Diploma Thesis

Perceived Mental Health Stigma in Primary Healthcare Settings: A Cross-Sectional Study

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and

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Graz, 22nd June 2022

Statutory Declaration

I declare that I have authored this thesis independently, that I have not used other than the declared sources/resources, and that I have explicitly marked all material that has been quoted either literally or by content from the used sources.

Graz, 22nd June 2022 *Anna Rabl eh*

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Abbreviations

POMD	Patients with other mental disorders (e.g., anxiety disorder, schizophrenia, personality disorder etc.)
e.g.	For example
OCD	Obsessive-compulsive disorder
PTSD	Post-traumatic stress disorder
SD	Standard deviation
et al.	Et alii / et aliae
SMI	Severe mental illness
CVD	Cardiovascular disease
PMI	Persons with mental illness
ISMI	Internalized Stigma of Mental Illness Scale
ISMI-29	Internalized Stigma of Mental Illness Scale-29
ISMI-10	Internalized Stigma of Mental Illness Scale-10
Stigma	Stigmatization
abbr.	Abbreviation

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Zusammenfassung

Einleitung: Stigmatisierung von Menschen mit psychischen Erkrankungen stellt eine entscheidende Barriere in der erfolgreichen Behandlung verschiedener psychischer Erkrankungen dar. Allgemeinmediziner*innen agieren für die meisten Patient*innen häufig als erste Verbindungsstelle mit dem Gesundheitssystem. Vor diesem Hintergrund untersuchte diese Arbeit Unterschiede in der subjektiv empfundenen Stigmatisierung zwischen Patient*innen mit einer psychischen Erkrankung und gesunden Kontrollpersonen im Rahmen des Hausarztbesuches. Krankheitsspezifische Unterschiede in der empfundenen Stigmatisierung wurden analysiert. Beziehungen zwischen der Selbsteinschätzung der mentalen und physischen Gesundheit und der Gesundheit im Allgemeinen und subjektiv empfundener Stigmatisierung, sowie Beziehungen zwischen Gesundheitsverhalten und empfundener Stigmatisierung wurden untersucht.

Methoden: Diese Querschnittsstudie nutzte einen Fragebogen, der Fragen zu soziodemografischen Daten, zum Angebot medizinischer Leistungen, zur Zufriedenheit mit den angebotenen medizinischen Behandlungen durch Hausärzt*innen, zum Gesundheitsverhalten, zur Selbsteinschätzung der mentalen und physischen Gesundheit, zur Selbsteinschätzung der „generellen Gesundheit“, zur Selbsteinschätzung des Schweregrades der psychischen Erkrankung und zur subjektiv empfundenen Stigmatisierung während eines Hausarztbesuches enthielt. Dieser Fragebogen wurde bei niedergelassenen Psychiater*innen sowie bei Hausärzt*innen in Graz, Bruck und Deutschlandsberg im städtischen sowie urbanen Raum an 176 Personen ausgeteilt und von diesen ausgefüllt. Die Teilnehmer*innen wurden entsprechend der Frage, ob bei ihnen in den letzten 10 Jahren eine psychische Erkrankung diagnostiziert wurde oder nicht, zunächst in zwei Gruppen eingeteilt (psychische Erkrankung versus keine psychische Erkrankung). Weiters enthielt der Fragebogen Fragen zur spezifischen psychiatrischen Diagnose zur Analyse von krankheitsspezifischen Unterschieden in der empfundenen Stigmatisierung, woraufhin Menschen mit psychischen Erkrankungen in eine Gruppe mit affektiven Störungen und eine Gruppe aus allen anderen psychiatrischen Krankheitsbildern zusammengefasst (Angststörungen, Schizophrenie, Persönlichkeitsstörungen etc.) (abbr. POMD) wurden. Die

empfundene Stigmatisierung wurde mittels 10 Fragen, die auf validierten Skalen zur Messung von Stigmatisierung auf individueller Ebene basierten, ermittelt. Die Analysen erfolgten mit dem Statistikprogramm IBM SPSS 26. Es wurde ein Signifikanzniveau von 5% ($p = .05$) angenommen.

Ergebnisse: Die Ergebnisse dieser Studie zeigten keinen signifikanten Unterschied in der empfundenen Stigmatisierung zwischen den zwei Gruppen (psychische Erkrankung versus keine psychische Erkrankung), kontrolliert für das Geschlecht. In der Untergruppe der Patient*innen mit einer affektiven Störung zeigte sich eine signifikante positive Korrelation zwischen der empfundenen Stigmatisierung und der Selbsteinschätzung der Gesundheit (welche sich aus der Selbsteinschätzung der mentalen und physischen Gesundheit, sowie der Gesundheit im Allgemeinen zusammensetzte), während sich keine signifikante Korrelation innerhalb der Teilnehmer*innen mit einer anderen psychischen Erkrankung sowie innerhalb der psychisch gesunden Personen zeigte. Weiters fanden wir unter allen Studienteilnehmer*innen eine negative signifikante Korrelation zwischen der Compliance und der empfundenen Stigmatisierung.

Diskussion: Die empfundene Stigmatisierung korrelierte signifikant mit der Compliance aller Studienteilnehmer*innen, als auch der Selbsteinschätzung der Gesundheit in der Gruppe der Teilnehmer*innen mit einer affektiven Störung. Folglich sollte in der weiteren Forschung sowie in geplanten Interventionen ein Fokus auf die Reduzierung von selbst empfundener Stigmatisierung im Primärversorgungsbereich gelegt werden. Affektive Störungen gehören zu den häufigsten und hinsichtlich ihrer Schwere am meisten unterschätzten Erkrankungen weltweit. Frühere Studien zeigten bereits, dass empfundene Stigmatisierung im Gesundheitsbereich zu einer Zunahme der Schwere der depressiven Symptomatik beitragen kann. Wir konnten in dieser Studie auch den Zusammenhang mit der Compliance aufzeigen. Es ist entscheidend, mögliche Barrieren zur Inanspruchnahme von Gesundheitsleistungen zu identifizieren und damit die negativen Auswirkungen auf Lebensqualität und Lebenserwartung der Patient*innen mit affektiven Störungen zu minimieren. Die meisten der bisherigen Studien fokussierten sich bei der Analyse der Stigmatisierung im Gesundheitssystem auf die Perspektiven der im Gesundheitssystem arbeitenden

Personen, während die Ergebnisse dieser Arbeit die Wichtigkeit der subjektiven Empfindung mentaler Gesundheit sowie der inneren Überzeugung von Selbstwirksamkeit veranschaulichen. Demzufolge wäre, um den Fokus vom Stigmatisierenden auf den Stigmatisierten zu lenken, die Anwendung unterschiedlicher Messungen von Stigmatisierung psychischer Erkrankungen eine interessante Richtung für zukünftige Studien.

Abstract

Background: Mental-health related stigma has manifested itself as an important barrier to the successful treatment of various mental disorders. Primary care physicians often act as a first point of contact with the healthcare system for most patients. Hence, we aimed to investigate differences in perceived stigmatization in a primary healthcare setting between patients with mental disorders and mentally healthy participants. Disease-specific differences in perceived stigmatization were examined. Correlations between self-assessment of "health in general", mental and physical health and perceived stigmatization, as well as between health-behaviour and perceived stigmatization were also investigated.

Methods: This cross-sectional study used a self-report questionnaire that included questions on sociodemographic characteristics, provision of somatic healthcare services, participant's satisfaction with offered medical treatments by primary healthcare physicians, self-assessment of mental and physical health, self-assessment of "health in general", compliance, lifestyle and perceived stigmatization during medical appointments to collect data from 176 adult subjects at outpatient clinics of primary healthcare physicians as well as settled specialists in psychiatry in urban and rural areas in Graz, Bruck and Deutschlandsberg. The participants were separated into groups based on whether they were diagnosed with a mental disorder in the last 10 years or not (mental disorder versus no mental disorder). The questionnaire also included a question about the specific psychiatric diagnosis. Subsequently, we divided the group with patients with mental disorders into patients with affective disorders and patients with other mental disorders (e.g., anxiety disorder, schizophrenia, personality disorder etc.) (POMD). Perceived stigmatization was examined using 10 questions based on validated scales measuring stigmatization on a subjective level. All analyses were conducted using IBM SPSS 26 and assumed a two-sided, 5% level of significance.

Results: Our findings suggest that there is no significant difference in perceived stigmatization between patients with mental disorders and the control group controlled for gender. Spearman's correlation showed a significant positive correlation between perceived stigmatization and self-rated health (which combined self-rated mental health, self-rated physical health and self-rated "health in general")

among participants with an affective disorder while there was no significant correlation among POMD and among the control group. Spearman's correlation resulted in a negative significant correlation between compliance and perceived stigmatization among all study participants.

Discussion: Perceived stigmatization significantly correlated with the compliance of the whole study sample, as well as self-rated health among patients with affective disorders. Therefore, these factors need to be considered for further research and interventions to reduce stigmatization in primary healthcare settings. Affective disorders contribute greatly to the global burden of disease. In prior studies, perceived stigmatization in the healthcare system has been identified to contribute to the increase of depressive symptom severity. In order to minimize the negative effects of depression on life quality and expectancy, it is important for people with depression to receive treatment as early as possible, which is why it is necessary to identify possible barriers preventing individuals with a depression from seeking the help they need. Most of the previous studies on stigmatization in healthcare focused on the investigation of attitudes of individuals working in the medical field towards patients with mental diseases from the health workers' point of view, whereas our findings reveal the importance of subjective awareness of mental health and inner conviction of self-efficacy individuals with a mental disorder have. Therefore, we believe an interesting direction for future studies may be an examination of whether different measurements of mental health-related stigma focusing on both the stigmatizer and the stigmatized, lead to different outcomes.

1. Introduction

Although important education has happened among the general population over the last decades and diagnostical and therapeutical methods have been improved, people with mental disorders still suffer from stigmatization. They are confronted with prejudices and stereotypes resulting from misconceptions about mental disorders in many different spheres of life, including their working environment (Stuart, 2006), their social relationships (Yanos et al., 2008), impacts on their self-esteem (Patrick W Corrigan et al., 2006) and also, particularly severe, their experience with stigmatizing attitudes among healthcare professionals (Nyblade et al., 2019; Thornicroft et al., 2007).

