

# Reducing the stigma of mental disorders: a base for an effective communication plan.

A survey testing the influence of knowledge, experience and media on stigma of mental disorders.

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## **Abstract**

**Context:** From ancient times, people have always had to deal with mental disorders, but acceptance has never been met within society and a stigma was formed. Nowadays, one-fourth of the population suffer or had suffered from some form of mental illnesses. These people have to cope every day with this stigma which makes them feel like outsiders.

**Aim:** Research showed that most of the campaigns done to reduce the stigma have been scarcely effective due to the lack of studies which measure the factors that may reduce the stigma of mental disorders by the use of communication means. Due to this, the aim of this study was to see the effects of knowledge, experience and media on the stigma of mental disorders. Moreover, if demographic factors like age, nationality and the perceived proximity to a psychiatric facility influenced these effects.

**Method:** This study was conducted by means of a survey. A total of 146 people of Italian and Dutch nationality participated. The age range was from 19 to 83 and most of them lived next to a psychiatric facility. A correlation analysis, a multiple regression analysis and an analysis of variance per moderator were conducted.

**Results/ Discussion:** It was found that having knowledge is important to reduce stigma. Moreover, personal experience helps to reduce stigma. Lastly, the best medium to use to convey information is books and the worst media are social media and television.

**Recommendations:** Overall, it was advised to educate younger generations through education programs and to create an awareness campaign to also address older generations. Moreover, the government should be addressed to change the way in which society is structured towards the mentally ill. Eventually, if everyone would get informed better, a reduction of stigma might happen.

**Key words:** stigma, mental disorders, communication, knowledge, experience, media

## Summary

From ancient time, people have always had to deal with mental disorders. When there was not enough knowledge about how the brain works, people who showed some differences in their behaviours were cast aside. In the last centuries, discoveries have been made regarding mental illnesses, but acceptance within society has never been met and people with mental disorders have always been seen as different and due to this, a stigma was formed. Nowadays, it was counted that one-fourth of the population suffer or had suffered of some form of mental disorders. These people have to deal every day with people who discriminate them and make them feel like outsiders. This causes them to hide their own feelings and, consequently, get worst. Moreover, people who live nearby a psychiatric facility, due to the way in which society portrays mental disorders, often feel unsafe. Nonetheless, much research has been done about mental disorders and associations, supporters and researchers are trying to reduce the stigma through communication strategy. However, it was found that most of these campaigns have been rarely effective due to the lack of studies which measure the factors that may reduce the stigma of mental disorders by the use of communication means. Accordingly, research shows that, through decades, there has not been a reduce of stigma within the population.

Due to this, the aim of this study was to see if factors like the amount of knowledge people have, their experience, how media frame the mentally ill, the medium used to receive information and the kind of information influence the stigma of mental disorders and how. Moreover, if demographic factors like age, nationality and the perceived proximity to a psychiatric facility influenced the effects of the aforementioned factors on stigma of mental disorders. This study was conducted by means of a survey. A total of 146 people took part in the study, 48 were Dutch and 98 were Italian. The age of the participants went from 19 to 83 years old and most of them lived next to a psychiatric facility. After conducting the analysis of the data, it was found, that knowledge is important to reduce stigma; when people knew about the topic of mental illnesses, their stigma was lower. When people knew about mental disorders, they were also aware about the negative way media frame the mentally ill. Moreover, personal experience and personal information helps to reduce stigma, thus experiences of people who suffer or suffered from some form of mental disorders should be told to people to let them empathise with the subject and know what it means to suffer from a mental illness. Lastly, the best medium to use to convey information is books and the worst media are social media and television. However, it was seen that television is one of the main medium to spread negative feelings regarding the mentally ill and it is considered easier to use than other media. Due to this, some measures should be taken to partially change how this mean is used.

Overall, it is advised to educate people through education programs. This means, for instance, approaching the Minister of Education through lobbying and ask to implement few hours in the last years of high school to discuss about the topic of mental disorders. Moreover, it is recommended to have someone experienced to talk to the students. Many students may pass through a rough time in their adolescence, e.g. eating disorders, drug misusing, depression, and this program may also help to increase acceptance between each other and, thus, facilitate the recovery of these students. Moreover, in high school books, something about mental disorders should be said by means of stories of people who suffered from mental disorders or by explaining the life of famous people, such as poets, scientists and singers who may have had some form of mental illnesses. By doing this, students may also better understand the relevance of this topic in society.

For older generations, it is advised to create an awareness campaign. For instance, within television programs a short spot with people talking about their experience about mental disorders may be sent with the use of the hashtag #reducingstigma. Moreover, in daily program, a psychiatrist may be host to talk about mental disorders and give corrective information with a positive connotation. Additionally, journalists, producers and screenwriters should be educated about mental illnesses. If their level of stigma is reduced through knowledge, it may happen that the information they will send,

afterwards, will be less biased. Every information of this campaign should be monitored and there should not be the possibility for manipulation of information. Furthermore, the hashtag #reducingstigma should always be used as an identification mark of the campaign. In cities where psychiatric facilities are present, meetings should be organised by people of trust to talk about mental disorders and the decisions which need to be taken regarding the facility. This may particularly relevant for individuals living around and working in a psychiatric facility who should be informed better about mental illnesses and should have a say in decisions which may have an influence in their life. Lastly, the government, mostly policymakers should be addressed in order to change those social structures that prevent people with mental disorders to have a life like everyone else.

To conclude, if people would get informed better about mental disorders, also by means of meetings with people who suffer or suffered from mental disorders, they may be more able to understand the subject and be more sympathetic with a consequent reduction of stigma. This may facilitate the reintegration into society of people who suffer or suffered from mental disorders and it may improve the lives of people who will feel more safe living around a psychiatric facility or people with mental disorders.

## 1. Introduction

Until two hundred years ago, there was much disregard from the public towards people who were behaving abnormally. Before that, these people were called crazy and accordingly, mental illness was a reason for punishment and isolation (Museum of Health Care, 2014). In the middle ages, someone who presented abnormal symptoms was imprisoned, used to amuse the population, tortured and at the end killed (Museum of Health Care, 2014; Small, 1964). Particularly in Christian countries, there was the belief that people who behaved differently were possessed by the evil spirit and that they were impure. This was also due to the tendency of these people to behave wrongly, violently, and against the law. However, the main reasons for people with mental illness to behave in those ways were sometimes anger towards injustice and the feeling that they were misunderstood.

This led to the rising of “mad-houses”. In these places, insane people were imprisoned and kept away from society without any consideration towards their health (Museum of Health Care, 2014). Nevertheless, around the nineteenth century, some research was conducted about mental illness and it was concluded that people who present mental disorders are curable. Therefore, the mad-houses were replaced by asylums where people who presented mental illnesses were nursed and helped out to reintegrate into society. Nonetheless, people were cured physically and by the use of unorthodox methods, such as hot and cold bath or the use of straightjackets. According to Museum of Health Care (2014), only many years later, the doctors Boris Sidis and Sigmund Freud suggested that the root of the problem was psychological and cures like hypnosis and therapy were more effective. Afterwards, the term “mental disorders” and the different mental illnesses began to be acknowledged by society. This was also due to education and the study of psychology (Museum of Health Care, 2014). Despite being aware of the existence of people who may have mental problems does not mean acceptance. Because of the aforementioned history and the portrait that media convey of people with mental disorders, a stigma was formed.

In the last 50 years, research has been done about the stigma of mental disorders. Most of this research was conducted in Western countries (Corrigan & Watson, 2002). Furthermore, many associations, advocates and researchers have been basing their campaigns and communication strategies on these studies (Corrigan, Morris, Michaels, Rafacz, & Rüsck, 2012). Nonetheless, within previous research, there were found no studies that tried to investigate the factors influencing the stigma of mental disorders from a communication perspective. For instance, in the study of Luty, Umoh, Sessay, and Sarkhel (2007), the authors mention and try to measure the effectiveness of a method to reduce stigma, namely the use of factsheets to inform people about mental illnesses. Nevertheless, these authors consider the negative attitudes people have to base the content of these factsheets and not, for instance, the kind of information that might be the best to show to reduce negative attitudes. Additionally, most of the studies encountered have a psychological background and only tried to emphasize the prominence of the stigma of mental disorders within society. Accordingly, in a recent article by Fox, Earnshaw, Taverna, and Vogt (2018) in which they review all the mental illnesses studies until now, the authors state that there is much confusion in the literature about the stigma of mental disorders. Moreover, they refer to the complexity of the argument which causes a lack of clarity (Fox et al., 2018). Besides, it was noticed that some of these studies are older than 30 years and many discoveries have been made in the field of psychology and psychiatry during these years. Because of this, many of the questionnaires created in the past and their results may be considered outdated. Consequently, due to the lack of clear scientific literature as a base, communication plans which were created to reduce stigma may have not worked as expected.

Accordingly, the ineffectiveness of these campaigns can be seen in a study of 2006 by Prescosolido and colleagues (as cited in Wahl, 2012) where, by measuring the attitudes people show towards mental disorders, they saw that individuals have more negative attitudes towards the mentally ill than positive ones. For instance, 62% of the participants said that they would not be willing to work

with someone who presents symptoms of schizophrenia. This study was done 10 years after another one with the same focus which was to measure people attitudes towards mental illnesses. Differences in the results were not found (Wahl, 2012). To conclude, it seems that the stigma of mental disorders remained the same throughout the decades. In addition to this, it was counted that one-fourth of the worldwide population presents symptoms that can be linked to mental illness and that one of four people had some form of mental disorders during its life (Todor, 2013). Therefore, the stigma of mental disorders may be considered a societal issue and serious measures capable of tackling this problem need to be taken.

At the end of the study from Fox and colleagues (2018), they invite researchers to use existing and new knowledge and valid and reliable questionnaires to try to reduce the stigma of mental disorders and improve the lives of people who suffer from some form of mental illnesses and their families. Furthermore, digging into the origin of the problem and analysing the main factors that influence it is important to build the right strategic plan (Fill & Turnbull, 2017). This is exactly what this study will try to do and what makes it unique. That is, identifying the factors in society that, nowadays, influence the stigma of mental disorders from a communication perspective, such as the frames built by media, the kind of information that people need and knowledge people have. Based on the results, a recommendation for a communication plan will be eventually given with the goal of changing and/or influencing the way in which these variables affect the stigma of mental disorders and with the aim of reducing this stigma.

The factors that will be investigated are the amount of knowledge that a person has, the experience that a person has with the topic mental disorders or with people who suffered from some form of mental disorders, the media they get information from and how they influence the stigma. Moreover, to understand who is the most relevant group to target and the context where the stigma of mental disorders should be reduced, the effect that age and proximity have on the aforementioned effects will be investigated. Additionally, the sample of this study is formed by Italian and Dutch participants. Due to this, the differences in the effects between these two cultures will be analysed. Therefore, the main research question will be: *To what extent do knowledge, experience and media have an effect on the stigma of mental disorders and what is the role of age, proximity and nationality on this effect?*

In this paper, there will be first a theoretical framework to understand what the stigma of mental disorder is and some of the factors that may influence this stigma. This theoretical framework will lead to the hypotheses of this research. Afterwards, in the method section, it will be explained how these constructs will be measured. In the results section, the analysis of the results will be described and in the discussion session, the results will be interpreted. Moreover, the limitations and strengths of the study will be described. To conclude, recommendations will be given for further research and in order to create a base for a communication plan to reduce the stigma of mental disorders.

### *1.1 Previous research*

There have been many studies done on the topic of mental disorders. Due to the opening of new facilities around 1950, the oldest studies were aimed to understand the context where the psychiatric clinics were going to be built (Taylor & Dear, 1981). For instance, researching the accessibility of services for the mentally ill and if the neighbourhood were opposing the building of these facilities (Taylor & Dear, 1981). Afterwards, more importance has been given to the stigma of mental disorders and the focus shifted to the development of a valid scale capable of measuring attitudes which people have towards mentally ill and mental illnesses. For example, in 1981, Taylor and Dear, developed the Community Attitudes Toward the Mentally Ill scale (CAMI) and tested its reliability and validity. This scale is the result of merging two previous scales: The Opinions about Mental Illness scale (OMI) and the Community Mental Health Ideology scale (CMHI). The first one was developed in 1962 by Cohen and



Struenin's (Taylor & Dear, 1981) and its core was to measure the feelings that people have towards mental disorders. The CMHI scale was created by Baker and Schulberg in 1967 and it measured the attitudes that people have towards the ideology to help communities with people with mental disorders (Taylor & Dear, 1981). The Community Attitudes Toward the Mentally Ill (CAMI) was mentioned as an example because it is the most used scale within the most recent studies that indeed aims to measure the attitudes that people have towards mental illnesses. For instance, in the study by Ukpong and Abasiubong, (2010), they use the CAMI scale to measure the attitudes that people at the University of Uyo Teaching Hospital in Nigeria have towards the mentally ill.

Moreover, another scale used in the past ten years that was verified to be reliable and valid by Luty, Fekadu, Umoh, and Gallagher (2006) is the Attitudes towards Mental Illness Questionnaire (AMIQ). This questionnaire consists of open questions, close questions measured with a 5-point Likert scale and the use of vignettes (Luty et al. 2006). Vignettes, also known as scenarios, are used to let the participant empathise with a certain situation. These vignettes were also used in other studies to measure the attitudes people have towards people with schizophrenia and substance addiction (Luty et al., 2007).

