض عقليا.					
18. يجب استبعاد أي شخص لديه تاريخ من المشاكل العقلية من تولي المناصب العامة.					
19. لا يحق لأحد استبعاد الأشخاص المصابين بمرض عقلي من حيهم.					
20. الأشخاص المصابون بمرض عقلي أقل خطورة بكثير مما يفترضه معظم الناس.					
21. يمكن الوثوق بمعظم النساء اللواتي كن مريضات في مستشفى للأمراض العقلية كجليسات أطفال.					
22. أفضل علاج لكثير من الأشخاص المصابين بمرض عقلي هو أن يكونوا جزءا من مجتمع طبيعي.					
23. ينبغي، قدر الإمكان، توفير خدمات الصحة العقلية من خلال المرافق المجتمعية.					
24. ليس لدى السكان ما يخشونه من الناس الذين يأتون إلى حيهم للحصول على خدمات الصحة النفسية.					
25. من المخيف التفكير في الأشخاص الذين يعانون من مشاكل عقلية ويعيشون في الأحياء السكنية.					
26. يؤدي تحديد موقع مرافق الصحة العقلية في منطقة سكنية إلى التقليل من شأن الحي.					
27. يجب أن يتمتع الأشخاص الذين يعانون من مشاكل الصحة العقلية بنفس الحقوق في وظيفة ما مثل أي شخص آخر.					

Appendix C

Informed Consent Form (Arabic)

عزيزي / عزيزتي الممرض/ـة أو الطبيب/ـة

أنا الطالبة آيات قطاوي، وأطلب من حضرتك الإجابة عن الاستبيان التالي الذي يعتبر جزءاً من رسالتي في ماجستير إدارة الصحة العامة في جامعة النجاح الوطنية، وهو يهدف إلى تقييم معرفة ومواقف الممرضين والأطباء الفلسطينيين تجاه الاضطرابات النفسية وخدمات الصحة النفسية ، تحديداً مدينة نابلس ، وكذلك أهم العوامل الشخصية والوظيفية التي تؤثر على هذه الاتجاهات. أرجو من حضرتك الإجابة على جميع أسئلة الاستبيان.

يتكون هذا الاستبيان من ثلاثة أقسام، حيث إن القسم الأول يتكون من أسئلة مغلقة حول معلوماتك الشخصية كالعمر والجنس ومكان السكن... إلخ، والمعلومات الوظيفية، كمكان العمل والخبرة وتاريخ تعرضك للتعامل مع مرضى نفسيين من قبل... إلخ. أما القسم الثاني فيعنى بتقييم مستوى المعرفة الخاصة بك عن الأمراض النفسية وكيفية التعامل معها، في حين أن القسم الثالث فيتكون من 27 سؤالا تشكل استبيان السلوكيات تجاه الأمراض النفسية والمرضى الذين يعانون من ذلك وخدمات الصحة النفسية ، وهو موثق من دائرة الصحة في المملكة المتحدة، وقد تمت ترجمته للعربية.

أود التأكيد هنا أن جميع المعلومات التي سيتم جمعها سيتم التعامل معها بسرية وخصوصية تامة، حيث إنه لن يتم جمع معلومات حساسة عنك، بما في ذلك الاسم أو رقم التواصل، وأن هذه المعلومات ستظل في مغلف مغلق بإحكام حتى بدء تحليلها، وأن سيتم التعامل معها من قبل الباحث والمشرف ولأغراض البحث العلمي فقط، كما ويمكنك الانسحاب من الدراسة في أي وقت تشاء.

لأي استفسارات يرجى التواصل مع الباحثة الرئيسية:

آيات جمال قطاوي جوال: 0595772514

أو المشرف: الدكتور نزار سعيد: 0599594960

أشكر لك استثمار وقتك الثمين

جامعة النجاح الوطنية
كليَّة الدّراسات العليا

معرفة واتجاهات الأطباء والممرضين تجاه الاضطرابات النفسية وخدمات الصحية المرتبطة بها: دراسة مقطعية في فلسطين

إعداد
آيات جمال محمد قطاوي

إشراف
د. نزار سعيد
د. محمد حايك

قدمت هذه الرسالة استكمالاً لمتطلبات الحصول على درجة الماجستير في إدارة الصحة العامة بكلية الدراسات العليا في جامعة النجاح الوطنية في نابلس، فلسطين.

2024

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الملخص

المقدمة: تواجه خدمات الصحة النفسية العديد من التحديات المالية والصحية، بينما يجب على مقدمي الرعاية الصحية اكتساب المستويات المناسبة من المعرفة والموقف تجاه الأمراض النفسية والمرضى النفسيين، وهو ما تهدف الدراسة الحالية إلى تحديده، بالإضافة إلى أكثر العوامل الديموغرافية والمهنية شيوعًا المرتبطة بهم.

المنهجية: استخدمت الدراسة تصميمًا مقطعيًا وكميًا، حيث قام الباحث بتجنيد عينة ملائمة من 89 طبيبًا و232 ممرضًا من المستشفيات الخاصة والحكومية وعيادات الصحة الأولية في نابلس – فلسطين. تضمنت استبانة الدراسة بيانات ديموغرافية، وجدول معرفة الصحة النفسية (MAKS) وأداة الموقف تجاه الاضطرابات النفسية (AMI)، التي تم تحليلها باستخدام برنامج (SPSS).

النتائج: كان متوسط عمر مقدمي الرعاية الصحية 31 عامًا (IQR = 8)، 46.4% ذكور، 60.4% متزوجون، 58.3% لديهم أكثر من 5 سنوات من الخبرة، و60.1% لم يتلقوا دورة حول الاضطرابات النفسية. كان متوسط مستوى المعرفة 68.42% (IQR = 12.63)، حيث كان 69.5% لديهم مستوى معرفة معتدل، والذي لم يكن مرتبطًا بشكل كبير بأي عامل .(p-value > 0.05) كان متوسط مستوى الاتجاه 63.70% – (IQR = 11.85)، حيث كان 62.0% لديهم مستوى اتجاه معتدل، وكان أعلى بشكل ملحوظ في الإناث (p-value < 0.001)، وفي ذوي الدخل المنخفض (p-value = 0.002)، وفي حالات اجتماعية أخرى (p-value = 0.016) ونوع مكان العمل غير المستشفى (p-value < 0.001). تم العثور على ارتباط إيجابي معتدل ذو دلالة بين المعرفة والاتجاه (r = 0.252, p-value < 0.001).

الخاتمة: يتمتع الممرضون والأطباء الفلسطينيون في مدينة نابلس بمستويات متوسطة من المعرفة والمواقف تجاه الاضطرابات النفسية. هناك حاجة إلى مزيد من التركيز على الاضطرابات النفسية، وهو ما يُوصى به من قبل صانعي السياسات وقطاع الصحة والجامعات ومقدمي الرعاية الصحية. كما أن هناك حاجة إلى مزيد من البحث في السياق الفلسطيني، بما في ذلك المناهج الطولية والنوعية.

الكلمات المفتاحية: الصحة النفسية؛ الاضطرابات النفسية؛ الأمراض النفسية؛ المعرفة؛ الوعي؛ الإدراك؛ الموقف؛ الأطباء؛ الممرضون.