1.1 Types, Definitions and Heterogeneity of Stigmatization

There are multiple levels of stigmatization occurring simultaneously in our society - intrapersonal (e.g., self-stigma), interpersonal (e.g., public stigma), and structural (e.g., systems, policies, discriminatory laws) (Link & Phelan, 2001). Figure 1 illustrates those different levels of stigmatization of mental health. While public stigma, the most prominent subtype observed and studied, represents the public endorsement of negative stereotypes and prejudices, resulting in discrimination against a stigmatized group, such as people with mental health issues, self-stigma occurs when people internalize these perceived public attitudes towards them, develop negative feelings about the underlying cause for why they are seen as socially undesirable and suffer a lot of grievous consequences as a result (Latalova et al., 2014).

A relatively new field of research concerns structural stigma, which refers to policies of large entities (e.g., schools, governments, companies) that intentionally or unintentionally restrict persons living with a mental disorder in their rights, opportunities and resources (Rüsch et al., 2005). Hatzenbuehler & Link (2014, p.2) provided an initial working definition of this new subtype of stigmatization: “societal-level conditions, cultural norms, and institutional policies that constrain the opportunities, resources, and well-being of the stigmatized”. For example, the precondition to reveal one’s history of mental illness during the job or school applications would be considered structural stigmatization (Pugh et al., 2015; Suto

et al., 2012). In the healthcare system, structural stigma occurs when institutional policies, cultural patterns and practices result in a declined access to optimal health services, lower quality of care, and a limited ability to achieve optimal health and well-being for members of stigmatized groups, such as Borderline Personality Disorder (Klein et al., 2021).

The awareness of the concept of stigmatization is advantageous for recognizing how stigmatization occurs on multiple levels throughout the healthcare sector as well, including structural (e.g., quality of care standards), interpersonal (e.g., interactions between patients and healthcare professionals, negative attitudes) and intrapersonal (e.g., self-stigma, reluctance to seek care) stigmatization (Patrick W Corrigan et al., 2014; Knaak et al., 2017; J. D. Livingston, 2013) and in addition, to develop educational anti-stigma interventions.

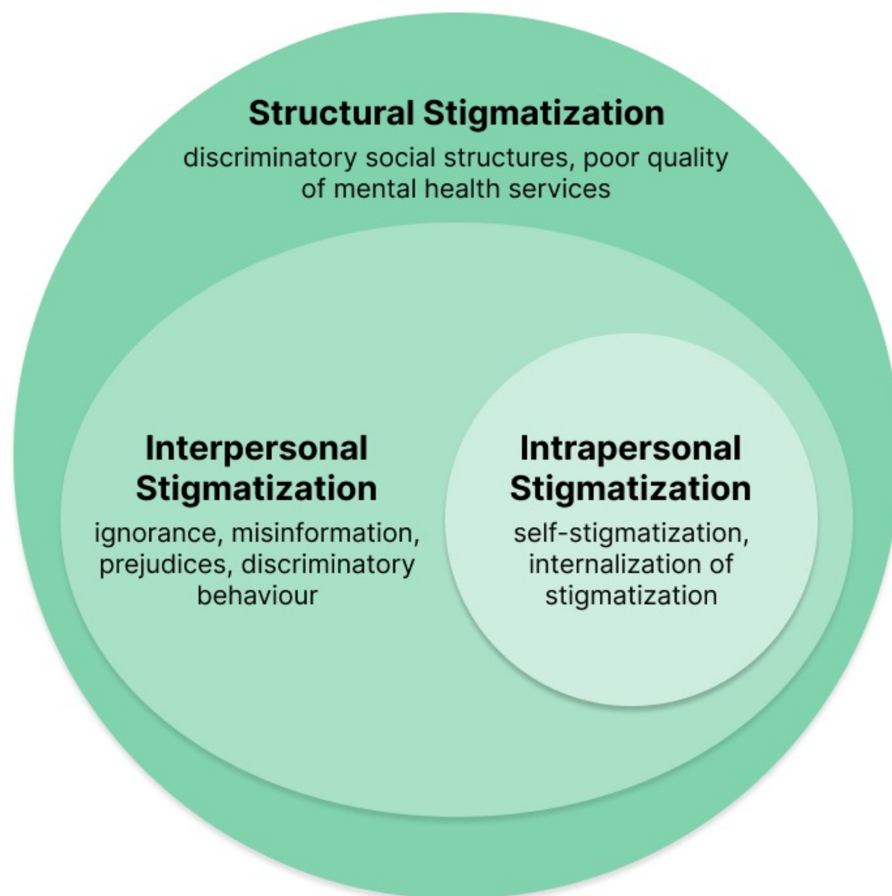

Figure 1. *Multiple levels of stigmatization of mental health.*
Adapted from Javed et al. (2021, p.3). Reducing the stigma of mental health disorders with a focus on low- and middle-income countries. Asian Journal of Psychiatry, 58, 102601. Retrieved from https://www.sciencedirect.com/science/article/pii/S1876201821000575

While stigmatization on its own can be referred to as a direct social judgement about a person, a more specified subtype of stigmatization called “perceived stigma” concerns an individual’s awareness of public stigma, or in other words the expectation of an existing negative attitude among the general population towards people with mental disorders. This is especially relevant for people with mental disorders who want to be open about their disease, because it can decrease a patient’s willingness to seek help (Conner et al., 2010). As a consequence, it contributes to poor provision of healthcare and preventive medicine, which leads to a reduction in life expectancy (Schnyder et al., 2017) and reduced quality of life due to lower self-esteem, difficulties with social relationships, reduced likelihood of staying with treatment and increased psychiatric symptoms (Colizzi et al., 2020; Hayward et al., 2002; Kamaradova et al., 2016; Kulesza et al., 2014; Lloyd et al., 2005).

Many studies have focussed on the concept of stigmatization towards individuals with mental disorders from the point of view of a medical professional (AlSalem et al., 2020; Picco et al., 2019). Only a few have investigated the individual effect of a patient's sociodemographic characteristics in this process (Lo et al., 2021; Stickney et al., 2012). In the majority of studies examining the influence of sociodemographic characteristics on attitudes towards individuals with mental disorders, lower levels of education, unemployment, older age and less familiarity with mental disorders were associated with lower tolerance (Riedel-Heller et al., 2005; Shulman & Adams, 2002). Due to previous studies, employment status (Silveira et al., 2012), rural residence, single marital status (Assefa et al., 2012), an older age and female gender (Roeloffs et al., 2003) are associated with higher levels of self-stigma.

To shift the focus from the perspective of the stigmatizer to the one of the stigmatized, it is crucial to keep the different mental health-related stigmatization mechanisms (e.g., intrapersonal, interpersonal, structural) and possible influences of sociodemographic characteristics on stigmatization in mind. To decrease the effects of self-stigma and to assist people with overcoming or better handling public stigmatization, interventions, such as anti-sigma campaigns (Evans-Lacko et al., 2014; Shahwan et al., 2020) among the general population, targeted treatments

(e.g., self-affirmation therapy with the main aim to inspire a positive view of oneself (Lannin et al., 2013) and psychoeducation, are needed (Picco et al., 2017).

Stigmatization towards mental disorders differs between cultural subgroups (Gopalkrishnan, 2018; Memon et al., 2016; St Louis & Roberts, 2013; Tanaka et al., 2018). This may be a result of less knowledge about the causes, treatments and prevention of mental disorders among different regions (AlSalem et al., 2020; Girma et al., 2013; Yin et al., 2020). Several studies discovered higher stigmatization levels toward individuals with a mental disorder among individuals from Eastern countries compared to Western countries (Cheng, 2015; Mirza et al., 2019). Tan et al. (2020) discussed topics related to mental disorder stigmatization-reasons with a group of Singaporean people who neither had students or medical professionals among them, nor had they ever been diagnosed with a mental disorder in their lifetime, and, drawing on Baral et al.'s (2013) modified socioecological model, classified the emerged themes regarding reasons for stigmatization into 4 levels (refer to Figure 2). This model could act as a valuable instrument to investigate cultural differences as well as similarities between Asian and European populations. A study, who compared attitudes towards mental health problems between Russian and British communities, revealed that the British sample was significantly more tolerant than the Russian participants (Shulman & Adams, 2002). Another cross-cultural study carried out to comprehend how culture shapes people’s understanding of mental disorders compared beliefs and attitudes towards depression and schizophrenia in Russia and the United States and revealed that US participants were more likely to endorse professional help for both depression and schizophrenia, whereas Russian participants stated that it would be more natural for them to deal with problems on their own than to seek help in someone they trust (Nersessova et al., 2019). An increasing number of studies were conducted on the stigmatization of individuals with mental disorders in healthcare settings, in particular with regard to regional variation (Akinola et al., 2017).

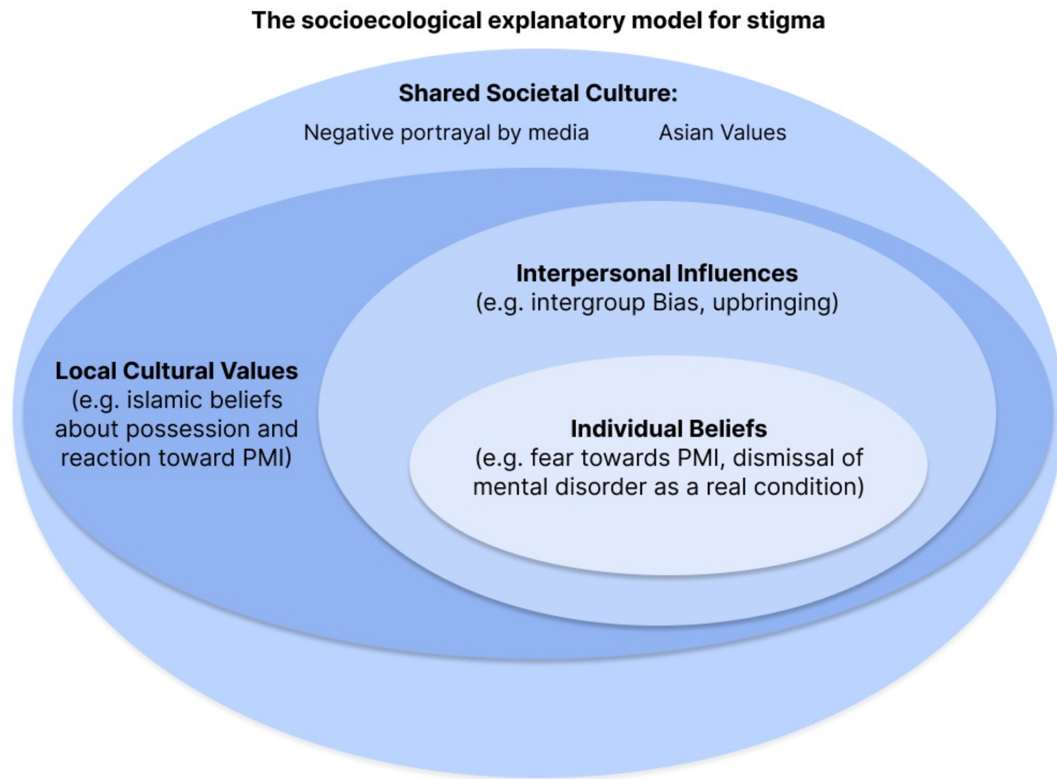

Figure 2. *Socioecological Model of Stigma in Singapore.*
Adapted from Tan et al. (2020, p.5). Mental illness stigma's reasons and determinants (MISReaD) among Singapore's lay public – a qualitative inquiry. BMC Psychiatry 20, 422 (2020). https://doi.org/10.1186/s12888-020-02823-6
Note: PMI = people with mental illness