According to the results of these studies, supporters all around the world have been working on reducing the stigma of mental disorders in the last 50 years. An example of one of the first campaigns is the one that took place in a little Canadian village where people were educated about mental illnesses with films and group discussions (Corrigan et al., 2012). Nowadays, there are many associations that fight against the stigma of mental disorders. In the United States, there is a group formed by people with mental disorders and family members who started the NAMI-program (Rüsch, Angermeyer, & Corrigan, 2005). This program aims at educating people about mental illnesses, supports the rights of mentally ill people, and opposes the way in which media frame mental disorders (Rüsch et al., 2005).

One of the main associations in Europe that fights for the reducing of stigma towards the mentally ill is Mental Health Europe (MHE). The mission of MHE is to ensure that the laws created for mentally ill people and their families are respected (Mental Health Europe, n.d.). Furthermore, in collaboration with policymakers this organization tries to generate friendly policies for people with mental disorders (Mental Health Europe, n.d.). Their projects also focus on the reduction of the stigma. They work with the European parliaments, and many associations around Europe are members of MHE (Mental Health Europe, n.d.). All around Europe there are different associations which try to reduce the stigma of mental disorders on a national level. In Germany, a major campaign is going on for years. This is called: "BASTA" that in English is translated as "stop" (Rüsch et al., 2005). The association organizing this campaign tries to reach society via different means: emails, school programs, social media and art exhibitions (Rüsch et al., 2005).

In the Netherlands, there are few associations that fight against the stigma of mental disorders. Stichting Ideeële Reclame [Idea Advertising Foundation] (SIRE) is a Dutch association that does campaigns to solve societal problems. Subsequently, they have also been doing some campaigns related to mental illnesses. For instance, in 2013, they did a campaign to support people who have major depression, who feel like they do not belong and who suffer from burnout (SIRE, 2013). Further, they also tried to educate people about mental illnesses through radio programs and social media. Another Dutch association that focuses on the reduction of stigma is Samen Sterk Zonder Stigma, that literally means Together Strong Without Stigma. This association organizes, for example, trainings where they teach people who suffer from self-stigma how to be more open and be able to accept themselves in a better way (Samen Sterk Zonder Stigma, 2019).

The Unione Nazionale delle Associazioni per la Salute Mentale [National Union for the Associations of Mental Health] (U.N.A.S.M.) is the biggest Italian national federation that works with more than 150 associations with the aim to reduce the stigma of mental disorders and improve the life of people mentally ill and their relatives (Unione Nazionale delle Associazioni per la Salute Mentale, n.d.). Their main activities, for example, are creating events to educate people about mental illness and

to provide juridical services to the families of mentally ill (Unione Nazionale delle Associazioni per la Salute Mentale, n.d.). At a local level, in Pisa (Italy) there is L'Alba [The Dawn], an association that helps people who have or had mental disorders to reintegrate into society (L'Alba, n.d.). Through the use of creative workshops and space where everyone can be open and talk to each other, people try to transform what they have experienced into something positive (L'Alba, n.d.).

Nonetheless, the effectiveness of these campaigns is not proven. This is because associations base them on general communication strategies and on past campaigns (Fox et al. 2018). Due to this, it may be relevant to measure the effectiveness of these strategies, but, particularly, they should be based on facts and on research which focuses on the factors influencing stigma and how to tackle them.

## 2. Theoretical framework

In this chapter, different theories to explain how the stigma of mental disorders is formed will be described. Moreover, some of the factors influencing stigma, chosen from a communication perspective, will be identified and analysed. Additionally, the moderators which may influence the effects on the stigma of mental disorders will be described. Eventually, according to literature, per each factor, an hypothesis will be formulated and the models of this research will be presented.

### 2.1 *The stigma of mental disorder*

The word stigma derives from the Greek word *stigmata* which means “a mark of shame or discredit; a stain, or an identifying mark or characteristic” (Merriam-Webster Dictionary as cited in Overton & Medina, 2008, p. 143). Therefore, when a group of people has a characteristic that makes it different, a stigma may form (Rössler, 2016). In the case of people with mental disorders, the creation of the stigma can be explained by three main theories: social identity theory, self-stigma and structural stigma (Overton & Medina, 2008). Social identity theory explains how societies categorize people by looking at how they behave and if they respect the social norms and an ideal identity (Overton & Medina, 2008). In the past, people with mental illnesses were seen as of weak character (Rüsch et al., 2005). This led to the exclusion of this group of people and to their stigmatization. In order to maintain their position in society, people who suffer from mental disorders may refuse or postpone treatment (Klin & Lemish, 2008). It was found that only 25-30% of these people seek for a cure (Klin & Lemish, 2008). In the long run, they may get sicker and, because of the lack of help, they may even attempt suicide.

Individuals who have mental disorders, and they feel marginalized because of it, create a negative judgment towards themselves: self-stigma. They believe they are incapable of leading a normal life and keep up with the expectations of others (Overton & Medina, 2008). Consequently, their self-esteem and self-efficacy decrease. Because of this, they begin feeling inferior, ashamed of themselves and insecure about their future (Overton & Medina, 2008). This can also be a reason for a person to become mentally ill and to feel the need to be hospitalised (Lamb & Weinberger, 2016). In addition to this, when a person falls in the trap of self-stigma, he or she may show some cues that are seen differently by others (Rüsch et al., 2005). Accordingly, this person also began to be negatively judged by other people.

The theory of structural stigma refers to the way in which society forms barriers towards people with mental disorders. Namely, the creation of laws which do not allow people with mental disorders to have the same rights as the people who are seen as “normal” (Overton & Medina, 2008). For instance, one-half of all states have been denying the mentally ill the possibility to raise their children, to vote for elections, and to get a driver’s licence (Johnston, as cited in Overton & Medina, 2008; Wahl, 2012). This way in which society is built does not guarantee people with mental disorders to live like everyone else. Further, laws for mental disorders emphasize the marginalization of this group, and, consequently, enhance the stigma of mental disorders. These structures in society are a big obstacle for mentally ill people when they are in the process of recovery. In a study mentioned by Wahl (2012), 1400 people who were diagnosed with mental illnesses were asked how they experience stigma. Social rejection was one of the main findings, thus that once friends discovered their sickness, they stopped calling and inviting them to hang out (Wahl, 2012). Further, participants stated that they felt isolated from their communities (Wahl, 2012). Eventually, people with mental disorders may feel unmotivated to get better and, as a result, they may get worse.

The stigma of mental disorders is formed by three factors: *stereotype*, *prejudice*, and *discrimination*. According to Kassin, Fein, and Markus (2017, p. 158), “Stereotypes are common beliefs or associations that link a whole group of people with same characteristics”. Because stereotypes are built up in society, they are usually the same for a social group (Overton & Medina, 2008). In culture, there may be stereotypes, but this does not mean that all the people in that culture

believe in or act upon them (Overton & Medina, 2008). These are called implicit stereotypes. Further, stereotypes can be seen as positive when they help people to make fast assumptions towards a person or group of people (Rüsch et al., 2005). Nonetheless, it is not fair to draw conclusions about a person because of the stereotype that belongs to her or him (Rössler, 2016). This is the case of people with mental illnesses who are often stereotyped as violent and irresponsible (Corrigan & Watson, 2002).

When individuals have negative feelings towards a whole stereotyped group, they are expressing prejudice (Kassin et al., 2017). This way of responding to stereotypes can be seen as defensive. People are scared of a particular group and, consequently, they talk about hate, disgust and danger (Overton & Medina, 2008). A sentence that people could say as referring to mentally ill could be: “they are dangerous and I’m afraid of them” (Overton & Medina, 2008, p. 144).

Taking actions according to the negative emotions, aroused by a belief that a person has towards a certain group of people, is called discrimination (Kassin et al., 2017). Therefore, it may be said that stereotypes and prejudice lead to discrimination. One of the main actions that is usually taken towards mental illnesses is avoidance (Overton & Medina, 2008). For instance, employers may not want to hire people with mental disorders because they are unreliable and they do not want to be responsible for them (Rüsch et al., 2005). The same goes for landlords who decide to not rent their house to mentally ill people because of the belief that they are not able to take care of themselves (Overton & Medina, 2008). These kinds of actions can lead to the creation of barriers between the mentally ill and the rest of society (Overton & Medina, 2008). Because of this, the distinction between “normal people” and “mentally ill people” increases, and accordingly, the stigma of mental disorders deepens.

## **2.2 Antecedents of Stigma**

In this sub-chapter, each section will describe the factors which were found to influence the stigma of mental disorders, namely knowledge, experience, media, age, proximity and nationality. Firstly, knowledge refers to how much knowledge a person has regarding the topic of mental disorders and how it can influence the level of stigma a person has. Secondly, experience regards how the amount of experience a person has with people with some form of mental disorders and with the topic can influence stigma. Thirdly, it will be described if the way in which media portrait mental disorders, the information chosen to convey information about mental disorders and the kind of medium used to pass this information have an influence on the stigma of mental disorders, how and why. Lastly, it will be analysed how age, proximity to a psychiatric facility and nationality have an influence on the stigma.

### *2.2.1 Knowledge*

It sometimes happens that people think to know what mental illnesses are and what they imply. However, their knowledge is mostly based on the information found on media or on the way their culture deals with mental illnesses. To illustrate, if the persons behind the creation of media messages convey a negative image of mental illnesses, the characteristics of people with mental disorders can be misrepresented (Stout, Villegas, & Jennings, 2004). For instance, it has been discovered that schizophrenia may have a genetic cause. This fact given to a person without enough knowledge may lead him or her to think that schizophrenia cannot be cured and it may deepen the idea of “the different” that people have about people mentally ill (Rüsch et al., 2005). Consequently, the stigma may increase. Nonetheless, in the study of Crisp, Gelder, Rix, Meltzer and Rowlands (2000), the authors claim that lack of knowledge is not one of the factors increasing the stigma of mental disorders within society. However, this study only tried to investigate if society believes that people with mental disorders cannot be cured. Moreover, the authors of this study claimed that increasing knowledge was not the only way to reduce the stigma of mental disorders (Crisp et al., 2000). Accordingly, this means that they do not deny that increasing knowledge partly helps to decrease stigma. Furthermore, in a study of 2002, Corrigan and Watson state that there is evidence that educating people reduces negative attitudes

towards mental illnesses. Therefore, *lack of knowledge* due to not being informed enough may result in an increase of stigma and people should be given correct information to be able to understand the complex topic of mental disorders.

Additionally, within society, different *myths* related to mental disorders are present. For instance, stalking celebrities is seen as obsessive behaviour (Stout et al. 2004). However, in reality, stalking is not one of the symptoms of Obsessive-Compulsive Disorder (OCD). Another example is the belief that mental illnesses are the results of weak or lazy characteristics and that people can just get better by working harder (MentalHealth.gov, 2017). Nevertheless, mental illnesses can be the result of many factors, such as genes, traumas and family history. Due to the fact that believing in myths may have a negative effect on stigma, it may be necessary to understand if people believe in them. To conclude, it could be relevant to see if not having a *lack of knowledge* and not *believing in myths* decrease the stigma of mental disorders.

*H1: The variable lack of knowledge has a negative effect on stigma of mental disorders.*

*H2: The variable believing in myths has a negative effect on stigma of mental disorders.*

### 2.2.2 Experience

Having had *personal experience* with someone suffering from some form of mental illness may have an impact on the stigma of mental disorders a person has. Research showed that direct contact, such as face-to-face communication, is the most effective way to reduce stigma (Rössler, 2016). This is because when people have some experience with individuals with mental disorders, they get a true impression about who they are, what is their story, and how they are dealing with their problems (Rössler, 2016). Additionally, research revealed that people who know someone who was diagnosed with mental disorders have usually more positive attitudes (Walker & Read, 2002). Further, knowing a person mentally ill who was able to get better increases the positive image that people have of mental disorders (Rössler, 2016; Stout et al., 2004). This is also explained by the cultivation theory. This theory implies that repetitive exposure to the same messages can reinforce, cultivate and eventually change believes, images and norms perceptions of social reality (Stout et al., 2004). Accordingly, lack of contact with the mentally ill and the lack of real facts lead people to only have an image of mental disorders like the one portrayed by society and the media (Stout et al., 2004). Therefore, in order to decrease the stigma of mental disorders, people should be more in contact with people who suffer or suffered from mental disorders.

Nonetheless, research showed that people working in the mental health sector have usually more negative attitudes toward mental illnesses. For instance, in the study of Noblett, Lawrence, and Smith (2015), the authors measured the attitudes doctors have towards mental illnesses. They concluded that participants had negative attitudes. If this fact were confirmed by other researches, it could be a big problem for mental health workers trying to cure their patients (Noblett et al., 2015). This kind of experience can be seen as professional experience since it happens in the workplace.

Due to the contradiction between *personal* and *professional experience*, it may be relevant to research if having personal experience with a person with mental disorders has a positive influence on the decreasing of stigma of mental disorders and if working in a psychiatric facility has a negative influence on the decreasing of stigma of mental disorders. Moreover, to get more insights on the subject, it will be seen if the amount of time spent dealing with the topic of mental disorders, the type of relationship, the type of profession and the years of experience of a person working in the mental health sector also influence the level of stigma of a person.

*H3: The variable personal experience has a negative effect on stigma of mental disorders.*

*H4: The variable professional experience has a positive effect on stigma of mental disorders.*

### 2.2.3 Media

Nowadays, one of the main influencers on the stigma of mental disorders is media, such as television, advertising, and newspapers. This is also emphasized by the study of Corrigan and colleagues in 2001 (as cited in Overton & Medina, 2008), where it was found that 90% of the participants knew about mental illnesses because of media. Moreover, it is said that, in general, media are crowded with stereotypes and because of this, it is one of the main factors reinforcing stigma towards different groups (Rössler, 2016; Seiter, 1986). In this section, three constructs to measure media will be described, namely *framing*, *kind of information* and *kind of media*.

#### *Framing*

Media framing has an impact on the stigma of mental disorders. This is because media are known for framing information with a negative connotation and using terms and metaphors that cannot be thoroughly understood by everyone (Rössler, 2016). Media framing refers to the way in which media portrait something and how deeply they influence people with the message they convey (Chong & Druckman, 2007). How the media have an influence on the stigma can be explained by two communication theories: cultivation theory and social learning theory. Following cultivation theory, by looking too much at the media, people tend to believe in the social reality portrayed by them (Stout et al. 2004). Consequently, they look at the world with the images, values, social norms and ideologies those media propose. This was also stressed in a study from Wahl and Lefkowitz (1989) where, by using the CAMI questionnaire, they found that when people spend much time watching television, they have more negative attitudes than people who only watch television few hours a day or not at all. For instance, if individuals watch many crime films where a killer is a person who has mental disorders, they may begin believing that, actually, most of the crimes are committed by people who are mentally ill.

The social learning theory states that people learn through observation; namely, through what they hear and see (Stout et al., 2004). Indeed, watching television requires people to see and hear. People may learn from the media how to behave and, particularly, how everyone should behave in a social context (Stout et al., 2004). This means that the media also teach people how to behave with people with mental illnesses (Stout et al., 2004). This can be a problem when considering the negative framing of media towards people with mental disorders. Accordingly, most media analyses done on the topic of mental disorders show that mentally ill people are framed as dangerous, violent, potential killers, childlike and unpredictable (Angermeyer & Matschinger, 2003; Overton & Medina, 2008; Rüscher et al., 2005; Stout et al., 2004). Therefore, when people base their knowledge on the media, they have mostly negative stereotypes of mental disorders, and when in contact with the real world, they tend to feel and behave accordingly. To conclude, to get a general understanding of the influence that media have on the stigma, it will be measured if people realise that media portrait the mentally ill as dangerous, violent, potential killers, childlike and unpredictable. If they do not, it should mean that they are not aware of it and their level of stigma should be higher than the one of people who are aware of it.

*H5: The variable framing has a negative effect on stigma of mental disorder.*

#### *Kind of information*

The kind of information sent to people through the media has also an influence on the stigma of mental disorders. Usually, the kind of information conveyed is based on the stereotypes present in society. This may be due to the fact that journalists, screenwriters and producers often prefer to write about the newness of shocking information, instead of giving unbiased, correct and balanced information (Nairn, as cited in Stout et al., 2004). Because of this, it can also be said that those people are responsible for

the way in which mental illnesses are shown by the media. They are the ones who decide the kind of message they want to send to the viewers or readers. For instance, the camera shots used in films may differ between the mentally ill and not (Overton & Medina, 2008). Another example is the use of scary sounds, dark light and horror images to emphasise the presence of an “evil” character (Stout et al., 2004). Nonetheless, it is assumed that screenwriters, producers and journalists are usually more knowledgeable about mental illnesses. Research showed that they have also less negative attitudes towards people with mental disorders (Stout et al., 2004). However, when they were asked if they were willing to hire a person who was diagnosed with a mental illness, they said that they would not do that (Stout et al., 2004). Therefore, they also discriminate the mentally ill. Because of this, when they are creating the messages they want to send through the media, they tend to be subjective. Accordingly, the information given gets a negative connotation.

Three different kinds of information were found to be effective in reducing the stigma of mental disorders. Firstly, it was suggested that to convey the right information, psychiatrists or doctors should get in contact with media and give more positive, reliable and scientifically proved information - medical (Stout et al., 2004). In addition to this, experts in mental health should also understand that producers, journalists and screenwriters use dramatic effects to increase the selling of their product (Wilson, Nairn, Coverdale, & Panapa, as cited in Sout et al., 2004). Therefore, there should be a perfect balance between the real information and the emotions that the authors want to transmit. Furthermore, it was proved that giving medical information, in the forms of documentaries or articles, about mental disorders can reduce negative attitudes people have towards mentally ill people (Rössler, 2016). Secondly, Walker and Read (2002) state that talking about the influence that mental disorders have on relationships, psychosocial information, may decrease stigma. Additionally, these authors investigated which information is better to convey between medical and psychosocial. It was concluded that a combination of both is the best in order to reduce stigma (Walker & Read, 2002). Lastly, it was found that the best kind of information to convey to reduce stigma is personal, that is hearing real stories of people mentally ill getting better and succeeding in their life (Rössler, 2016). Personal information does not necessarily imply direct contact with people who suffer or suffered from mental disorders, but it can also be passed through indirect means, such as films or videotapes of stories of people who suffer or suffered from mental disorders (Corrigan et al. 2012). According to the aforementioned research, three main kinds of information were selected: psychosocial, medical and personal. It may be relevant to see which one of these kinds is the most effective to use when trying to reduce the stigma of mental disorders and if personal information is the best to use.

*H6: The variable personal information has a negative effect on stigma of mental disorders over and above the variable psychosocial information and the variable medical information.*

#### *Kind of media*

Over time, mental illnesses have been reported in different media. The most used are television by means of films, tv series and documentaries, popular magazines and newspapers (Stout et al., 2004). In addition to this, with the decrease of televisions in households, the internet is becoming the most important source of information, thus also about mental illnesses. However, the provenience of the information found on the web is usually uncertain, thus it could be considered unreliable (Klin & Lemish, 2008). Furthermore, another means showed in television, in the internet and newspapers that can foster negative attitudes toward the mentally ill is advertisement (Sieff, 2003). In this case, features of mental illnesses are humourized to promote products. For instance, a good cleaning product could be advertised by making fun of people with Obsessive Compulsive Disorder (OCD).

According to the media richness theory, the channels used to inform people do matter. Media richness theories states that media can be ranked in order of richness (Fill & Turnbull, 2017). The richest

medium is considered face-to-face communication which allows personal cues and consequently a personal connection, whilst the leanest media are fliers and bulletins which lack images and are usually impersonal (Fill & Turnbull, 2017). Rich media decrease ambiguity and misunderstanding, but they are often more complex and time-consuming. Lean media are simple for fast communication and cost-effective. Moreover, according to the technology acceptance model (TAM), the use of certain media depends on the usefulness of the media and the perceived ease of use (Fill & Turnbull, 2017). Research shows that when people get information from others, thus via face-to-face communication, they tend to have more positive attitudes towards mental illnesses than, for example, people who get their information from websites (Rössler, 2016). However, it is still unclear which media is the most used as a source of information nowadays and the effect it has. Because of this, it may be relevant to comprehend which medium or media among the ones that are used the most nowadays, such as social media, television, the internet etc., have the most negative influence on decreasing the stigma of mental disorders and if face-to-face communication or word-of-mouth is the medium which have the most positive influence on decreasing the stigma.

*H7: The variable word-of-mouth has a negative effect on stigma of mental disorder over and above the variables television, internet, social media, podcast, radio, books and newspapers.*

### 2.3 Demographic

When trying to decrease the stigma of mental disorders within the population, it is relevant to understand the context where stigma is more dominant and the target group who present the most negative attitudes towards mental illnesses. In this study, three demographic variables will be used, namely age, proximity and nationality.

#### 2.3.1 Age

Depending on their age, people may have more or less stigma. This was shown by the study of Wolff, Pathare, Craig, and Leff (1996), in which they measured the influence that age has on the stigma of mental disorders when situations of social control and goodwill are presented. Older people had more negative attitudes in the situation of social control. They answered they were scared and tried to avoid meeting mentally ill people (Wolff et al., 1996). Younger people, instead, were more open-minded and they were more willing to help people with mental disorders (Wolff et al., 1996). Therefore, they proved to have more positive attitudes toward the mentally ill than older people. These results were confirmed in a more recent study by Griffiths, Christensen, and Jorm (2008), where they tried to identify the predictors influencing the stigma of depression. They saw that younger people tended to have less stigma of mental disorders than older people. Because of this, it is expected that being older has a negative influence on the effects of knowledge, experience and media on the stigma of mental disorders.

*H8: Being old positively increases the effects of the independent variables on stigma of mental disorders.*

#### 2.3.2 Proximity

Living in proximity of a psychiatric facility may also have an influence on the stigma. Research showed that communities are usually against the integration of a psychiatric facility in their surrounding (Högberg, Magnusson, Ewertzon, & Lützén, 2008; Wolff et al., 1996). This may happen because, once a psychiatric facility is built inside these communities against individuals' will, they tend to have more negative feelings about it. Moreover, because of the way in which the media portrait mental disorders and the wrong information that is conveyed about this topic, people may gradually develop fear by repeatedly meeting someone with mental disorders in their streets (Wahl, 2012). As a consequence,



people suffering from some form of mental disorders may have more difficulty to get better in the environment where they live. Therefore, in case the stigma around psychiatric facilities is higher, means should be found to decrease it. Consequently, one of the barriers for the mentally ill to get better would be destroyed and it may be possible to facilitate their process of recovery (Wahl, 2012). Because of the negative opinions that people may have towards building psychiatric facilities around their houses and the facilities themselves, it is expected that when people perceive that they live next to a psychiatric facility, they have a higher stigma than people who live far away.

*H9: Living next to a psychiatric facility positively increases the effects of the independent variables on stigma of mental disorders.*

### *2.3.3 Nationality*

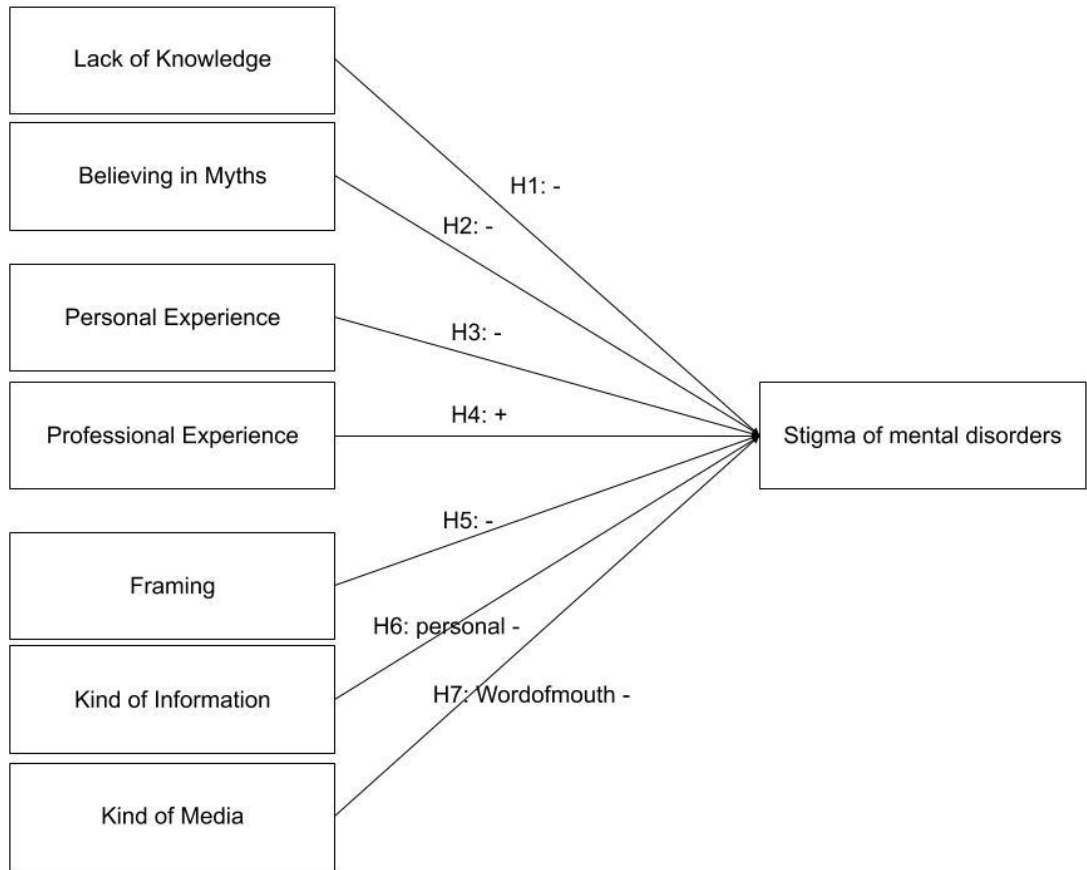
Nationality may also influence the stigma of mental disorders. This may depend on the culture of the nations. By using some of Hofstede cultural dimensions, the possible differences between Italy and the Netherlands towards the stigma of mental disorders will be described. These countries were compared by using the website of Hofstede Insights (n.d., Figure 1, Appendix 1). The dimensions used are power distance index, individualism vs. collectivism, uncertainty avoidance and masculinity vs. femininity.