A lot of research on mental health-related stigmatization has happened over the last decade. Nevertheless, consistency and clarity are still lacking in both the conceptualization and measurement of mental health-related stigmatization, which limits the increase of knowledge about its consequences (Fox et al., 2018). The increasing amount of research done on mental health-related stigmatization mechanisms led to an increasing number of stigmatization measurements. In 2004, Link et al. identified gaps in stigmatization measurement, such as the necessity of developing measurements concerning the experiences of individuals with mental disorders (e.g., self-stigma). Most of the existing frameworks do not contain concepts that are relevant to do sufficient research on both the stigmatizer and the stigmatized. While most research focuses on stereotypes and discrimination (which counts as public stigma-research), processes focusing on the point of view of individuals with mental disorders have not yet been extensively studied (Fox et al., 2018).

Over 400 new measurements of mental health-related stigmatization were developed between 2004 and 2014. The emergence of this high amount of different measurements could be associated with the lack of uniformity in how different stigmatization types and processes are explained in the field of research. Discrepancies and inconsistencies in clear definitions and measurements could hinder the process of developing progress in the research field of stigmatization and correspondingly impede efforts to develop interventions against mental health-related stigmatization (Fox et al., 2018).

A validated and effective tool to measure self-stigma is the Internalized Stigma of Mental Illness (ISMI) scale (Ritsher et al., 2003). It was developed to measure subjective experiences of stigmatization. It is a 29-item self-report instrument with five subscales: alienation (6 items), stereotype endorsement (7 items), perceived discrimination (5 items), social withdrawal (6 items), and stigma resistance (5 items). The person is asked how much she/he agrees or disagrees with each statement, on a 1-4 scale ranging from "strongly disagree" to "strongly agree." A higher score indicates more severe self-stigma. The original validation testing of the ISMI among mental health outpatients resulted in a high internal consistency and test-retest reliability. In 2014, a shorter version of the ISMI, the ISMI-10 (Boyd et al., 2014), consisting of the two strongest items from each subscale, was developed and validated.

1.2 Stigmatization in the Healthcare System

Primary care physicians play an important role in how patients feel their symptoms or disabilities to be taken seriously in general, which is why in many cases they can act as an important barrier to get in contact with the healthcare system. Stigmatization in the healthcare system occurs any time prejudices or stereotypes among health professionals negatively affect a patient's treatment. In healthcare settings exists a broad spectrum of stigmatization manifestations, including rejection of patients with mental disorders, low-quality care, making people with mental disorders wait longer or passing their treatment off to younger colleagues (Dodor et al., 2009; Hamann et al., 2014; Nyblade et al. 2009; Ross & Goldner, 2009). In the United States, a previous study among healthcare providers showed that professionals with stigmatizing attitudes towards patients with mental disorders

were more likely to expect patients to be non-adherent, and due to that making them less likely to refer patients to specialists for further treatment (Patrick W. Corrigan et al., 2014). Findings from another study among physicians in the United States showed that professionals tended to suspect that physical symptoms (e.g., headache and abdominal pain) among people with previous episodes of depression in their medical history originate from their mental disorder and as a result were less likely to provide a more specific investigation of underlying causes (Graber et al., 2000).

A previous study which assessed and compared the levels of stigmatization towards patients with mental disorders between medical students, psychiatrists and non-psychiatry physicians discovered that psychiatrists were the group that showed the lowest levels of stigmatizing attitudes, followed by medical students and non-psychiatry physicians (Oliveira et al., 2020). A possible explanation for this outcome could be the already convincing evidence that higher contact rates with people suffering from mental disorders are associated with lower stigma (Eksteen et al., 2017). Oliveira et al. (2020, p.3) further noted: "Another factor that can help to understand this difference is the physicians bias that states that the attitudes held by a health provider may be conditioned by training and/or past experiences with patients with mental illness. We hypothesize that doctors from other specialties may have contact with more complicated patients that have to be seen in emergency room setting with self-inflicted lesions or disruptive conduct in virtue of severe psychiatry illness." Medical students' scores were placed between those of psychiatrists and doctors of other specialities, which could be explained by a fact several previous studies have pointed out before: older people are more likely to occupy themselves with stigmatizing attitudes toward patients with mental disorders (Hansson et al., 2016; Winkler et al., 2015). Furthermore, studies comparing pre- and post-clinical rotation medical students demonstrated that as the knowledge about mental disorders rises, the level of stigmatization decreases (Eksteen et al., 2017).

1.2.1 Understanding Stigmatization as a Healthcare Barrier

Mental health-related stigmatization has manifested itself as an important barrier to the successful treatment of depression (Halter, 2004), schizophrenia (Fung et al.,

2010), bipolar disorder (Latalova et al., 2013), and post-traumatic stress disorder (Zinzow et al., 2012). Key themes leading to those treatment obstacles (reported by individuals who experienced stigma in a healthcare setting) included having to wait very long when seeking help, not feeling included when treatment decision are made, not being given enough information about further treatment options, being treated in a paternalistic manner, being spoken to with stigmatizing language and being told they would never get well (Barney et al., 2009; Clarke et al., 2007; Commission, 2010; Connor & Wilson, 2006; Hamilton et al., 2016; Thornicroft et al., 2010). Other studies on the contrary have shown that it would be naïve to assume that stigmatizing attitudes towards mental disorders would always be associated with decreased willingness to seek professional help. Mojtabai (2010) stated that while believing in people with mental disorders to be dangerous or unlikely to recover is associated with increased willingness to seek help, believing in people with mental disorders to be unpredictable or responsible for their illness is associated with an increased reluctance to seek professional help. Rüsch et al. (2009) found evidence that self-stigma and stigma-related cognitions (perceived rightfulness of discrimination and identification with a group) could prognosticate service use among people with serious and chronic mental illness, and identified increased self-stigma as a possible risk factor for psychiatric hospitalisation as a last resort due to decreased coping resources, whereas strong group identification may encourage individuals with mental disorders to turn to each other for mutual help, and as a consequence increase empowerment.

1.2.2 Impact of Stigmatization on Somatic Treatment for People with Comorbid Mental and Somatic Disorders

Stigmatization of patients with mental disorders in healthcare affects not only a patients well-being, but has also serious consequences on the outcome of somatic diseases (Mai et al., 2011). Figure 3 illustrates common causes of mental disorders and chronic somatic diseases, such as diabetes or CVD. In the general population the mortality rates from somatic diseases, including cardiovascular, respiratory and cancer diseases, have decreased over the last decades, whereas studies have shown that patients with bipolar disorder have not benefitted from this considerable improvement that has taken place, especially those living in countries with equal

and free access to healthcare services (Nielsen et al., 2019). Previous studies have also shown that individuals with a severe mental illness (SMI), defined as schizophrenia, bipolar disorder and psychosis, have a higher prevalence of somatic health problems compared to the general population (Janssen et al., 2015). Most studies on life quality and life expectancy of people living with schizophrenia identified a life expectancy reduction of 10-20 years compared to peers without schizophrenia (Henderson et al., 2015; Laursen et al., 2012). Individuals with SMI often present a high number of risk factors increasing the probability of an occurrence of diabetes mellitus and cardiovascular diseases (Druss et al., 2011), such as low physical activity, high rates of smoking, unhealthy diets, hyperlipidemia, hypertension or side-effects of antipsychotic drugs (Castle & Chung, 2018; Henderson et al., 2015; Laursen et al., 2012). Figure 4 illustrates factors associated with cardiovascular morbidity and mortality in patients with SMI.

Due to those significantly higher mortality rates among certain mental disorders, the reduced quality of life (Saarni et al., 2007, 2010) and life expectancy this study also set its focus on identifying possible differences in perceived stigmatization between different mental disorders to provide evidence for the necessity to develop disease-specific interventions to reduce self-stigma.