Firstly, power distance index refers to the degree people of a nation accept inequality of power within society (Gray, 1998). Accordingly, in a nation with high power distance index, such as Italy, people do not have a big role in the decision-making process and laws which are created to deal with mental disorders may only be applied according to what more powerful people want. According to this, in Italy, people may have higher stigma than in the Netherlands. The second dimension, individualism vs. collectivism, refers to the extent to which people are more or less part of a group (Gray, 1998). The Netherlands scores slightly higher in individualism than Italy (Hofstede Insights, n.d.). Accordingly, Dutch people often tend to rely on close ties, whilst Italian people tend to merge into in-groups (Gray, 1998). These in-groups try to protect themselves against possible threats and, consequently, Italian people may see people with mental illnesses as dangerous and marginalize them more than Dutch people. Thirdly, uncertainty avoidance is the tolerance a society has towards ambiguity (Gray, 1998). The Netherlands scores higher than Italy in this dimension (Hofstede Insights, n.d.). According to uncertainty avoidance, Italian people are usually less open to changes and they need to rely on rules and guidelines (Gray, 1998). Contrary, Dutch people are better at accepting unknown and unexpected situations and, consequently, they are more able to live their lives at ease (Gray, 1998). Therefore, in the Netherlands, people should be able to deal better with the idea of mental disorders than in Italy. Lastly, masculinity vs. femininity refers to the difference between nations which aim to individual achievement and success and nations which focus on cooperation, caring for the weak and quality of life (Gray, 1998). The Netherlands is seen as a more feminine nation. Due to this, people with mental illness should be better accepted and taken care in the Netherlands than in Italy. To conclude, it is expected that Italian people hold a more negative stigma of mental disorders than Dutch people.

*H10: Being of Italian nationality positively increases the effects of the independent variables on stigma of mental disorders.*

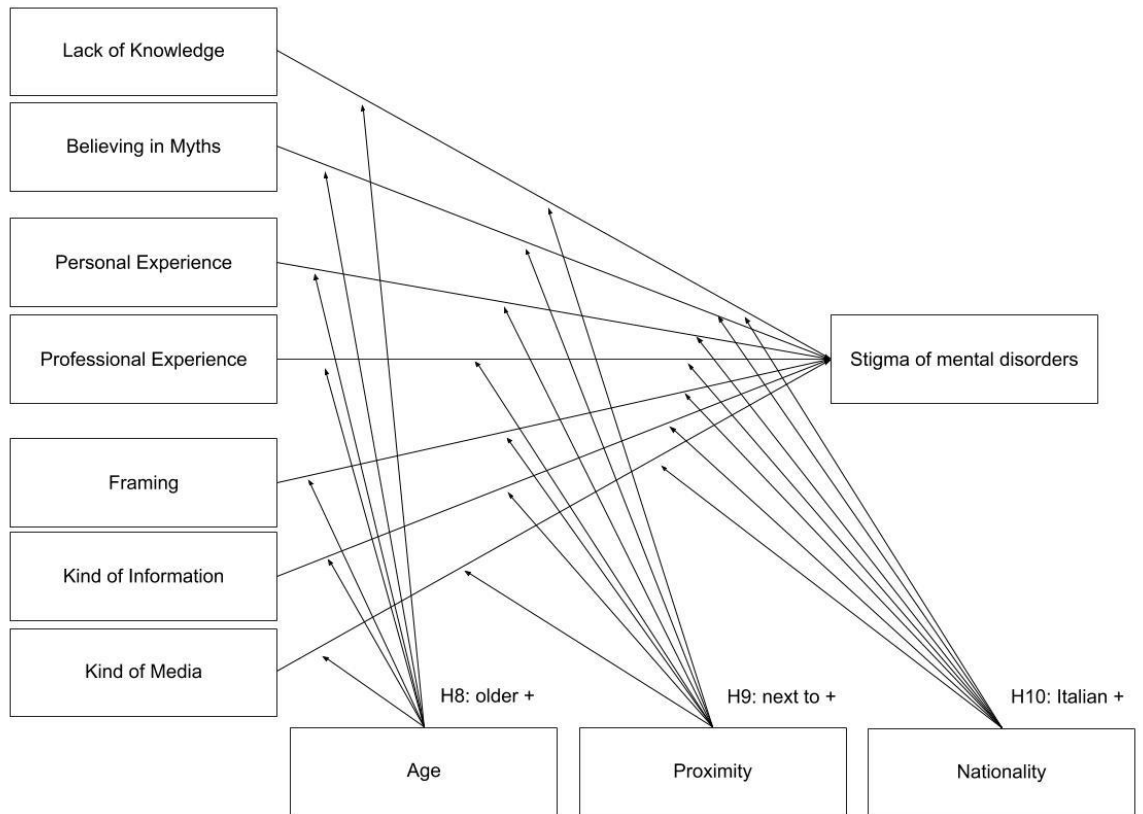
### *2.4 Models*

The graphic representation of the first model which will be used to see the effects of knowledge, experience and media on stigma of mental disorders is:



*Figure 2.* Effect of Knowledge (Lack of Knowledge and Believing in Myths), Experience (Personal Experience and Professional Experience) and Media (Kind of Media, Kind of Information and Framing) on Stigma of mental disorders

Additionally, the graphic representation of the model which will be used to see the influence that the moderators have on the effect of media, knowledge and experience on the stigma of mental disorders is:



*Figure 3.* Final model: Moderation of Age, Proximity and Nationality on the effect of Knowledge, Experience and Media on Stigma of mental disorders.

### 3. Method

The method section will describe the way this study was conducted, the instrument that was used, how reliability and validity were checked, the preparation of the dataset for analysis and the sample used. As an overview, this study was conducted with Italian and Dutch people by means of a survey. To ensure validity, a factor analysis was conducted. Furthermore, Cronbach's alpha was measured to ensure reliability. Lastly, incomplete questionnaires were deleted from the dataset and the variables were prepared for analysis.

#### 3.1 Data collection procedure and sampling

In the middle of April, the questionnaire was ready to be used. Before sending the questionnaire, it was translated in the other two languages of the participants: Italian and Dutch. Afterwards, the three questionnaires were created by using the program Qualtrics (n.d.). People to which the questionnaire was sent were selected according to the sampling method maximum variation sampling. Therefore, it was tried to have a great variation among the participants, such as people working in a psychiatric facility or not, living next to or far from a psychiatric facility, elderly, middle age people and younger generations. The only criterion used was that participants had to be older than 18 years old. To ensure a good mix and to distribute the questionnaire people from different ages, work occupation and surroundings were contacted and it was asked to them if they could, after having filled the questionnaire, forward it to their friends, colleagues and neighbours. They were contacted via message or via mail and an online link was sent to them (Appendix 2). The message did not give further details regarding the research because this was explained to them as soon as they opened the questionnaire.

At the beginning of the questionnaire, people were given a short piece of text (Appendix 3). This included a thank you for participating, the topic of the study and the time people would have needed to fill in the questionnaire, which was 10-15 minutes. However, it was decided not to explain to participants the whole research because it may have made people uncomfortable which would have led to bias results. Accordingly, participants were also told that there were no wrong nor right answers and that this study did not aim to test them as individuals, but it aimed to get general insights on the topic mental disorders.

Additionally, people were ensured that their data were going to be kept private and that the study was approved by the ethical committee of the University of Twente. Lastly, they were given the possibility to quit the study whenever they wanted and the contact information of the researcher for possible questions. Once participants finished the questionnaire, they were thanked again for participating and a white space was given to write down their emails in case they wanted to know about the final results of this research.

The collection of data lasted for a month and, in the first three weeks, most of the answers were gathered. Eventually, 255 questionnaires were sent and 178 responses were received. Nonetheless, 32 out of the total answered questionnaires could not be counted as valid, due to incompleteness. Therefore, 146 questionnaires were counted for analysis.

#### 3.2 Instrument

The instrument used for this research was a questionnaire. This method was chosen because it allows to gather data from a large number of people and draw reliable conclusions about the population. Moreover, sending a questionnaire generally saves time when compared to other methods, such as face-to-face interviews, which require much time to be conducted. Another reason a questionnaire was chosen is that it allows people to have their time to answer the questions and be more honest and open about their answers. This is because they are not pressured by the researchers or other people to answer.

This questionnaire was formed by an introduction, 43 questions and a conclusion. The variables measured were 11: *stereotype, prejudice, discrimination, kind of media, framing, kind of information,*

*lack of knowledge, believing in myths, age, nationality and proximity*. Accordingly, in the next paragraphs, it will be described what the variable measured, if the items were retrieved from previous studies and the reliability and validity of some of the variables according to their significance. The variables which questions were taken from other scales or, in general, literature were *stereotype, prejudice, discrimination, lack of knowledge and believing in myths*. The questions for the other items were created by using the theoretical framework as a base. Furthermore, the reliability of these variables was measured with the Cronbach's alpha. When  $\alpha$  is higher than .60, the variables are reliable. The reliability was measured first, with the data of the two countries, Italy and the Netherlands together, and afterwards, it was measured per country. This is because the samples of the two countries may be more homogeneous if taken separately and this may lead to higher reliability. Accordingly, some of the values increased when measured per each country. Table 1 (Appendix 4) shows the reliability per each variable per each country or countries. Moreover, the validity of the variables was measured by means of factor analysis with varimax rotation and the numbers of factors were forced depending on the variable analysed. For instance, for *stigma of mental disorders*, 3 factors were forced. These results can be found in Table 2 (Appendix 5). Overall, for almost every questions a 5-point Likert scale was used with "1 = strongly disagree", "2 = somewhat disagree", "3 = Neither disagree nor agree", "4 = somewhat agree", "5 = strongly agree". If an item had a different scale, it will be described later in the text.

The first 12 questions measured the level of *stigma of mental disorders* people had, thus the dependent variable. The sub-variables were *stereotype, prejudice and discrimination*. For each variable, four questions were asked. To illustrate, a question for *stereotype* was "I think that one of the main causes of mental disorders is a lack of will power" where "1 = strongly disagree" is having no stereotypes and "5 = strongly agree" is having stereotypes. Moreover, an example question for *discrimination* was "I think that employers should not hire people with mental disorders". Furthermore, one statement for *stereotype* and three statements for *prejudice* were formulated with a positive connotation. To illustrate, a question to measure prejudice was "I think people with mental disorders deserve our sympathy". The questions for the variable *stigma of mental disorders* were taken from three questionnaires of which reliability and validity were tested beforehand. The first questionnaire is the Community Attitudes Toward the Mentally Ill scale (CAMI) (Link, Yang, Phelan, & Collins, 2004; Taylor & Dear, 1981). An example of question used for *stereotype* from this questionnaire is "I think that mental disorders are illnesses like any other". For the variable *prejudice*, the questions were mainly retrieved from the Prejudice towards People with Mental Illnesses (PPMI) scale (Kenny, Bizumic, & Griffiths, 2018). A statement from the PPMI that was used to measure prejudice was "I am not scared of people with mental illness". The last questionnaire used to measure stigma was the scale of Beliefs and Attitudes towards Mental Health Service Users' Rights (BAMHS) which was used to formulate a few questions of the variable *discrimination* (Eiroa-Orosa & Limiñana-Bravo, 2019). For instance, the statement "I would not be comfortable if a person with a mental disorder was a teacher in a school" was from the BAMHS. Due to the fact that the validity and reliability of the aforementioned questionnaires have already been measured, it may be said that the validity and reliability of this items would also be high. Nonetheless, this was not the case. The reliability for the variable stigma was quite low,  $\alpha = .55$  for the Netherlands and Italy together,  $\alpha = .61$  for Italy and  $\alpha = .46$  for the Netherlands (Appendix 4, Table 1). Because of this, by also looking at the factor analysis (Appendix 5, Table 2), it was decided to delete questions 5 and 8 of the variable prejudice to increase the reliability of this construct which resulted in higher reliability,  $\alpha = .68$  for the Netherlands and Italy together,  $\alpha = .71$  for Italy and  $\alpha = .66$  for the Netherlands. Furthermore, the factor analysis presented only 7 statements for stigma with values acceptable, thus higher than .60 (Appendix 5, Table 2). Moreover, the questions of *discrimination* fell all under one factor loading (Appendix 5, Table 2).

The next 14 questions of the questionnaire were under the construct *media*. Media is measured with the variables *kind of media*, *framing* and *kind of information*. The sub-variables kind of media and framing had 4 questions each and the sub-variable kind of information had 6 questions, two per kind of information (medical, psychosocial and personal). For instance, a question used for *kind of information* was “When people with mental disorders talk about their experiences, I think I get the best information on the subject” with “1 = strongly disagree” when it is thought that the kind of information is not a good source and “5 = strongly agree” when it is a good source. The variable *kind of media* was one of these variables which did not have a 5-point Likert scale. To answer the questions, participants had to rank 8 media, namely television (movies, documentaries, series TV, etc.), internet (Google, Wikipedia, Websites, etc.), social media (Blogs, Facebook, etc.), newspapers (including Magazines), word-of-mouth (Friends, Acquaintances, Professionals), podcast, radio and books from 1 the one they mostly use in general, the most suitable, the most reliable and the clearest when searching for information about mental disorders, to 8 the one they use the least in general, the least suitable, the least reliable and the least clear when searching for information about mental disorders. An example of a question for this variable is “Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable”. The reliability of the variable framing was moderately high,  $\alpha = .61$  for both countries,  $\alpha = .62$  for Italy and  $\alpha = .53$  for the Netherlands (Appendix 4, Table 1). Additionally, all the sub-variables of kind of media were reliable (Appendix 4, Table 1). However, the validity of the sub-variables was not always met (Appendix 5, Table 2).

From question 27 to question 34, the construct *knowledge* was measured; 4 questions were for the variable lack of knowledge and 4 questions were asked for the variable believing in myths. An example of a question for *lack of knowledge* was “When people talk about mental disorders, I feel enough knowledgeable to participate in the conversation” where “1 = strongly disagree” means that people think they do not have knowledge about mental disorders and “5 = strongly agree” means they think they have knowledge about mental disorders. The questions for the sub-variable *lack of knowledge* were retrieved from the Subjective Knowledge scale by Flynn and Goldsmith (1999). This questionnaire was created to measure the amount of knowledge a person has about fashion (Flynn & Goldsmith, 1999). Because of this, the statements used for this variable were edited and the terms regarding fashion were replaced with terms about the topic of mental disorders. For instance, the statement “I know pretty much about fashion clothing” became “I know pretty much about mental disorders”. Additionally, to create statements for the variable *believing in myths*, myths about mental disorders were selected from the article by Stout and colleagues (2004) and the website MentalHealth.gov (2017). For instance, one of the myths about mental illnesses is that children cannot be affected (MentalHealth.gov, 2017). Therefore, the statement “I think that children cannot experience mental disorders” was formulated. Furthermore, the construct knowledge was tested as reliable with a Cronbach’s alpha of  $\alpha = .74$  for both countries,  $\alpha = .77$  for Italy and  $\alpha = .68$  for the Netherlands (Appendix 4, Table 1). Moreover, the items of the variable *knowledge* presented values higher than .60 for the validity and the four statements for *lack of knowledge* and the four for *believing in myths* were under the same factor loading (Appendix 5, Table 2).

The questions after the construct knowledge measured the *experience* people had with the topic of mental disorders or with the mentally ill. The sub-variables for *experience* were *personal experience* and *professional experience* and they had three questions each. For three of those questions, another scale was used. To illustrate, in case people had some *personal experience* with people with mental disorders, the question which followed was “Which kind of personal experience do (or did) you have?” and the possible answers were “1 = relative”, “2 = close friend”, “3 = colleague”, “4 = classmate” and “5 = neighbour”. For *professional experience*, if people had some, they were asked how long they

worked there between “1 = from 1 to 3 months”, “2 = from 3 months to 1 year”, “3 = from 1 to 10 years”, “4 = more than 10 years”. Moreover, they were also asked their role in the psychiatric facility between “1 = nurse”, “2 = social worker”, “3 = psychiatric”, “4 = psychologist” and “5 = other”. The reliability of this construct was really low,  $\alpha = .36$  for the Netherlands and Italy together,  $\alpha = .46$  for Italy and  $\alpha = -.46$  for the Netherlands (Appendix 4, Table 1). These low alphas may be explained by the fact that when people did not have personal and/or professional experience, they were skipping questions 36, 37, 39 and 40 which asked the type and quantity of personal or professional experience. Accordingly, the missing values did not allow to measure the reliability of the construct. Due to this, the reliability of only the first items which asked if participants had personal experience and professional experience was measured and it resulted, even if not reliable, in an increase of reliability for the variable *experience*,  $\alpha = .50$  for the Netherlands and Italy together,  $\alpha = .49$  for Italy and  $\alpha = .54$  for the Netherlands (Appendix 4, Table 1). Lastly, in the factor analysis, having *personal experience* and having *professional experience* fell in different factors loading and the values for those questions were higher than .60 (Appendix 5, Table 2). Due to the missing values of four questions of the construct experience, those questions were not used for the multiple regression analysis and the moderation analysis. However, the correlation analysis between those questions and stigma of mental disorders was conducted to partially see the effect of quantity of personal experience, type of personal experience, quantity of professional experience and type of professional experience on stigma of mental disorders.

Finally, the last three questions asked the *age* of participants, the perceived *proximity* to a psychiatric facility and the *nationality* of the participants. *Age* was asked with an open question. Secondly, *proximity* measured the perceived distance of participants between their home and a psychiatric facility. The answer was a 5 Likert-point scale with “1 = very close”, “2 = close”, “3 = moderate”, “4 = far away”, “5 = very far away”. Lastly, with *nationality*, it was possible to answer “1 = Dutch”, “2 = Italian”, “3 = other”. Moreover, because the moderators had only one question, their validity and reliability was not measured.

### 3.3 Pre-test

Before sending the questionnaire, a pre-test was conducted. Two Dutch people, whose one was an English speaker, and an Italian person were contacted to check each version of the questionnaire respectively. They were asked to fill in the questionnaire, check for possible translation mistakes and calculate the time to fill in the questionnaire. Moreover, it was asked if the questions were understandable and if they were easy to fill in.

Only a few things came out. First, the questionnaire needed 10-15 minutes to be filled in. Second, the age question had a slider to select age and the checkers find it hard to understand how to use it. Therefore, this was changed into an open question with white space to fill in. Thirdly, the variable experience was first divided between private and professional experience. The term “private” was confusing and it was said that it should have been changed in personal. Lastly, there were some words that when translated in another language had a slightly different meaning, such as using “struttura psichiatrica” [psychiatric structure] instead of “clinica psichiatrica” [psychiatric clinic] in the Italian questionnaire.

Additionally, as it was mentioned, the questionnaire was partially created by using literature. This means that some of the questions used came from questionnaires which reliability and validity had already been tested. Using these questions ensured the reliability of the questionnaire.

### 3.4 Preparation for analyses

Before analysing the data, they had to be imported and prepared in SPSS, a statistic program (IBM, SPSS software, n.d.). The first step was exporting the answers from Qualtrics (Qualtrics, n.d.) and import them in SPSS. Once this was done, the responses which were half or not filled in were deleted. Afterwards, each variable was renamed according to their questions. For the variables *age*, *proximity* and *nationality* there was only one question. Therefore they were named according to their variables. For instance, question 41 which asked the age of the participants was called “Age”.

Some of the questions had an opposite measuring scale when compared to most questions, namely three questions for *prejudice*, the questions for *believing in myths*, a question for *stereotype* and the variable *nationality*. Therefore, these were re-coded. *Prejudice* was re-coded by changing 1 with 5, 2 with 4 and 3 stayed the same. In the end, number 1 means not having prejudices and 5 means having prejudices toward people with mental disorders. *Believing in myths* was re-coded in the same way, thus 1 is believing in the myth and 5 not believing in the myth. *Stereotype* was also re-coded by switching numbers, thus that 1 is not having stereotype and 5 is having stereotype. Lastly, *nationality* was re-coded into a dummy variable – variables with only 1 and 0 values – with Dutch equal to 0 and Italian equal to 1.

Once each question was re-coded, the kind of measures, values, decimals and labels were changed. For example, for question 9 of *discrimination*, the kind of measure is ordinal because it is a 5-point Likert scale question. The values are “1 = strongly disagree”, “2 = somewhat disagree”, “3 = neither disagree nor agree”, “4 = somewhat agree”, “5 = strongly agree” and, because of this, the decimals are 0. The label is “I would not be comfortable if a person with a mental disorder was a teacher in a school”. Additionally, the variable *proximity* was considered as scale and not as ordinal, even if the answer was a 5-points Likert scale. The next step required to measure the reliability of each variable and the validity of the questionnaire. This was done by measuring the Cronbach’s alpha per each variable and by conducting a factor analysis per variable. The difference of reliability and validity between countries was also measured to see if the reliability and validity were higher per country. Afterwards, questions were merged according to their variable. For instance, questions 17, 18, 19, 20 were combined into *framing*.

Nonetheless, the variables *personal experience* and *professional experience* had questions which required a different kind of answers. Because of this, for the analysis, it was decided to create three variables for personal experience and three variables for professional experience. Respectively, they were called “personal experience1”, “type of personal experience2”, “quantity of personal experience3”, “professional experience1”, “quantity of professional experience2” and “type of professional experience3”. Additionally, because *kind of information* measured the difference among three kinds of information, three variables were formed, namely “medical information”, “psychosocial information” and “personal information”.

Furthermore, the variable kind of media required a different process. The questions for this variable asked participants to rank media from 1 to 8 and each question was divided into 8 other questions, such as “Q13television”, “Q13internet”, “Q13social media” and so on. Each media had its own rank number from 1 meaning the least used, reliable, suitable and clear to 8 meaning the most used, reliable, suitable and the clearest. Because of this, it was decided to, first, create two dummy variables per medium. To illustrate, per question 13television which measure the most used and least used, a dummy variable was “televisionmostuseddummies” with values from 1 to 7 equal to 0 and 8 equal to 1. The other dummy variable was “televisionleastuseddummies” with 1 equal to 1 and values from 2 to 8 equal to 0. Following, each dummy variable per question, medium, and most or least were merged. Eventually, 16 different dummy variables were formed, 8 per each media with “8 = 1”, thus the most used, reliable, suitable and the clearest and 8 per each media with “1 = 1”, thus the least used, reliable, suitable and clear.



Once checked if all the labels, values, decimals and measures were correct, the dataset was ready for analysis. First, the frequencies and the demographics per each variable and the correlations between variables were analysed. Later, a multiple regression per each variable or more variables was conducted. Eventually, a regression analysis of variance was conducted to check the influence of each moderator on the effects of the independent variables on the dependent variable.

### *3.5 Participants*

In the table below (Table 3), it is possible to see the characteristics of the participants.

Table 3  
*Participants characteristics*

	N	M	SD	Mode	Min	Max
Nationality	146 = 98 Italian 48 Dutch	1.67	.47	2	1	2
Age	137	47.46	15.56	60	19	83
Proximity	146	2.28	.95	2	1	5
Stigma of mental disorders	146	2.69	.32	3	2	4
Lack of knowledge	146	2.85	.91	2	1	5
Believing in myths	146	4.23	.42	4	3	5
Personal experience	146	3.86	1.05	4	1	5
Type of personal experience	140	2.44	1.50	1 = Relative	1	5
Quantity of personal experience	145	2.99	1.27	4	1	5
Professional experience	145	1.97	1.52	1	1	5
Quantity of professional experience	50 = 43 Italian 7 Dutch	2.64	1.19	4 = More than 10 years	1	5
Type of professional experience	50 = 43 Italian 7 Dutch	3.28	1.63	5 = Other (e.g. social worker)	1	5
Framing	146	3.25	.63	3	2	5
Medical information	146	4.00	.73	4	2	5
Psychosocial information	146	3.99	.64	4	1	5
Personal information	146	3.69	.78	4	2	5
Medium: the most used	146	6.60	2.15	8 = Internet	1	8
Media: the least used	146	3.43	2.27	1 = Social media	1	8
	146	2.34	1.95	1 = Podcast	1	8
Media: the most suitable	146	5.95	2.14	8 = Television	1	8
	146	5.09	2.30	8 = Books	1	8
Media: the least suitable	146	3.77	2.40	1 = Social media	1	8
	146	2.63	1.96	1 = Podcast	1	8
Medium: the most reliable	146	6.96	1.98	8 = Books	1	8
Media: the least reliable	146	2.47	1.91	1 = Social media	1	8
	146	2.78	1.90	1 = Podcast	1	8
Medium: the clearest	146	6.70	2.06	8 = Books	1	8
Media: the least clear	146	2.70	2.08	1 = Social media	1	8
	146	2.81	1.98	1 = Podcast	1	8

## 4. Results

The results chapter is divided in four parts. In the first section, the correlation analysis between the dependent variables, stigma of mental disorders, and the independent variables and among some of the independent variables will be described. The second section will regard the multiple regression analysis of the independent variables on the dependent variable. The third section will show the moderation analysis of age, proximity and nationality on the effects of the independent variables on the dependent variable. In the last section, an overview of the findings will be given.

### 4.1 Correlation between variables

In order to find out if the variables of this research correlated and how, a correlation analysis was conducted. Firstly, each independent variable were correlated with the dependent variables. Afterwards, the correlation between some of the independent variables were checked, namely lack of knowledge with believing in myths, having personal experience, having professional experience and framing; believing in myths with having personal experience and having professional experience; the three variables of kind of information between themselves and framing; and having personal experience with having professional experience. In the text, only the significant correlations will be described. However, all the correlations can be found on the table below (Table 4).

A weak negative correlation between stigma of mental disorders and lack of knowledge was found,  $r = -.27$ ,  $N = 146$ ,  $p = .001$ . A weak negative correlation between stigma of mental disorders and believing in myths was found,  $r = -.26$ ,  $N = 146$ ,  $p = .002$ .

A weak negative correlation between stigma of mental disorders and having personal experience was found,  $r = -.31$ ,  $N = 146$ ,  $p < .001$ . A weak negative correlation between stigma of mental disorders and quantity of personal experience was found,  $r = -.30$ ,  $N = 145$ ,  $p < .001$ . A weak positive correlation between stigma of mental disorders and type of personal experience was found,  $r = .19$ ,  $N = 140$ ,  $p = .03$ . A weak negative correlation between stigma of mental disorders and having professional experience was found,  $r = -.24$ ,  $N = 145$ ,  $p = .003$ . A negative correlation between stigma of mental disorders and quantity of professional experience was found,  $r = -.45$ ,  $N = 50$ ,  $p = .001$ .

A weak positive correlation between stigma of mental disorders and television most was found,  $r = .25$ ,  $N = 146$ ,  $p = .002$ . A weak negative correlation between stigma of mental disorders and books most was found,  $r = -.18$ ,  $N = 146$ ,  $p = .03$ . A weak negative correlation between stigma of mental disorders and social media least was found,  $r = -.19$ ,  $N = 146$ ,  $p = .02$ . A weak positive correlation between stigma of mental disorders and newspapers least was found,  $r = .001$ ,  $N = 146$ ,  $p = .99$ . A weak positive correlation between stigma of mental disorders and podcast least was found,  $r = .15$ ,  $N = 146$ ,  $p = .06$ .