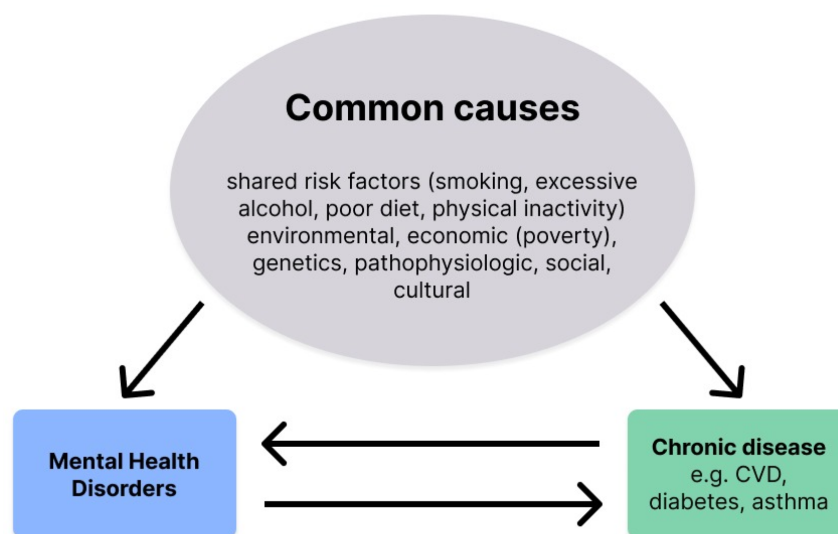

Figure 3. *Mental health and chronic disease comorbidity model. CVD, cardiovascular diseases. Adapted from Javed et al. (2021, p.2). Reducing the stigma of mental health disorders with a focus on low- and middle-income countries. Asian Journal of Psychiatry, 58, 102601. Retrieved from https://www.sciencedirect.com/science/article/pii/S1876201821000575*

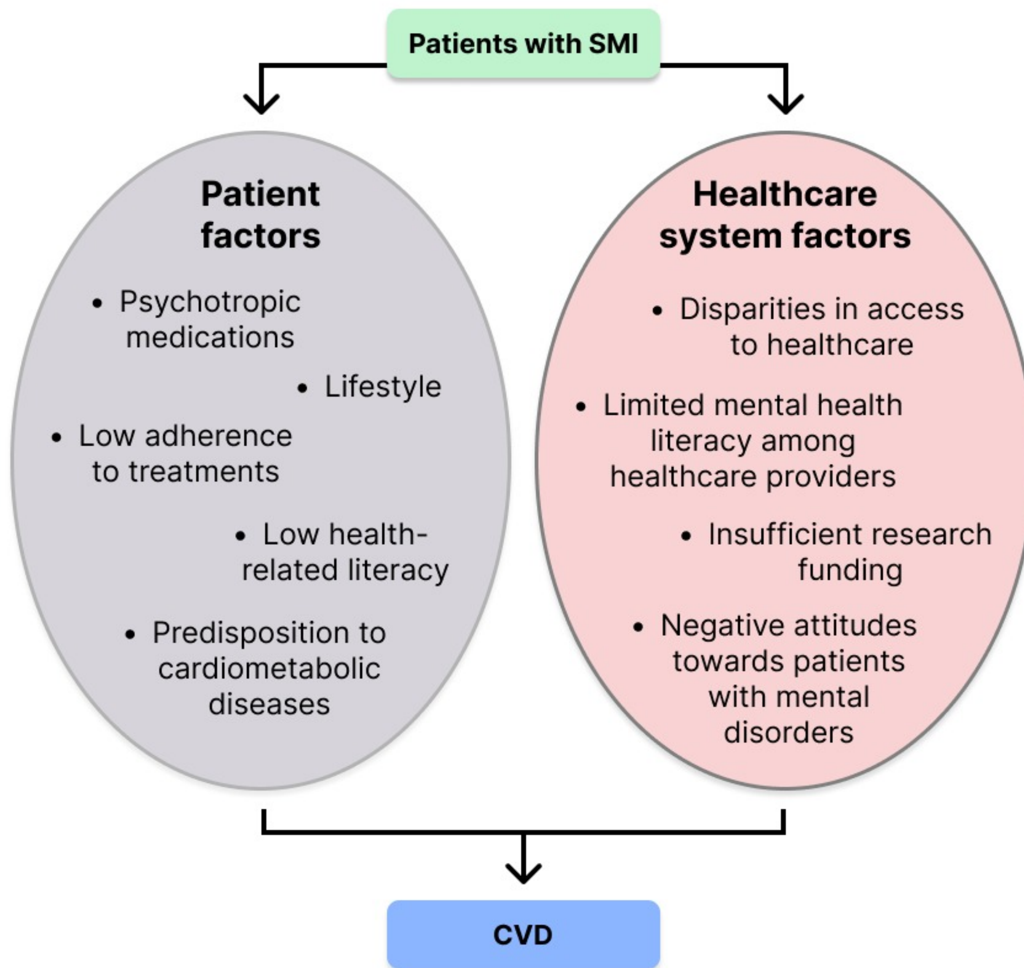

Figure 4. *Factors associated with cardiovascular morbidity and mortality in patients with SMI. Adapted from Nielsen et al. (2021, p.5). Cardiovascular disease in patients with severe mental illness. Nat Rev Cardiol 18, 136–145 (2021). https://doi.org/10.1038/s41569-020-00463-7*

1.3 Affective Disorders and Stigmatization

Affective disorders, also known as mood disorders, are mental disorders that primarily affect an individual's emotional state. Major disturbances of feelings or emotions are predominant. There are many different types of affective disorders. The most common ones are depression and bipolar disorder. Bipolar disorder is characterized by wide mood alterations, with periods of both depression and mania. Depression presents itself with long lasting sadness, fatigue or a lack of interest in activities which have previously been enjoyed. Further common symptoms are insomnia, reduced appetite, sexual dysfunction, poor concentration, loss of self-confidence and feeling guilty or worthless. Symptoms vary by individual and can range from mild to severe. Depression contributes greatly to the global burden of

disease. It is estimated that, globally, 5% of adults suffer from depression. The effects of it can dramatically affect a person's ability to function and to live a rewarding life. In order to minimize the negative effects of depression on life quality and expectancy, it is important for people with depression to receive treatment as early as possible, which is why it is necessary to identify possible barriers preventing individuals with a depression from seeking the help they need. Feelings of guilt and low self-confidence, which are common among individuals suffering from depression, are possible factors influencing self-stigmatization and could benefit the avoidance of seeking help, because individuals could believe that they are not worthy of help. In order to assist individuals with depression, a disease-specific approach to decrease stigmatization is necessary.

1.4 Stigmatization and Disease Severity

Recent studies have shown that fear of stigmatization increases with more severe depressive symptoms and both could lead to a treatment delay (Freidl et al., 2008; Lahariya et al., 2010). For individuals with depression, greater symptom severity correlates with greater perceived stigmatization (Rayan et al., 2018; Shi-Jie et al., 2017). Among individuals with a major depressive disorder high levels of self-stigma showed an association with a lack of social support, long duration of the illness, lower quality of life, being single, non-adherence to treatment and a history of suicidal attempt (Alemayehu et al., 2020). Among those diagnosed with schizophrenia, those with higher levels of self-stigma suffered from stronger psychiatric symptoms (Li et al., 2017; Mosanya et al., 2014). Previous studies have also pointed out that perceived stigmatization is associated with greater current psychological distress (Griffiths et al., 2008). To reduce negative effects on patient's treatment quality, life quality and life expectancy, it is crucial to further identify those factors influencing symptom severity and stigmatization and to therefore improve healthcare professional's disease- and severity-specific approach towards individuals with mental health issues (Kohrt et al., 2018).

1.5 Connection between Self-stigma and Adherence to Treatment

Due to their essential contribution to symptom relief, psychiatric medications are often used as a first line of treatment offered to patients with mental disorders. In a clinical setting, an individual's approval or refusal of prescribed drug plans often acts

as the single greatest determinant of these treatments' successes (Fenton et al., 1997). However, regardless of the definite benefits, non-adherence is highly common among patients with mental disorders. Compared to patients who are undergoing therapy for physical conditions, patients with mental disorders are the least likely to follow their medication recommendations (McDonald et al., 2002).

When examining non-adherence, identifying its causes is inevitable in order to properly address and decrease it. Lack of social support, low knowledge about the illness, shorter illness duration, medication side-effects and negative attitudes toward medication have priorly been identified as the leading factors causing non-adherence (Diaz et al., 2004; El-Mallakh, 2007; Lacro et al., 2002; Olfson et al., 2006). Previous studies pointed out that, compared with non-depressed patients, depressed patients will more likely be non-compliant with medical treatment recommendations (DiMatteo et al., 2000).

A study by Fung et al. (2008) identified self-stigma to act as a contributing factor to decrease treatment adherence. Feelings of incompetence and self-disregard are very common among individuals with schizophrenia (Lysaker et al., 2008; Lysaker et al., 2008). Self-stigmatising thoughts could therefore lead to a reduced motivation and preparedness to seek help (refer to Figure 5). Self-stigma makes patients feel very embarrassed and ashamed and they would rather not take their prescribed medication than being stamped as “mentally ill” (P. Corrigan, 2004).

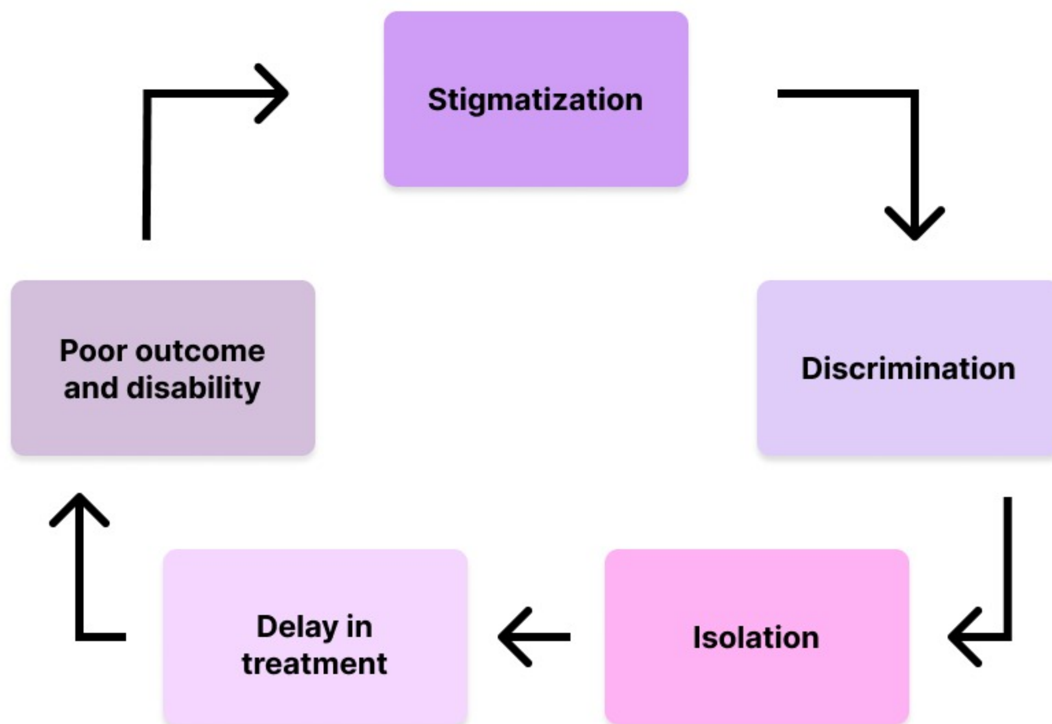

Figure 5. *Circle of cause and effect from stigma.*

Adapted from Shrivastava et al. (2012, p.5). Stigma of Mental Illness-2: Non-compliance and Intervention. Mens sana monographs, 10(1), 85–97. https://doi.org/10.4103/0973-1229.90276

1.6 Aims of the Thesis

The current study aims to (1) investigate possible differences in perceived stigmatization in a primary healthcare setting among individuals with mental disorders and mentally healthy participants; Furthermore (2), it aims to investigate disease-related differences in perceived stigmatization between patients with an affective disorder, POMD and the healthy control group.