A positive correlation between lack of knowledge and having personal experience was found,  $r = .49$ ,  $N = 146$ ,  $p < .001$ . A positive correlation between lack of knowledge and having professional experience was found,  $r = .49$ ,  $N = 145$ ,  $p < .001$ . A weak positive correlation between lack of knowledge and framing was found,  $r = .20$ ,  $N = 146$ ,  $p = .02$ .

A weak positive correlation between believing in myths and having personal experience was found,  $r = .16$ ,  $N = 146$ ,  $p = .06$ .

A positive correlation between medical information and psychosocial information was found,  $r = .49$ ,  $N = 146$ ,  $p < .001$ . A weak positive correlation between psychosocial information and personal information was found,  $r = .26$ ,  $N = 146$ ,  $p = .002$ .

A weak positive correlation between having personal experience and having professional experience was found,  $r = .36$ ,  $N = 145$ ,  $p < .001$

Table 4

*Correlation between independent variables and dependent variables and between some of the independent variables*

	Stigma	Lack of Knowledge	Personal experience	Professional experience	Medical information	Psychosocial information	Personal information
Lack of knowledge	-.27*						
Believing in myths	-.26*	.08	.16	.08			
Personal experience	-.31*	.49*					
Type of personal experience	.19*						
Quantity of personal experience	-.30*						
Professional experience	-.24*	.49*	.36*				
Quantity of professional experience	-.45*						
Type of professional experience	-.12						
Framing	.08	.20*			.03	.000	.13
Medical information	-.08						
Psychosocial information	-.09				.49*		
Personal information	-.04				.05	.26*	
Television most	.25*						
Internet most	-.08						
Social media most	.04						
Newspapers most	.08						
Word-of-mouth most	.07						
Podcast most	.02						
Radio most	.04						
Books most	-.18*						
Television least	-.02						
Internet least	.08						
Social media least	-.19*						
Newspapers least	.001						
Word-of-mouth least	-.02						
Podcast least	.15						
Radio least	.08						
Books least	-.04						
Age	.11						
Proximity	.03						
Nationality	-.10						

*Notes:* Correlation is significant at the .05 level (2-tailed)

#### *4.2 Multiple Regression Analyses*

In order to find the effect of knowledge, experience and media on stigma of mental disorders, two studies were run. The first one measured the effect of knowledge, experience and media on stigma of

mental disorders. The second one was done to get better insights on the effect of knowledge on stigma of mental disorders since this construct scored significant results in the reliability and validity tests and in the correlation analysis. More in-depth analysis regarding the variable experience was made, but it was not that relevant compared to these results (see Appendix 6, Number 1)

#### *4.2.1 Knowledge, Experience and Media*

This model measured the effects of knowledge, experience and media on stigma of mental disorders. A multiple linear regression analysis, with the alpha level of .05, was ran. Stigma of mental disorder was the dependent variable. The independent variables were, in order, lack of knowledge, believing in myths, having personal experience, having professional experience, framing, medical information, psychosocial information, personal information, television most, internet most, social media most, newspapers most, word-of-mouth most, podcast most, radio most, books most, television least, internet least, social media least, newspapers least, word-of-mouth least, podcast least, radio least and books least. When the regression analysis was conducted, the variable books most and podcast least did not show any results.

Table 5 shows the results of the multiple linear regression with stigma of mental disorders as dependent variable.

Table 5  
*Multiple Regression Analysis with Stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	3.72	.34	10.88	.000	3.04	4.39
Lack of knowledge	-.03	.04	-.92	.36	-.11	.04
Believing in myths	-.13	.07	-1.90	.06	-.27	.01
Having personal experience	-.06	.03	-2.08	.04	-.12	-.003
Having professional experience	-.02	.02	-1.01	.31	.06	.02
Framing	-.01	.04	-.17	.86	-.09	.08
Medical information	-.02	.04	-.55	.58	-.11	.06
Psychosocial information	.03	.05	-.63	.53	-.07	.13
Personal information	-.03	.04	-.85	.40	-.11	.04
Television most	.42	.15	2.82	.01	.12	.71
Internet most	-.02	.10	-.02	.83	-.23	.18
Social media most	.20	.28	.73	.47	-.35	.76
Newspapers most	.23	.22	1.07	.29	-.20	.67
Word-of-mouth most	.24	.17	1.43	.16	-.09	.58
Podcast most	.29	.26	1.13	.26	-.22	.79
Radio most	-.61	.67	-.91	.36	-1.95	.72
Books most	--	--	--	--	--	--
Television least	-.15	.17	-.85	.40	-.49	.19
Internet least	.10	.34	.28	.78	-.58	.78
Social media least	-.18	.08	-2.32	.02	-.34	-.03
Newspapers least	-.70	.49	-1.42	.16	-1.68	.28
Word-of-mouth least	.01	.16	.03	.98	-.30	.31
Podcast least	--	--	--	--	--	--
Radio least	.03	.17	.19	.85	-.30	.36
Books least	-.34	.30	-1.15	.25	-.92	.25

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

The proportion of variance, thus what was explained by the model, was 29%. This was significant,  $F(22, 122) = 2.28, p = .002$ .

By looking at the individual effects of the independent variable believing in myths, it showed an almost significant effect on stigma of mental disorders,  $b = -.13, t(122) = -1.90, p = .06$ . It shows

that there is a 6% probability that this sample comes from a population where there is no effect of believing in myths on stigma of mental disorders. It is unclear if the null hypothesis that believing in myths has no effect on stigma of mental disorders can be rejected or not. The 95% confidence interval for this effect was [-.27; .01]. Therefore, it can be said with 95% confidence that the regression coefficient of believing in myths on stigma of mental disorders falls between -.27 and .01.

By looking at the individual effects of the independent variable having personal experience, it can be seen that having personal experience had significant effect on stigma of mental disorders,  $b = -.06$ ,  $t(122) = -2.08$ ,  $p = .04$ . It shows that there is 4% probability that this sample comes from a population where there is no effect of having personal experience on stigma of mental disorders. The null hypothesis that there is no effect of having personal experience on stigma of mental disorders can be rejected. The 95% confidence interval for this effect was [-.12; -.003]. Therefore, it can be said with the 95% of confidence that the regression coefficient of having personal experience on stigma of mental disorders falls between .12 and -.003.

By looking at the individual effects of the independent variable television most, it can be seen a significant effect on stigma of mental disorders,  $b = .42$ ,  $t(122) = 2.82$ ,  $p = .01$ . It shows that there is 1% probability that this sample comes from a population where there is no effect of the medium television most on stigma of mental disorders. The null hypothesis that television most has no effect on stigma of mental disorders can be rejected. The 95% confidence interval for this effect was [.12; .71]. Therefore, it can be said with 95% confidence that the regression coefficient of television most on stigma of mental disorders falls between .12 and .71.

By looking at the individual effects of the independent variable social media least, it can be seen a significant effect on stigma of mental disorders,  $b = -.18$ ,  $t(122) = -2.32$ ,  $p = .02$ . It shows that there is 2% probability that this sample comes from a population where there is no effect of social media least on stigma of mental disorders. The null hypothesis that social media least has no effect on stigma of mental disorders can be rejected. The 95% confidence interval for this effect was [-.34; -.03]. Therefore, it can be said with 95% confidence that the regression coefficient of social media least on stigma of mental disorders falls between -.34 and -.03.

Based on this model, we would predict that people who did not have lack of knowledge (5), who did not believe in the myths (5), who had personal experience (5), who had professional experience (5), who thought that media portrait the mentally ill in a negative way (5), who chose medical information (5) and personal information (5) as the best and not psychosocial information (1), who selected internet and radio as the most used, reliable, suitable and clearest media (1, rest 0) and television, social media, newspapers and books as the least used, reliable, suitable and clear (1, rest 0) would had the lowest stigma of mental disorders. We would expect them to have  $3.72 - .03 * (5) - .06 * (5) - .02 * (5) - .01 * (5) - .02 * (5) + .03 * (1) - .03 * (5) + .42 * (0) - .02 * (1) + .20 * (0) + .23 * (0) + .24 * (0) + .29 * (0) - .61 * (1) - .15 * (1) + .10 * (0) - .18 * (1) - .70 * (1) + .01 * (0) + 03 * (0) - .34 * (1) = .90$  of stigma of mental disorders.

Contrary, we would predict that those who had lack of knowledge (1), believed in the myths (1), did not have personal experience (1), did not have professional experience (1), who did not think that media frame the mental ill in a negative way (1), who chose psychosocial information (5) as the best and not medical information (1) and personal information (1), who selected television, social media, newspapers, word-of-mouth, podcast as the most used, suitable, reliable and clearest (1, rest 0) and internet, word-of-mouth and radio as the least used, reliable, suitable and clear (1, rest 0) had the highest stigma of mental disorders. We would expect them to have  $3.72 - .03 * (1) - .06 * (1) - .02 * (1) - .01 * (1) - .02 * (1) + .03 * (5) - .03 * (1) + .42 * (1) - .02 * (0) + .20 * (1) + .23 * (1) + .24 * (1) + .29 * (1) - .61 * (0) - .15 * (0) + .10 * (1) - .18 * (0) - .70 * (0) + .01 * (1) + 03 * (1) - .34 * (0) = 5.31$  of stigma of mental disorders.

#### 4.2.2 Knowledge

This model measured the effects of believing in myths and lack of knowledge on stigma of mental disorders. A multiple linear regression analysis, with the alpha level of .05, was ran. Stigma of mental disorder was the dependent variable. The independent variables were lack of knowledge and believing in myths.

Table 6 shows the results of the multiple linear regression with stigma of mental disorders as dependent variable.

Table 6  
*Multiple Regression Analysis with Stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	3.70	.26	14.17	.000	3.19	4.22
Lack of knowledge	-.09	.03	-3.13	.002	-.14	-.03
Believing in myths	-.18	.06	-3.02	.003	-.30	-.06

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

The proportion of variance, thus what was explained by the model, was 13%. This was significant,  $F(2, 143) = 10.29, p < .001$ .

By looking at the individual effects of the independent variable lack of knowledge, it can be seen that lack of knowledge had a significant effect on stigma of mental disorders,  $b = -.09, t(143) = -3.13, p = .002$ . It shows that there is a very small probability that this sample comes from a population where there is no effect of lack of knowledge on stigma of mental disorders. The null hypothesis that knowledge has no effect on stigma of mental disorders can be rejected. The 95% confidence interval for this effect was  $[-.14; -.03]$ . Therefore, it can be said with the 95% of confidence that the regression coefficient of lack of knowledge on stigma of mental disorders falls between  $-.14$  and  $-.03$ .

By looking at the individual effects of the independent variable believing in myths, it showed a significant effect on stigma of mental disorders,  $b = -.18, t(143) = -3.02, p = .003$ . It shows that there is a very small probability that this sample comes from a population where there is no effect of believing in myths on stigma of mental disorders. The null hypothesis that believing in myths has no effect on stigma of mental disorders can be rejected. The 95% confidence interval for this effect was  $[-.30; -.06]$ . Therefore, it can be said with 95% confidence that the regression coefficient of believing in myths on stigma of mental disorders falls between  $-.30$  and  $-.06$ .

Based on this model, we would predict that people who thought to have high knowledge about mental disorders (5) and did not believe in the myths (5), would have low stigma of mental disorders. We would expect them to have  $3.70 - .09 * (5) - .18 * (5) = 2.35$  of stigma of mental disorders. We would predict that those who did not have knowledge about mental disorders (1) and believed in the myths (1) have high stigma of mental disorders. We would expect them to have  $3.70 - .09 * (1) - .18 * (1) = 3.43$  of stigma of mental disorders.

#### 4.3 Moderation analyses

For the moderation analysis, one study per moderator was conducted. Nonetheless, the variable kind of media was not included in the result section due to the no significant results and the impossibility to do



a moderation analysis with more than 18 variables. However, the analysis of only the influence of the moderators on the effect of kind of media on stigma of mental disorders can be found in Appendix 7 (Number 1).

#### 4.3.1 Age

In this model, it was analysed if the effect of lack of knowledge, believing in myths, having personal experience, having professional experience, framing, medical information, psychosocial information and personal information on stigma of mental disorders is stronger when people are older. A regression analysis of variance, with the alpha level of .05, was ran. The dependent variable for this model was stigma of mental disorders. The first independent variable were age, lack of knowledge, the interaction between lack of knowledge and age, believing in myths, the interaction between believing in myths and age, having personal experience, the interaction between personal experience and age, having professional experience, the interaction between having professional experience and age, framing, the interaction between framing and age, medical information, the interaction between medical information and age, psychosocial information, the interaction between the interaction between psychosocial information and age, personal information, the interaction between personal information and age.

Table 7 below shows the results for this interaction model with stigma of mental disorders as dependent variable.