In addition (3), the study investigates health-behaviour and the association to stigmatization as well as (4) the relationship between self-assessment of mental health, physical health and “health in general” and perceived stigmatization.
We hypothesized that perceived stigmatization is higher in individuals with mental disorders, especially in the group of individuals with affective disorders. Furthermore, we hypothesized that there is a significant association between lower mental and physical health and higher perceived stigmatization.

2. Methods

2.1 Study Design

During the study recruitment period in 2019, this cross-sectional study used a paper-pencil-survey to collect data from 176 adult subjects with a minimum age of 18 and no fixed maximum age (the youngest participant was aged 19, the oldest 85).

The survey was done at outpatient clinics of primary healthcare physicians as well as settled specialists in psychiatry in urban and rural areas in Graz, Bruck and Deutschlandsberg to guarantee broad regional coverage.

Twelve participants were not included in the analyses due to missing data. Due to our questionnaire structure, only participants who had been to their primary healthcare provider in the last 12 months could answer questions about perceived stigmatization, which led to missing data about stigmatization (n = 46). One hundred and thirty participants answered the questions about perceived stigmatization and were included in the analysis.

2.2 Sample

Among these participants, 121 indicated to have been diagnosed with a mental disorder within the last 10 years. The control group was defined as individuals without indicated mental disorder in the last decade (43 participants). For data analysis, two groups were formed. The first group included 121 (73,8%) individuals with mental disorders, who have been diagnosed in the last 10 years. These patients formed one group, whereas participants who answered the question ‘Have you been diagnosed with a mental illness in the last 10 years?” with “no” were included in the control group.

For more disease-specific questions, we defined two samples within the patient group. One group included individuals with affective disorders and the second group (POMD) unites all other mental disorders appearing in the study sample except for affective disorders (e.g., anxiety disorder, schizophrenia, personality disorder etc.) (n = 24). More than one answer was possible, which is why patients suffering from both affective disorder and other mental disorders were excluded from this group to be able to identify possible associations between perceived stigmatization and

affective disorders. The primary target group included patients with an affective disorder (n = 105), due to two main reasons: Firstly, international studies have already shown a higher rate of multimorbidity and mortality due to somatic comorbidities among this patient group (Steffen et al., 2020). Secondly, according to previous research, perceived stigmatization has a negative effect on the severity of depressive symptoms (Goepfert et al., 2019).

Participants had to accept and agree to an informed consent document before they could proceed to complete the survey. Ethical approval to conduct the study was received from the Ethical Committee of the Medical University of Graz.

2.2 Clinical Characteristics

The clinical characteristics of the study sample are presented in Table 1. The majority of the respondents were patients with an affective disorder (n =105; 77,8%), followed by 64 (47,4%) participants with an anxiety disorder (OCD, trauma, PTSD). Eighty-four (70%) participants had symptoms longer than 12 months. 94 (63,1%) participants had a chronic physical disease.

Table 1. *Clinical Characteristics of Study sample (n =176)*

Characteristics	n	%
Diagnosed Mental Illness in the last 10 years	121	73.8
Organic Disease (e.g., Dementia)	5	3.7
Substance Abuse and Addiction (e.g., alcohol, drugs)	10	7.4
Anxiety Disorder, OCD, Trauma, PTBS	64	47.4
Psychotic und Delusional Disorder (e.g., Schizophrenia)	13	9.6
Behavioral Disorders with Physical Disorders (e.g., Insomnia, Eating Disorder, Sexual Dysfunction)	40	29.6
Behavioral and Emotional Disorders beginning in Childhood and Adolescence (e.g., ADHD)	8	5.9
Affective Disorder (e.g., Depression, Mania, Bipolar disorder)	105	77.8
Personality Disorder (e.g., Borderline)	10	7.4
Developmental Disorder beginning in Childhood	4	3.0
Mental Illness – Diagnosis not known yet	4	2.9

Mental Illness – Different diagnosis	9	6.8
Mental Illness – Diagnosis unknown	3	2.5
Start of Psychic Symptoms[a]		
In the last 2 months	5	3.9
2-6 months ago	8	6.3
7-12 months ago	11	8.6
More than 12 months ago	103	80.5
Duration of Psychic Symptoms[a]		
Less than 2 months	9	7.5
2-6 months	14	11.7
7-12 months	10	8.3
Longer than 12 months	84	70.0
Permanent or Chronic Psychical Disease	94	63.1

[a] *Missing Data was excluded for next variables: duration of psychic symptoms (n = 3), start of psychic symptoms (n = 1)*

2.3 Questionnaire

The instruments used in this study comprised a self-report questionnaire that included questions on provision of somatic healthcare services, participant's satisfaction with offered medical treatments by primary healthcare physicians, perceived stigmatization during medical appointments, self-assessment of mental and physical health, self-assessment of "health in general" and self-assessment of disease severity. Time taken to do the survey was approximately 20 min.

The participants were asked about their sociodemographic characteristics, such as age, sex, relationship status, income and housing-conditions.

Table 2 shows the 10 questions used to determine perceived stigmatization at primary healthcare providers. Participants could answer those questions with (1) totally disagree, (2) disagree, (3) neutral (4) agree, and (5) totally agree.

Self-rating of mental and physical health was assessed with a 1-5 scale ranging from "Very good" (1) to "Very bad" (5). Self-assessment of disease severity was assessed with a 1-4 scale ranging from "Very severe" (1) to "Only slightly ill" (4). The

results of self-assessment of mental health, self-assessment of physical health and self-assessment of “health in general” were summarized into “self-rated health” for further analyses.

Health-behaviour was determined by combining questions about compliance and lifestyle. To determine compliance, questions about medication adherence, attending ordered therapy appointments and implementation of lifestyle modification were asked. For the assessment of lifestyle, the questionnaire contained questions about smoking, drinking alcohol, nutrition and exercising (such as “During the last 12 months, how many times did you consume alcohol?” or “How do you take care of healthy eating?”).

Table 2. *Questions used to determine "Perceived Stigmatization" at Primary Healthcare Providers.*

Item	Statement
1.	I have the feeling that my primary healthcare physician treats patients with mental diseases worse than mentally healthy patients.
2.	I have the feeling that mentally ill patients are disadvantaged by my primary healthcare physicians in comparison to mentally healthy patients.
3.	I have the feeling that patients with mental disorders don’t get involved in decisions for further treatment as much as mentally healthy patients.
4.	I have the feeling that she/he doesn’t take patients with mental health issues seriously.
5.	She/he is focusing too much on whether a patient has a mental disease or not.
6.	She/he makes a big difference between mentally ill and mentally healthy patients.
7.	I have the feeling that she/he has prejudices against mentally ill patients.
8.	I have the feeling that as soon as my primary care physicians finds out about a patient’s mental disorder, her/his impression of this patients worsens.
9.	I have the feeling that my primary care physician condemns patients as “mentally ill” too rashly.

10. I have the feeling that my primary care physician only sees the mental health issues in a mentally ill patient.

2.4 Statistical Analyses

All analyses were conducted with the IBM Statistical Package for Social Sciences (SPSS), version 26.0. Descriptive statistics and bivariate analyses were performed to determine differences in perceived stigmatization between the groups, between self-rated health and perceived stigmatization and between health-behaviour and perceived stigmatization. One-way ANOVA and Dunett-T3 were used to identify differences in sociodemographic characteristics between the 3 groups.

Normal distribution was tested using skewness and kurtosis of the data. Furthermore, visual inspection of histogram and Q-Q plots determined if the data were normally distributed. A p-value $\leq .05$ was the used criterion for determining a statistically significant observed difference.

To examine differences between groups, analyses of variance (ANOVA) were utilized to compare subgroups. In order to meet the requirements for using ANOVA, the variable perceived stigmatization was log-transformed to achieve a near normal distribution. Correlations were tested using Spearman's correlation coefficient (depending on the outcome of previous prerequisites check and a lack of normal distribution in the dataset).

To measure the reliability of the variable "perceived stigmatization" Cronbach's Alpha was utilized.

3. Results

3.1 Descriptive Statistics

The sociodemographic characteristics of the study sample (n = 176) are presented in Table 3. Participants' ages ranged from 19 to 85 years (M= 49, SD = 15) with 61,7% female, 37,7% as male, and 0,6% divers participants.

***Table 3**. Sociodemographic Characteristics of Study Sample (n = 176)*

Characteristics	n	%
Age	Mean (±SD): 49 (±15)	
Native language		
German	148	84.6
Something else	27	15.4
Birthplace		
Austria	139	79.4
Something else	36	20.6
Citizenship		
Austria	162	92.6
Something else	13	7.4
Living Area		
Rural	45	25.9
City	129	74.1
Marital status		
Single	57	33.9
In a Relationship (not married)	22	13.1
Married	55	32.8
Divorced/widowed	35	20.3
Living Community		
Living Alone	76	45.0
With partner	68	40.2
Flat-sharing community	10	5.9
Assisted living	2	1.2
Something else	13	7.7

Employment status		
Unemployed	27	16.3
Employed	65	39.2
Retired	44	26.5
Pupil/Student	5	3.0
Housewife/Househusband	3	1.8
Compulsory Civil Service	1	0.6
Incapacitated for work (permanent)	2	1.2
Incapacitated for work (temporary)	16	9.6
Something else	3	1.8
Education status		
Mandatory school	18	10.7
Vocational school and in-company training	61	36.3
Specialized school/ Commercial school	20	11.9
Higher education entrance qualification	30	17.9
University	31	18.5
Something else	8	4.8

To determine whether the variable perceived stigmatization is normally distributed, visual inspection of histogram and Q-Q-plot was carried out and indicated a non-normal distribution of perceived stigmatization. The histogram is shown in Figure 6. Determination of skewness and kurtosis also indicated a non-normal distribution. Results are shown in Table 4.