Table 7  
*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% IC	
					LL	UL
(Constant)	4.11	1.41	2.91	.004	1.32	6.91
Age	-.01	.03	-.25	.80	-.06	.05
Lack of knowledge	.02	.13	.19	.85	-.22	.27
Lack of knowledge*age	-.001	.003	-.49	.63	-.01	.004
Believing in myths	-.13	.24	-.54	.59	-.61	.35
Believing in myths*age	.000	.01	-.03	.97	-.01	.01
Personal experience	-.24	.11	-2.23	.03	-.46	-.03
Personal experience*age	.004	.002	1.70	.09	-.001	.01
Professional experience	.10	.07	1.49	.14	-.03	.24
Professional experience*age	-.002	.001	-1.82	.07	-.01	.000
Framing	.01	.16	.06	.95	-.31	.33
Framing*age	-.001	.003	-.19	.85	-.01	.01
Medical information	-.01	.15	-.07	.94	-.30	.28
Medical information*age	2.80E-5	.003	.01	.99	-.01	.01
Psychosocial information	-.13	.18	-.72	.47	-.49	.23
Psychosocial information*age	.003	.003	.84	.40	-.004	.01
Personal information	.05	.13	.41	.69	-.20	.31
Personal information*age	-.001	.003	-.52	.61	-.01	.004

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

This model explained 22% of variance on level of stigma of mental disorders in the data and was significant,  $F(17, 118) = 2.00, p = .02$ . Age did not significantly predict stigma of mental disorders,  $b = -.01, t(118) = -.25, p = .80$ .

Having professional experience did not significantly predict stigma of mental disorders,  $b = .10, t(118) = 1.49, p = .14$ . The interaction between having professional experience and age had almost a significant effect on stigma of mental disorders,  $b = -.002, t(118) = -1.82, p = .07$ . The p-value for the interaction between having professional experience and age on stigma of mental disorders is slightly higher than 0.05. Therefore, it is unclear if the null hypothesis that the effect of having professional experience on stigma of mental disorders is the same besides age can be rejected or not. This means that the chance to have found this interaction effect in this sample when there is no interaction effect in the population is 7%.

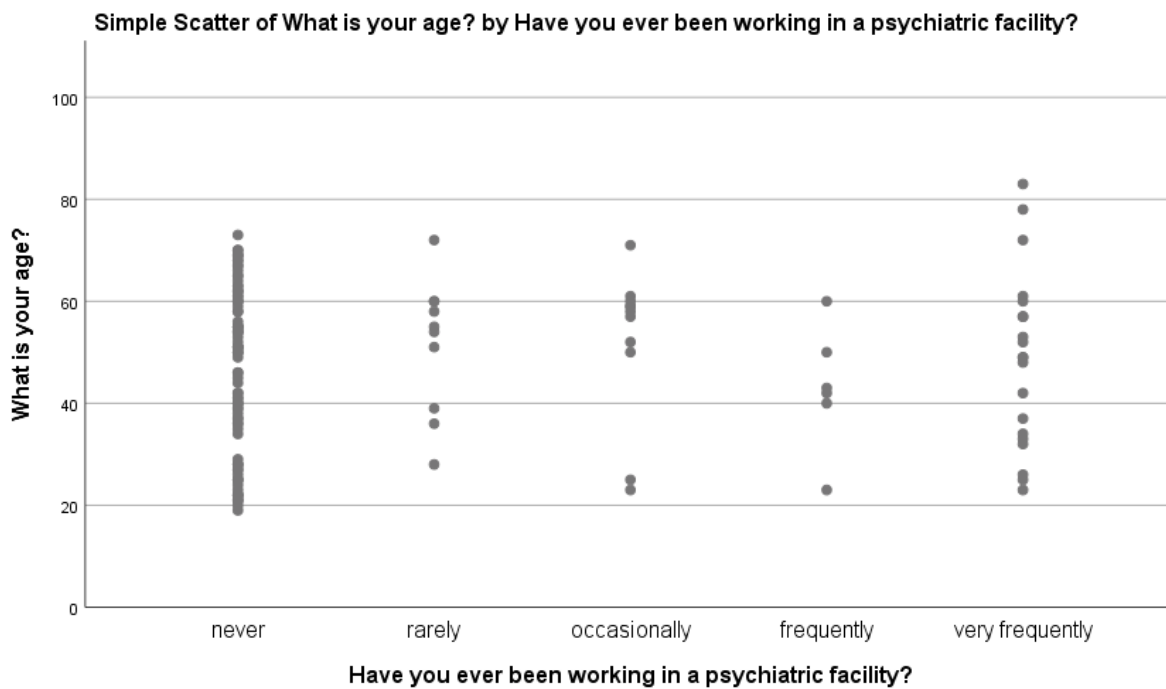


Figure 4. Scatterplot of age by professional experience

#### 4.3.2 Proximity

In this model, it was analysed if the effect of lack of knowledge, believing in myths, having personal experience, having professional experience, framing, medical information, psychosocial information and personal information on stigma of mental disorders is stronger when people live next to a psychiatric facility. A regression analysis of variance, with the alpha level of .05, was ran. The dependent variable for this model was stigma of mental disorders. The first independent variable were proximity, lack of knowledge, the interaction between lack of knowledge and proximity, believing in myths, the interaction between believing in myths and proximity, having personal experience, the interaction between personal experience and proximity, having professional experience, the interaction between having professional experience and proximity, framing, the interaction between framing and proximity, medical information, the interaction between medical information and proximity, psychosocial information, the interaction between the interaction between psychosocial information and proximity, personal information, the interaction between personal information and proximity.

Table 8 below shows the results for this interaction model with stigma of mental disorders as dependent variable.

Table 8  
*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% IC	
					LL	UL
(Constant)	3.25	.88	3.69	.000	1.51	5.00
Proximity	.14	.39	.36	.72	-.63	.91
Lack of knowledge	-.01	.10	-.10	.92	-.21	.19
Lack of knowledge* proximity	-.01	.04	-.28	.78	-.09	.07
Believing in myths	-.12	.18	-.70	.48	-.47	.22
Believing in myths* proximity	.001	.08	.01	.99	-.15	.15
Personal experience	.05	.08	.58	.57	-.12	.21
Personal experience* proximity	-.04	.03	-1.34	.18	-.10	.02
Professional experience	-.12	.06	-2.19	.03	-.23	-.01
Professional experience* proximity	.05	.02	1.87	.06	-.003	.09
Framing	-.09	.11	-.83	.41	-.31	.13
Framing* proximity	.03	.05	.69	.49	-.06	.12
Medical information	.12	.13	.88	.38	-.14	.38
Medical information* proximity	-.05	.05	-1.03	.31	-.16	.05
Psychosocial information	.09	.16	.57	.57	-.23	.41
Psychosocial information* proximity	-.03	.06	-.53	.60	-.16	.09
Personal information	-.12	.11	-1.12	.26	-.34	.09
Personal information* proximity	.05	.04	1.18	.24	-.03	.14

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

This model explained 22% of variance on level of stigma of mental disorders in the data and was significant,  $F(17,127) = 2.07, p = .01$ . Proximity did not significantly predict stigma of mental disorders,  $b = .14, t(127) = .36, p = .72$ .

Having professional experience significantly predicted stigma of mental disorders,  $b = -.12, t(127) = -2.19, p = .03$ . The interaction between having professional experience and proximity had almost a significant effect on stigma of mental disorders,  $b = .05, t(127) = 1.87, p = .06$ . The p-value for the interaction between having professional experience and proximity on stigma of mental disorders is slighter higher than 0.05. Therefore, it is unclear if the null hypothesis that the effect of having professional experience on stigma of mental disorders is the same besides proximity can be rejected or not. This means that the chance to have found this interaction effect in this sample when there is no interaction effect in the population is 6%.

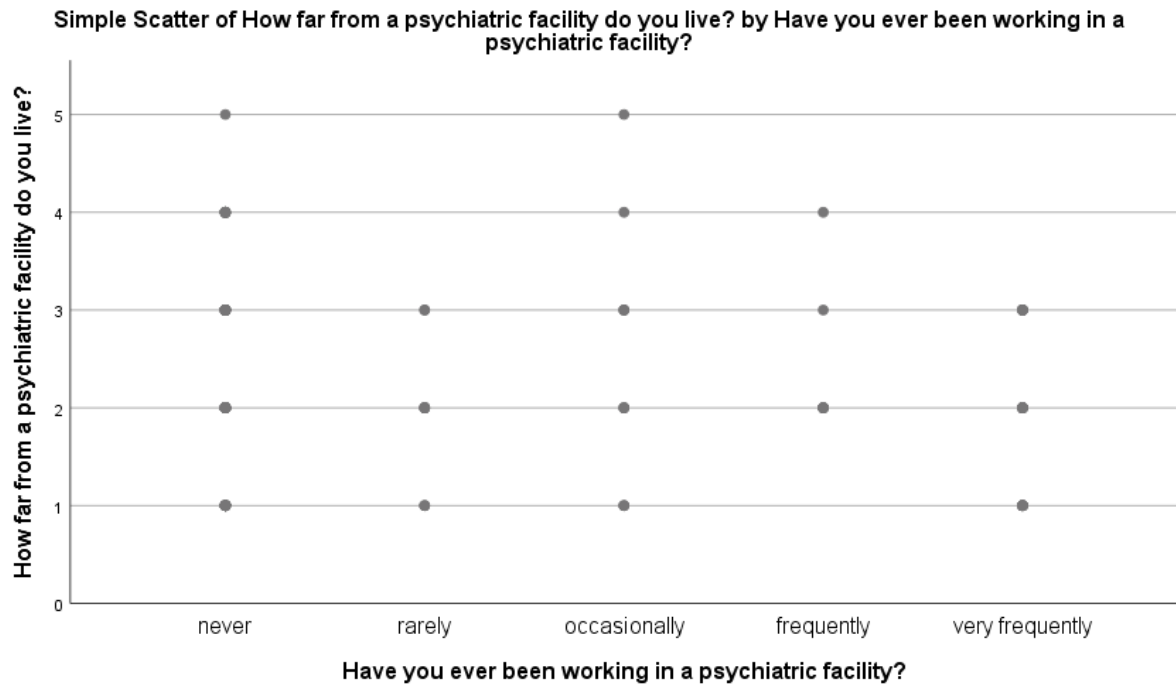


Figure 5. Scatterplot of proximity by professional experience

#### 4.3.3 Nationality

In this model, it was analysed if the effect of lack of knowledge, believing in myths, having personal experience, having professional experience, framing, medical information, psychosocial information and personal information on stigma of mental disorders is stronger when people are of Italian nationality. A regression analysis of variance, with the alpha level of .05, was ran. The dependent variable for this model was stigma of mental disorders. The first independent variable were nationality, lack of knowledge, the interaction between lack of knowledge and nationality, believing in myths, the interaction between believing in myths and nationality, having personal experience, the interaction between personal experience and nationality, having professional experience, the interaction between having professional experience and nationality, framing, the interaction between framing and nationality, medical information, the interaction between medical information and nationality, psychosocial information, the interaction between the interaction between psychosocial information and nationality, personal information, the interaction between personal information and nationality. The independent variable nationality was transformed into a dummy variables with the value 1 for Italian and 0 for Dutch.

Table 9 below shows the results for this interaction model with stigma of mental disorders as dependent variable.

Table 9

*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% IC	
					LL	UL
(Constant)	3.67	.41	8.91	.000	2.85	4.48
Nationality	.30	.77	.38	.70	-1.23	1.82
Lack of knowledge	-.02	.05	-.45	.65	-.11	.07
Lack of knowledge* nationality	-.10	.08	-1.14	.26	-.26	.07
Believing in myths	-.12	.07	-1.70	.09	-.27	.02
Believing in myths* nationality	-.19	.15	-1.22	.22	-.49	.12
Personal experience	-.06	.04	-1.41	.16	-.14	.02
Personal experience* nationality	.04	.06	.64	.52	-.08	.16
Professional experience	-.02	.02	-.98	.33	-.07	.02
Professional experience* nationality	-.001	.06	-.02	.98	-.11	.11
Framing	-.05	.05	-1.02	.31	-.16	.05
Framing* nationality	.11	.09	1.22	.22	-.07	.30
Medical information	-.003	.06	-.05	.96	-.12	.11
Medical information* nationality	.04	.09	.43	.67	-.14	.22
Psychosocial information	.03	.07	.43	.67	-.11	.17
Psychosocial information* nationality	-.05	.11	-.44	.66	-.27	.17
Personal information	-.02	.05	-.51	.61	-.12	.07
Personal information* nationality	.09	.09	1.06	.29	-.08	.26

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

This model explained 20% of variance on level of stigma of mental disorders in the data and was significant,  $F(17, 127) = 1.90$ ,  $p = .02$ . Nationality did not significantly predict stigma of mental disorders,  $b = .30$ ,  $t(127) = .38$ ,  $p = .70$ .

#### 4.4 Overview

In Table 10, it is possible to see if the hypotheses were met and the significance of the results. Moreover, in Figure 6 and Figure 7, it can be seen the models and which are the effects that were found significant and the effects that, at the end, the independent variables and the moderators had on the stigma of mental disorders.