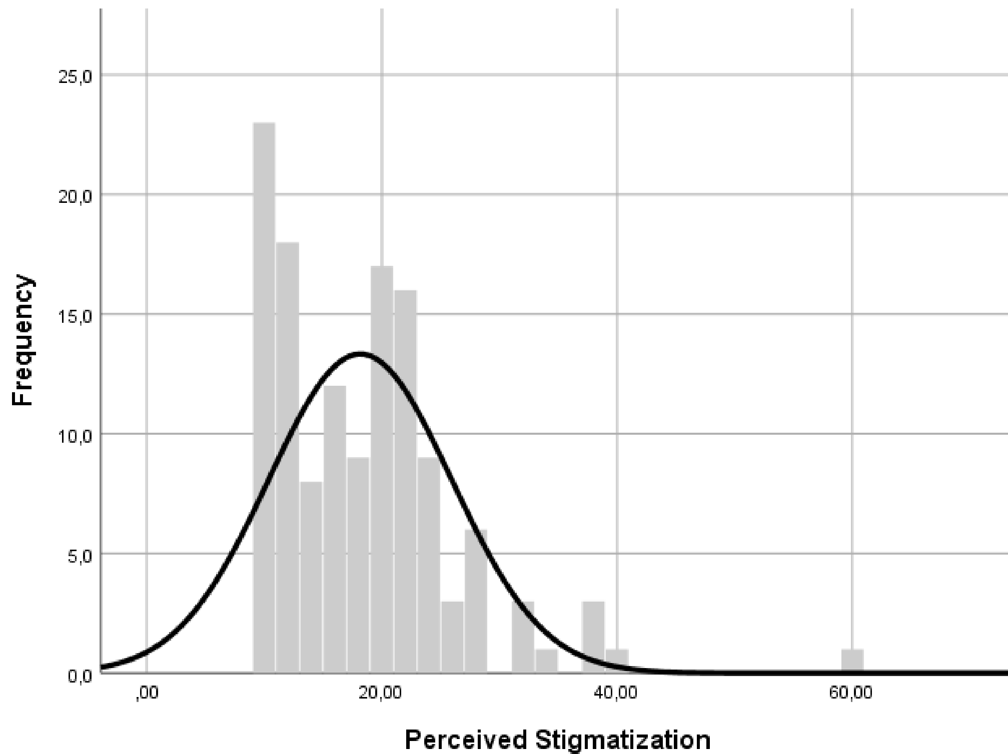

Figure 6. *Histogram presenting the Distribution of Perceived Stigmatization.*

Table 4. *Descriptive Analyses of Perceived Stigmatization with Skewness and Kurtosis.*

			Statistic	Std. Error
Perceived Stigmatization	Mean		18,1538	,68230
	95% Confidence Interval for Mean	Lower Bound	16,8039	
		Upper Bound	19,5038	
	5% Trimmed Mean		17,3932	
	Median		17,5000	
	Variance		60,519	
	Std. Deviation		7,77938	
	Minimum		10,00	
	Maximum		60,00	
	Range		50,00	
	Interquartile Range		11,00	
	Skewness		1,716	,212
	Kurtosis		5,823	,422

For reliability analysis, Cronbach's alpha was calculated to assess the internal consistency of the questionnaire to determine perceived stigmatization, which consisted of ten questions. The internal consistency of the questionnaire was satisfying, with Cronbach's alpha = .89.

Descriptive statistics of the 10 questions to determine perceived stigmatization are presented in Table 5.

Table 5. *Descriptive Statistics of the 10 Questions for Perceived Stigmatization separated for Subgroups.*

		Have you been diagnosed with a mental disorder in the last 10 years?			
		Yes		**No**	
		N	**%**	**N**	**%**
1. I have the feeling that my primary care physician only sees the mental health issues in a mentally ill patient.	Totally disagree	35	33.0	7	23.3
	Disagree	37	34.9	14	46.7
	Neutral	22	20.8	7	23.3
	Agree	11	10.4	2	6.7
	Totally agree	1	0.9	0	0.0
2. I have the feeling that my primary care physician condemns patients as “mentally ill” too rashly.	Totally disagree	49	46.2	11	37.9
	Disagree	38	35.8	14	48.3
	Neutral	9	8.5	4	13.8
	Agree	5	4.7	0	0.0
	Totally agree	5	4.7	0	0.0
3. I have the feeling that she/he has prejudices against mentally ill patients.	Totally disagree	58	53.2	13	43.3
	Disagree	41	37.6	16	53.3
	Neutral	6	5.5	0	0.0
	Agree	4	3.7	1	3.3
	Totally Agree	0	0.0	0	0.0
4. She/he makes a big difference between mentally ill and mentally healthy patients.	Totally disagree	42	39.3	9	33.3
	Disagree	46	43.0	12	44.4
	Neutral	12	11.2	4	14.8
	Agree	5	4.7	1	3.7

	Totally agree	2	1.9	1	3.7
5. She/he is focusing too much on whether a patient has a mental disease or not.	Totally disagree	39	36.4	10	35.7
	Disagree	49	45.8	15	53.6
	Neutral	10	9.3	1	3.6
	Agree	8	7.5	2	7.1
	Totally agree	1	0.9	0	0.0
6. I have the feeling that my primary care physician treats patients with mental diseases worse than mentally healthy patients.	Totally disagree	56	51.4	12	41.4
	Disagree	46	42.2	16	55.2
	Neutral	5	4.6	1	3.4
	Agree	2	1.8	0	0.0
	Totally agree	0	0.0	0	0.0
7. I have the feeling that she/he doesn't take patients with mental health issues seriously.	Totally disagree	53	48.6	13	41.9
	Disagree	36	33.0	13	41.9
	Neutral	14	12.8	5	16.1
	Agree	3	2.8	0	0.0
	Totally agree	3	2.8	0	0.0
8. I have the feeling that mentally ill patients are disadvantaged by my primary healthcare physicians in comparison to mentally healthy patients.	Totally disagree	54	49.5	14	45.2
	Disagree	43	39.4	13	41.9
	Neutral	9	8.3	3	9.7
	Agree	3	2.8	1	3.2
	Totally agree	0	0.0	0	0.0
9. I have the feeling that patients with mental diseases don't get involved in decisions for further treatment as much as mentally healthy patients.	Totally disagree	38	35.2	8	28.6
	Disagree	41	38.0	15	53.6
	Neutral	19	17.6	5	17.9
	Agree	7	6.5	0	0.0

	Totally agree	3	2.8	0	0.0
10. I have the feeling that as soon as my primary care physicians finds out about a patient's mental disease, her or his impression of this patients worsens.	Totally disagree	52	47.7	10	32.3
	Disagree	42	38.5	16	51.6
	Neutral	10	9.2	4	12.9
	Agree	4	3.7	1	3.2
	Totally agree	1	0.9	0	0.0

3.2 Differences in Sociodemographic Characteristics between the 3 Groups

Table 6 presents the results of One-way ANOVA to determine if there are significant differences in sociodemographic characteristics between the 3 groups. There was a statistically significant difference regarding age between the 3 groups, $F_{(2,160)} = 5.162$, $p = .007$. Dunnett-T3 was used as a post-hoc test and showed a significant difference between the control group and POMD, $p = .007$, but no significant difference between the control group and patients with affective disorders, $p = .077$, and between patients with affective disorders and POMD, $p = .269$. There was also a statistically significant difference regarding living area (rural or city), $F_{(2,159)} = 4.372$, $p = .014$. Dunett-T3 showed a significant difference between the control group and patients with affective disorders, $p = .040$; no significant differences between the control group and POMD, $p = .112$; and between patients with affective disorders and POMD, $p = .999$.

Table 6. *Sociodemographic Differences between Groups.*

		Sum of Squares	df	Mean Square	F	Sig.
Sex	Between groups	,648	2	,324	1,361	,259
	Within groups	37,852	159	,238		
	Total	38,500	161			
Age	Between groups	2172,628	2	1086,314	5,162	,007
	Within groups	33671,544	160	210,447		
	Total	35844,172	162			
Native language	Between groups	,565	2	,283	2,183	,116
	Within groups	20,577	159	,129		
	Total	21,142	161			
Living area	Between groups	1,516	2	,758	4,372	,014
	Within groups	27,570	159	,173		
	Total	29,086	161			
Citizenship	Between groups	,019	2	,010	,151	,860
	Within groups	10,234	159	,064		
	Total	10,253	161			
Birthplace	Between groups	,797	2	,399	2,431	,091
	Within groups	26,067	159	,164		
	Total	26,864	161			
Marital status	Between groups	,060	2	,030	,095	,909
	Within groups	50,590	160	,316		
	Total	50,650	162			
Education status	Between groups	,358	2	,179	,083	,920
	Within groups	334,022	155	2,155		
	Total	334,380	157			
Living community	Between groups	1,075	2	,537	,413	,662
	Within groups	202,887	156	1,301		
	Total	203,962	158			
Employment status	Between groups	1,182	2	,591	,127	,880
	Within groups	709,510	153	4,637		
	Total	710,692	155			

3.3 Perceived Stigmatization in Primary Healthcare and Disease-specific Differences

Two-way ANOVA showed no statistically significant difference between individuals with mental disorders and the healthy control group and between men and women on perceived stigmatization, $F(_{1, 117}) = .017$, $p = .895$.

One-way ANOVA resulted in no statistically significant difference in perceived stigmatization between the 3 different groups - control group, participants with affective disorders and POMD, $F(_{2, 119}) = 1.018$, $p = .364$.

3.4 Correlations between Self-assessment of Health and Perceived Stigmatization

There was a significant positive correlation between perceived stigmatization and self-rated health among all 3 groups, $r_{(124)} = .246$, $p = .005$. Separated for specific mental disorders, Spearman's correlation showed a significant positive correlation between perceived stigmatization and self-rated health among patients with an affective disorder, $r_{(77)} = .268$, $p = .017$, while there was no significant correlation between perceived stigmatization and self-rated health among POMD, $r_{(16)} = .408$, $p = .093$; and among the control group, $r_{(22)} = .246$, $p = .271$. Figure 7 illustrates differences in perceived stigmatization between different responses of self-assessment of health (separated for the 3 groups).

Spearman's correlation resulted in no statistically significant correlation between perceived stigmatization and self-rated severity of mental illness among patients with an affective disorder, $r_{(75)} = -.066$, $p = .568$; and among POMD, $r_{(13)} = -.170$, p = .545. Self-rated physical health and stigmatization showed no statistically significant correlation among patients with an affective disorder, $r_{(80)} = .125$, $p = .261$; among POMD, $r_{(16)} = .200$, $p = .427$; and among the control group, $r_{(20)} = .024$, $p = .916$.

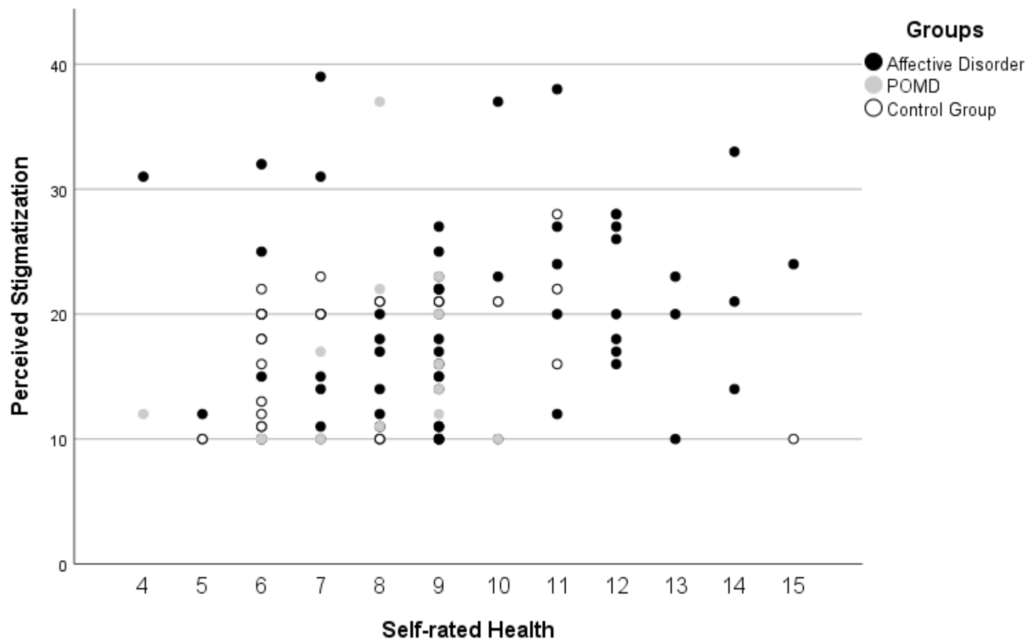

Figure 7. *Differences in Perceived Stigmatization among the different Groups depending on how Participants rated their Health Status.*

3.4 Correlations between Health-behaviour and Perceived Stigmatization

There was no statistically significant Spearman's correlation between health-related behaviour (which was measured with questions about lifestyle and compliance combined) and perceived stigmatization among patients with affective disorders, $r_{(73)} = -.006$, $p = .959$; POMD, $r_{(15)} = -.243$, $p = .348$; and the control group, $r_{(17)} = .043$, $p = .861$. Spearman's correlation resulted in a negative significant correlation between compliance (which was measured with questions about medication adherence, attending ordered therapy appointments and implementation of lifestyle modification) and perceived stigmatization, $r_{(126)} = -.195$, $p = .028$ among all 3 groups combined, whereas, separated for groups, there was no significant correlation: patients with affective disorders, $r_{(79)} = -.198$, $p = .076$; POMD, $r_{(16)} = -.185$, $p = .461$; and the control group, $r_{(19)} = -.165$, $p = .474$. There was neither a significant Spearman's correlation between lifestyle (which was measured with questions about smoking and drinking habits, nutrition and exercising) and stigmatization among all 3 groups combined, $r_{(115)} = .050$, $p = .591$, nor when separated for groups: patients with affective disorders, $r_{(73)} = .046$, $p = .696$; POMD $r_{(15)} = -.178$, $p = .494$; and the control group, $r_{(17)} = .072$, $p = .769$.

4. Discussion

This study was conducted with participants from urban and rural areas in Styria with the main goal of investigating differences in perceived stigmatization in a primary healthcare setting between individuals with a mental disorder and mentally healthy participants. It also investigated if there is a disease-related difference in perceived stigmatization between patients with affective disorders, POMD and the control group. Furthermore, it examined if self-rated health and health-behaviour (determined by summarizing lifestyle and compliance) correlate with perceived stigmatization.

Our findings suggest that there is neither a significant difference in perceived stigmatization between patients with mental disorders and the control group, nor when the sample is separated into 3 groups. Separated for specific mental disorders, Spearman’s correlation showed a significant positive correlation between perceived stigmatization and self-rated health among patients with affective disorders, while there was no significant correlation among POMD and among the control group. Self-rated severity of mental illness showed no statistically significant correlation with perceived stigmatization among POMD and among patients with affective disorders. Self-rated physical health also showed no statistically significant correlation separated for all 3 groups. Spearman’s correlation resulted in a negative significant correlation between compliance and perceived stigmatization among the whole sample, whereas there were no significant correlations when separated into 3 groups.

4.1 Perceived Stigmatization in Primary Healthcare and Disease-specific Differences

Study findings reported here did not support our hypothesis that perceived stigmatization in primary healthcare differs between people with a mental disorder and the mentally healthy population, as well as they did not show any expected differences in stigmatization between patients with affective disorders, POMD and the control group.

Our results that participants with affective diseases reported no significantly different perception of stigmatization and that there were also no disease-related differences

are inconsistent with previous research on this topic using different methods (Angermeyer & Matschinger, 2003; Heinz et al., 2021; Khan et al., 2015; Leff & Warner, 2006; Mahajan & Banerjee, 2015; Naushad et al., 2018). There are several possible explanations for this outcome. Firstly, it is important to highlight the fact that it is very common for primary healthcare physicians in Austria, especially in urban regions, to treat their patients over a long period of time. Well-established relationships with patients and better insight into personal and family circumstances may alter or improve aspects of stigmatization (Eksteen et al., 2017), such as a reduction of prejudices regarding the aetiology of a patient's mental illness or lower expectancy of non-adherence, which, as a consequence, would lead to lower perceived stigmatization among patients with a mental disorder (Knaak et al., 2017).

One must also consider that the study sample consisted mainly of individuals with affective diseases, whereas the sample of participants with a psychotic illness, such as schizophrenia – one of the most stigmatized mental diseases (Crisp et al., 2000; Joseph et al., 2015) – contained only 13 individuals. Previous research found that people with schizophrenia are, by far, more frequently considered as dangerous and unpredictable. They are more likely to trigger negative emotional reactions from other people (such as fear) while people with depression perceive more empathetic reactions (Angermeyer & Matschinger, 2003). A previous study who examined public attitudes towards seven different mental disorders (severe depression, panic attacks, schizophrenia, dementia, eating disorders, alcoholism and drug addiction) showed that schizophrenia, alcoholism and drug addiction elicited the most negative opinions (Crisp et al., 2000), which is why including a larger sample size of those disorders could show a significant effect on perceived stigmatization. Further data collection would be needed to determine if different mental diseases affect perceived stigmatization differently.

4.2 Correlations between Perceived Stigmatization and Self-rated Health

Consistent with previous studies, we found a significant positive correlation between perceived stigmatization and self-rated health among patients with affective disorders (Moses, 2009). Considering the high prevalence of depression, the negative effects of stigmatization on quality of life and life expectancy, and the self-

stigma-benefitting symptoms of depression (e.g., feelings of worthlessness, feelings of guilt), our findings suggest a disease-specific approach to reduce perceived stigmatization could prove beneficial for patients with affective disorders. According to our results, future interventions should take patients' self-rated health into account to sufficiently reduce perceived stigmatization in primary healthcare. No significant correlation was found between perceived stigmatization and self-rated physical health separated for all 3 groups. Perceived stigmatization and self-rated severity of mental illness also showed no statistically significant correlation among patients with an affective disorder, which is in contrast with previous results reported in the literature demonstrating that greater depression severity appears as a strong predictor of perceived stigmatization (Pyne et al., 2004). Perceived stigmatization and self-rated severity of mental illness among POMD also showed no statistically significant correlation.

4.3 Correlations between Health-behaviour and Perceived Stigmatization

In terms of health-behaviour-related differences and in line with previous studies (Fung et al., 2010; Sirey et al., 2001), our findings showed that there is a significant effect of compliance on perceived stigmatization among all 3 groups combined. To our knowledge this is the first study to employ a subjective measure of compliance and a perceived stigmatization measure to study the association between compliance and perceived stigmatization from a patient's view in the setting of primary healthcare. Our results suggest that perceived stigmatization may be a very important factor influencing health-behaviour (e.g., treatment adherence) in patients with mental disorders. Therefore, the reduction of perceived stigmatization in primary healthcare settings may be a determinant of future treatment success, which could be achieved by implementing strategies such as systematic psychoeducation of patients or in the course of psychotherapy.

4.4 The Importance of Selecting an Appropriate Measuring Instrument

When comparing our results to previous studies, it is important to highlight the different mechanisms and types of stigma. Most of those previous studies based on

correlations between stigmatization and compliance measured public stigma. Due to the still existing lack of consistency and clarity in the measurement of mental illness stigma, Fox et al. (2018) identified over 400 different measurements of mental health-related stigmatization, of which two thirds had not undergone any systematic psychometric testing. Therefore, we determined Cronbach's Alpha to investigate the reliability of our self-constructed stigma-questionnaire, which resulted in a good internal consistency (0.838). However, acknowledging this existing lack of clarity in the measurement of mental illness stigma is particularly important for future investigations on mechanisms of mental illness stigma, which are necessary to establish sufficient research on both the stigmatized and the stigmatizer. Such an approach, which includes the perspectives of both individuals who have and do not have mental disorders, could proof beneficial for interventions reducing public and self-stigma as classic theories of stigmatization emphasize that the cognitive separation into "us" and "them"- groups is a crucial component of stigmatization (Link & Phelan, 2001).

When comparing our results to those of previous research, it must be pointed out that most of the older studies on stigmatization in healthcare focused on the investigation of attitudes of individuals working in the medical field towards patients with mental diseases from the health workers' point of view (Eksteen et al., 2017; Kopera et al., 2015). Furthermore, stigmatizing attitudes in health facilities have been studied more intensely among mental health professionals than in the setting of non-psychiatric healthcare professionals (Kochański & Cechnicki, 2017; Nordt et al., 2006; Picco et al., 2019).

4.5 Gaps and Opportunities for Future Research and Development of Interventions

Even though our findings did not support the hypothesis that patients with mental disorders experience significant stigmatization in a primary healthcare setting, implementing certain interventions and strategies could certainly prove beneficial. Providing regular training opportunities and educational lectures focusing on the improvement of awareness of attitudes toward patients with mental disorders for primary care and other non-psychiatry physicians could be a future target of great importance. Those interventions should include programs that focus on aspects

related to higher risks for self-stigma and public stigma based on existing evidence, for example providing information about cultural and regional differences, health-behaviour-related differences or the effects of self-rated health and symptom severity on stigmatization to effectively illustrate the roots and origins of stigmatization and, as a consequence, provide the necessary tools to reduce it. An aspect that must be taken into account when designing new educational campaigns regards the provision of information about the biogenesis of different mental disorders by highlighting the genetic components. Such information was primarily used to decrease the blame the general population placed on people with mental disorders for their condition (Schomerus et al., 2012). One meta-analysis found that, even though the information was medically accurate, these educational materials led to the participants less likely blaming people with mental disorders, but also led them to perceiving them as more dangerous, believing in low chances of recovery and desiring more distance from them (Kvaale et al., 2013). Most of the existing stigma-reduction strategies focus on education. Research has already demonstrated that stand-alone educational programs can lead to stereotype suppression rather than the rejection of stereotyped beliefs upon learning that such beliefs are socially undesirable (P W Corrigan & Penn, 1999; Penn & Corrigan, 2002). This indicates that interventions solely based on education achieve a limited effect on reducing stigmatization in members of the general population and that future research needs to explore a wider range of stigma-reducing strategies.

There is growing consciousness that, with reference to the three different types of stigmatization and to deliver an all-embracing and sustainable approach to stigmatization in healthcare, it is necessary to address stigmatization in health facilities at multiple levels. Interventions must focus on the individual, interpersonal and structural aspects of potential and actual stigmatization. Any healthcare worker who has contact with patients can stigmatize, but hence could also be a target for effective anti-stigma interventions. On an individual level, educational programs for healthcare workers of all occupational groups of healthcare could include skills-building activities to develop the appropriate skills and tools to work directly with stigmatized groups, like role play (Nyblade et al., 2018). Research has also shown that healthcare workers are affected by stigmatization, either as a result of their working experience with stigmatized individuals or because of their own health

status (Ha et al., 2013; Lohiniva et al., 2016). To the best of our knowledge, there are no interventions yet implemented which focus on healthcare workers with a stigmatized disorder and address stigmatization experienced from co-workers or through structural conditions. Future research on this specific topic and the implementation of interventions could lead to an increase in healthcare workers' quality of life, a higher employee satisfaction and ultimately, a reduction of stigmatization in healthcare facilities. On an interpersonal level, bringing healthcare workers and patients living with mental disorders together to work on reducing stigmatization could be immensely beneficial in many ways. As has been previously reported in the literature, greater exposure to mental illness is associated with less stigma (Alexander & Link, 2003; Boyd et al., 2010; Eksteen et al., 2017). Healthcare workers who lack of adequate training and skills for working with patients with a mental illness often do not know what to say or do to help and therefore feel a sense of hopelessness and helplessness, which could also lead to an increase of stigmatization as feelings of anxiety and a desire for avoidance could occur (Knaak et al., 2013). Including members of stigmatized groups into interventions by direct contact could contribute to the reduction of fear, the development of empathy, to better "see the person before the illness", and therefore a better understanding of the human experience of mental illness. Contact-based interventions in healthcare may also decrease self-stigma due to the opportunity for people with mental disorders to actively contribute to a stigma-reducing process and for them to actually realize that stigmatization is a social injustice and an error of society, which results in them being treated unfairly without their fault.

For an all-embracing and successful approach to achieve an improvement of the complex issue of stigmatization, the third type of stigmatization – structural stigmatization – also needs to be addressed and reduced. In a literature review J. Livingston (2020, p.2) presented a comprehensive strategy based on previous research for addressing structural stigmatization in healthcare contexts for people with mental disorders, that includes "a combination of approaches that seek to (1) improve the attitudes and practices of health-care practitioners and others (e.g., trainees, decision makers), (2) strengthen the integration and coordination of care, (3) achieve parity for mental health and substance use issues, (4) expand access to effective treatment, (5) establish mechanisms to monitor structural stigma, (6)

foster the inclusion and participation of people living with mental health and substance use issues, and (7) enhance and enforce protections for people with lived experience.” Despite the exciting recent progress in the emerging research of structural stigmatization, the field is only just starting to develop. Hatzenbuehler (2016) summarized several research priorities that are needed to expand the knowledge of structural stigmatization, including a further refinement of the current definition of structural stigmatization, the development of new ways of testing structural stigmatization (including cross-cultural comparisons), the explication of how different levels of stigmatization operate together, the assessment of other outcomes that structural stigmatization might influence beyond those already studied (e.g., academic achievement) and more.

Programs to fight stigmatization should not only be carried out among healthcare providers. With regard to stigmatizing public attitudes toward mental disorders, Patrick W Corrigan (2011) has suggested that a strategy that is locally based and delivered, continuous, credible, contact-based (involving contact with people who have successfully managed their mental disorder) and targeted toward specific populations (such as landlords, faith-based and other community leaders, legislators, school personnel, entitlement counsellors, and media outlets) would be the strategy that is most likely to be effective. Recent studies identified cultural differences in stigmatization (Krendl & Pescosolido, 2020), which could indicate the need for programs more appropriately fitting the attitudes, perceptions and preferences of different cultural groups or communities.

Approaches to self-stigma-reduction for people with mental disorders are in development. A promising approach, the “Ending Self-Stigma” intervention (Lucksted et al., 2011) (a group-based intervention to reduce self-stigma executed in 9 sessions), uses educational materials about mental health, interventions to strengthen family and community bonds, strategies to influence the internalization of public stigmas, and techniques for responding to public discrimination. Nevertheless, Mittal et al. (2012) acknowledged that research on self-stigmatization is in its nascent stages and that the evidence for interventions against self-stigma is preliminary. An interesting direction for future research could concern the effects of disease-specific self-stigma-reducing interventions, as previous studies have shown

that self-stigmatization differs between people with different mental disorders (Chang et al., 2016). Due to previous research stating that there is a significant association between high self-stigma and the level of medication adherence (Abdisa et al., 2020), investing in further research on self-stigmatization could have a beneficial impact on the life expectancy and the quality of life of people with mental disorders.

Another interesting direction for future research may be the exploration of associations between sociodemographic characteristics and perceived stigmatization including a broad range of variables such as religious beliefs or personality types - who have priorly been shown to have an impact on perceived stigmatization (Johnson-Kwochka et al., 2020; Yuan et al., 2018). Furthermore, including more cities and rural areas in regions other than Styria could provide a greater scope for comparison and understanding. It would also be interesting if similar studies were conducted in low- and middle-income countries as well as developed countries to provide a helpful comparison of different norms, societies and cultures (Javed et al., 2021).

5. Limitations

Findings from this study should be understood within the context of its limitations. Many participants suffered from both affective disorders and other mental disorders. These patients were included into the group with patients with affective disorders in order to identify affective disorder-related differences in perceived stigmatization. This led to a small simple size of POMD. Due to our questionnaire structure, the size of the control group was also limited. To gain a more accurate representation of perceived stigmatization, a larger sample size may prove beneficial.

As reported above, our findings concerning the non-significant correlation between self-assessment of disease-severity and perceived stigmatization are in contrast with previous results reported in the literature. A possible explanation for this contradictory result may be the different methods of measuring stigmatization and disease-severity. Whereas our questionnaire measured the self-assessment of severity with single-item measure on a four-point scale from very severe to only

slightly ill, other studies relied on validated measurement scales using more questions, such as the Patient Health Questionnaire (PHQ-9) (Kroenke et al., 2001).

6. Conclusion

In summary, this study was conducted with participants from urban and rural areas in Styria with the main goal of investigating differences in perceived stigmatization in a primary healthcare setting between individuals with a mental disorder and mentally healthy participants. No significant difference was found between these two groups. Separated into groups (patients with affective disorders, POMD and the control group), we also found no statistically significant correlation. Our findings point to the probability that self-rated health influences perceived stigmatization among patients with an affective disorder. We have also provided further evidence that there is a significant negative correlation between perceived stigmatization and compliance from a patient’s point of view, which suggests that the reduction of perceived stigmatization in primary healthcare settings may be a determinant of future treatment success, which could be achieved by implementing strategies such as systematic psychoeducation of patients or in the course of psychotherapy.

While assumptions can be made as to why these examined factors correlated with perceived stigmatization, it would be interesting to investigate whether similar patterns can be observed in a larger sample size, especially when looking at a larger variety of possible associated factors.

Most of the previous studies on stigmatization in healthcare focused on the investigation of attitudes of individuals working in the medical field towards patients with mental diseases from the health workers’ point of view. Another interesting direction for future studies may be an examination of whether different measurements of mental health-related stigma focusing on both the stigmatizer and the stigmatized, lead to different outcomes. Furthermore, stigmatizing attitudes in health facilities have been studied more intensely among mental health professionals than in the setting of non-psychiatric healthcare professionals. Future studies could fruitfully explore this issue further by examining perceived stigmatization in the setting of different medical specialities.

Our study provided information about perceived stigmatization in primary healthcare facilities in Austria and identified possible targets for future research. Stigmatization associated with mental disorders is a global problem and strategies to combat it should be informed by the best available evidence. A multi-level anti-stigmatization-strategy including a wide variety of identified stigma-influencing factors could have an enormously positive impact on the life expectancy and quality of life of people with mental disorders.

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