Table 10

	met/no t met	Significance/Rejec ted
Lack of knowledge has a negative effect on stigma of mental disorders.	Met	Yes, p = .002
Believing in myths has a negative effect on stigma of mental disorders.	Met	Yes, p = .003
Personal experience has a negative effect on stigma of mental disorders.	Met	Yes, p = .04
Professional experience has a positive effect on stigma of mental disorders.	Not met	No, p = .31
Framing has a negative effect on stigma of mental disorders.	Met	No, p = .86
Personal information has a negative effect on stigma of mental disorders over and above psychosocial information and medical information.	Met	No, p = .53
The medium word-of-mouth has a negative effect on stigma of mental disorder over and above television, internet, social media, podcast, radio, books and newspapers.	Not met	No, p = .16 No, p = .98
Being old positively increases the effects of the independent variables on stigma of mental disorders.	Not met	No, p = .80
Living next to a psychiatric facility positively increases the effects of the independent variables on stigma of mental disorders	Not met	No, p = .72
Being of Italian nationality positively increases the effects of the independent variables on stigma of mental disorders.	Not met	No, p = .70

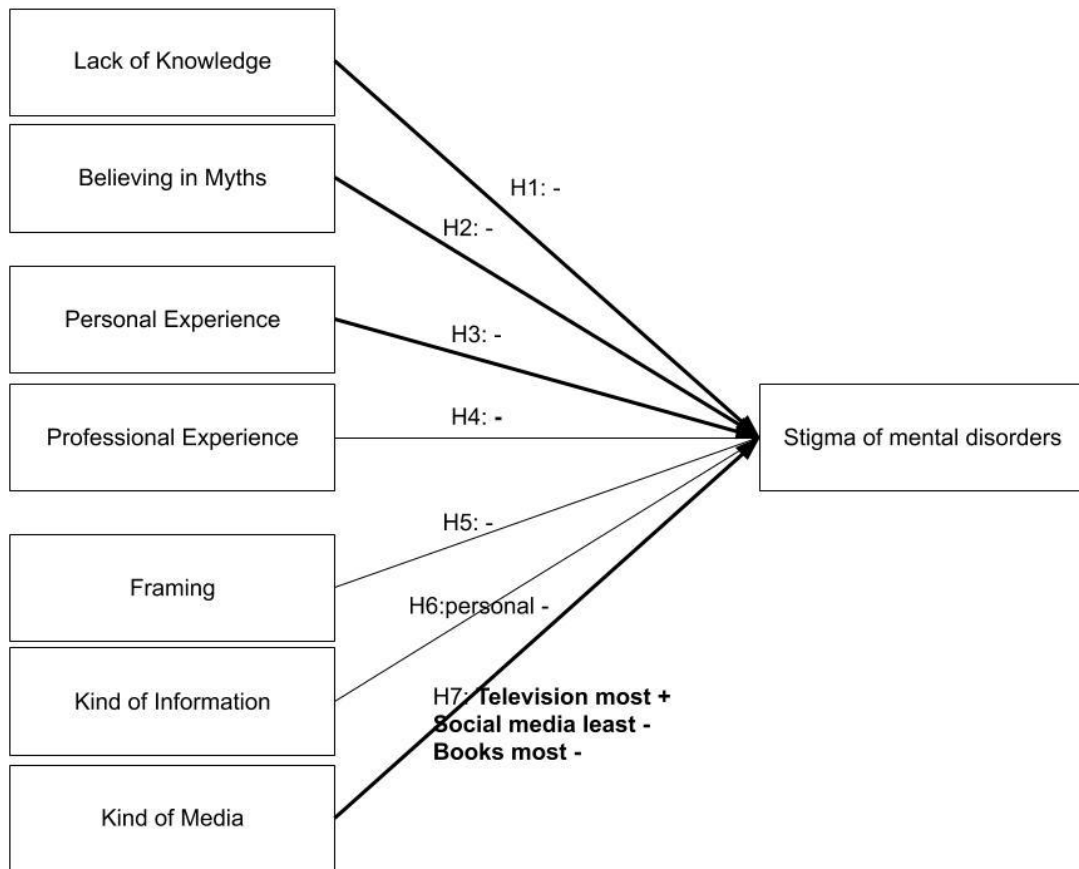


Figure 6. First model after analysis

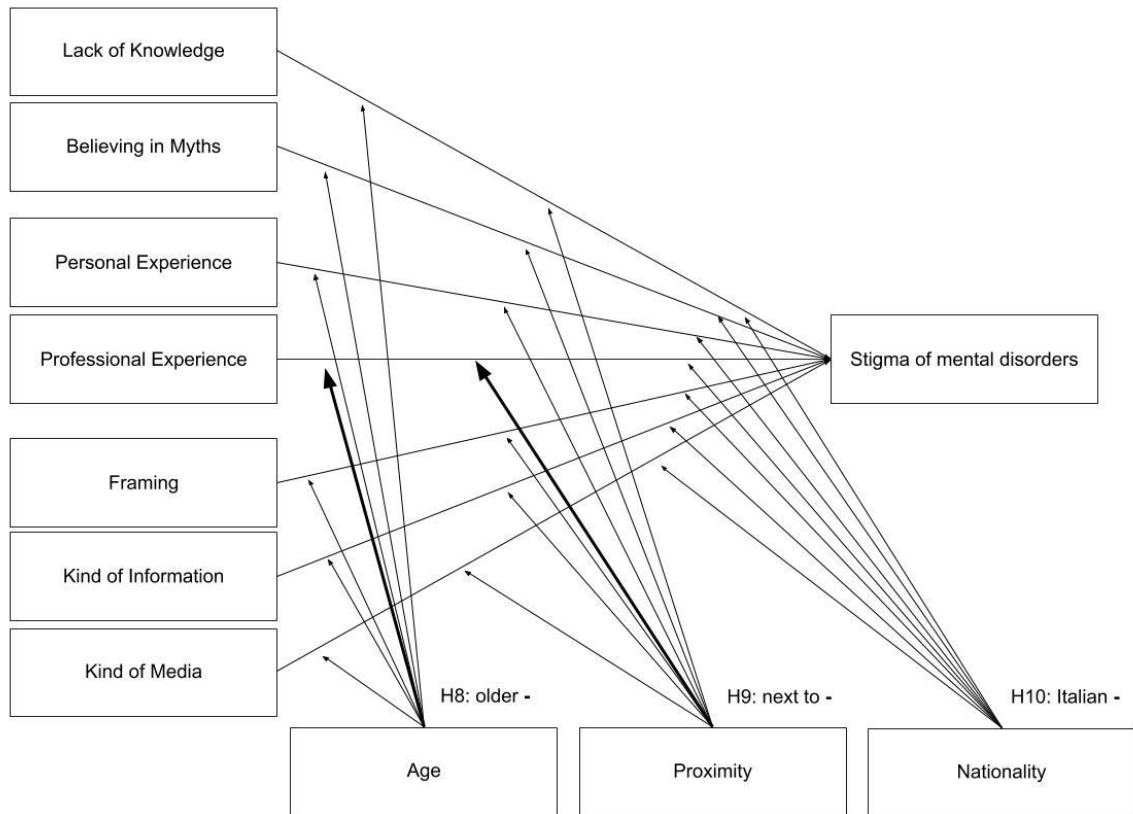


Figure 7. Final model after analysis



## 5. Discussion

The main research question of this study was *To what extent do knowledge, experience and media have an effect on the stigma of mental disorders and what is the role of age, proximity, and nationality on this effect?* Accordingly, this question will be answered by looking if the ten hypotheses that were initially formulated have been met. Moreover, it will be said if, from the analysis, reliable conclusion regarding the Italian and Dutch population can be drawn. Overall, the models explained, in order, 29%, 22%, 22% and 20% of the variability of the data. This means that respectively 71%, 78%, 78% and 80% of the effects were explained by something outside the model. Additionally, most people scored high in stigma of mental disorders.

Firstly, it was expected that when a person had lack of knowledge and believed in the myths of mental disorders, she or he would have a higher level of stigma (Corrigan & Watson, 2002; MentalHealth.gov, 2017). According to the results, this was the case. It was found that when people were sure they had enough knowledge about mental disorders and did not believe in the myths, they had lower stigma than people who did not have enough knowledge and believed in the myths. To conclude, informing people about mental disorders and, consequently, giving them enough knowledge may help reduce the stigma of mental disorders within society.

The third and fourth hypotheses stated that when people knew someone who had some experience with people with some form of mental disorders or with the topic of mental disorders, their level of stigma would be lower (Rössler, 2016; Stout et al., 2004). Moreover, when people worked in the mental health sector, their stigma would be higher (Noblett et al., 2015). The analysis showed that when people knew someone with some form of mental disorder, their level of stigma was significantly lower. Additionally, when people had both personal experience and professional experience, they had the lowest level of stigma. On the contrary, when people did not have either personal experience and professional experience, their stigma was the highest. These results led to the conclusion that the third hypothesis was met, but the fourth hypothesis was not met. Nonetheless, a conclusion about the fourth hypothesis cannot be made due to the fact that this value was not valid. This may be explained by the number of participants who had professional experience. Within the Italian participants, 43 people had professional experience which can be considered a good number since it is half of them. However, within the Dutch people, only 7 participants had some professional experience. Overall, only one-third of the participants had some professional experience. Moreover, it may be that people who work in a psychiatric facility spend many hours with the mentally ill and this fact may have a similar influence of having personal experience (Rössler, 2016). Further, it was found that people with many years of professional experience had a lower level of stigma. This result, which confirms the previous statement, can also be explained by the fact that they have acquired enough knowledge in their career to be able to not stigmatise people with mental disorders (Corrigan & Watson, 2002). Overall, it can be said that people should be put in contact with stories about the mentally ill or with the mentally ill themselves in order to get a more reliable idea about mental disorders and, accordingly, to reduce stigma.

According to the fifth hypothesis, it was expected that when people thought that the media frame mental disorders in a negative way, they would have a lower level of stigma (Rössler, 2016). Thinking that media frame mental disorders in a negative way means that people have enough knowledge to do that. Indeed, when people knew more about mental disorders, they also thought that media have a negative influence on the creation of stigma. Moreover, in line with the analysis, people who believed that media portrait the mentally ill in a negative way had lower stigma than the one who did not think so. However, this result was not significant. Therefore, reliable conclusions regarding the influence of media framing on stigma of mental disorders in the population cannot be drawn.

The sixth hypothesis was that when people thought that personal information was the best to give when talking about mental disorders, their level of stigma would be lower than when they thought that information given by doctors or psychologists was the best (Rössler, 2016; Walker & Read, 2002).

In agreement with the analysis, the selection of all three kinds of information as the best also meant a low level of the stigma of mental disorders. Nonetheless, when participants thought that personal information was the best to convey, their level of stigma was the lowest. Furthermore, when they thought that psychosocial information was the best, their stigma was the highest. Due to this, the expectation was met, but unfortunately, these results were not significant and because of this, certain conclusions cannot be deduced.

For the variable kind of media, some general results were found. According to participants, the medium which was chosen as the most used to find information, in general, was the internet and the least used media were social media and podcast. Furthermore, the media selected as the most suitable to inform the public about mental disorders were television and books and the least suitable ones were social media and podcast. Moreover, the medium which was considered as the most reliable to find information about mental disorders was books and the least reliable media were social media and podcast. Lastly, the medium which explains mental disorders in the clearest way was books and the least clear were the media social media and podcast. These results can already lead to think that the seventh hypothesis, which expected that the medium word-of-mouth was the best to convey information and reduce stigma, was not met (Fill & Turnbull, 2017; Rössler, 2016). In line with the analysis, when people selected word-of-mouth as the most used, reliable, suitable and the clearest, they did not have the lowest or the highest level of stigma and because of this, this medium was not the worst or the best to influence stigma of mental disorders. Nonetheless, these results were not significant. The media which turned out to have an influence on the level of the stigma of individuals are television, books and social media. When participants selected television as the most used, reliable, suitable and clearest, their level of stigma was higher and when they selected books, their level of stigma was lower. When individuals chose social media within the least used, suitable, reliable and clear media, their level of stigma was lower, their level of stigma was higher. Because of this, it may be concluded that the best medium to use to convey information is books and the worst media are social media and television. Therefore, even if participants selected television as the most suitable, it may be that this medium is not adapt to inform people about mental disorders or at least not through the programs that are nowadays in television. This is also explained by the media richness theory which categorise media according to the way in which they transfer information. Television is not a medium high in richness, but it may target people in a fast and cost-effective way (Fill & Turnbull, 2017). Moreover, according to the technology acceptance model, television may be perceived as easy to use and therefore, more people may be reached (Fill & Turnbull, 2017). Due to this, this medium will be advised to be used to change the negative way in which the mentally ill are framed. To conclude, the seventh hypothesis was not met, but some significant results were found and some conclusions can be made about which media are the best or worst to use when conveying information about mental disorders.

The eighth expectation was that when people were older, the effects of the dependent variables on stigma were enhanced and due to this, they would tend to have a higher level of stigma of mental disorders (Griffiths et al., 2008; Wolff et al., 1996). According to the analysis, some mixed results were found. The only valid result showed that when people were older and they had some professional experience, their level of stigma was lower than when people were younger and had professional experience. This can be explained by the fact that when people were experienced and for many years, they had less stigma. Accordingly, all the other results presented that when people were older, they usually knew more, they were more professionally experienced and their level of stigma was lower. However, most of the results were not significant and due to this, they cannot be considered valid. Eventually, the eighth hypothesis was not met and sure conclusions about the population cannot be drawn because of the insignificant results.

Ninthly, it was expected that when participants lived next to a psychiatric facility, their level of stigma would be higher (Wahl, 2012). However, mixed results were found. For instance, when people

had personal experience and lived far away, they had less stigma than when people had personal experience and lived next to a psychiatric facility. On the contrary, when people had professional experience and lived far away from a psychiatric facility, they had significantly higher level of stigma than when people had professional experience and lived next to a psychiatric facility. Overall, there was a balance between the ones for which living next to a psychiatric facility increased stigma and the ones for which living far away from a psychiatric facility increased stigma. However, most of these results cannot be considered valid and real conclusion cannot be drawn. In general, the ninth hypothesis was not met.

The last hypothesis was that when people were of Italian nationality, their level of stigma would be higher (Gray, 1998, Hofstede Insights, n.d.). In line with the analysis, this hypothesis was not met because it turned out that Dutch people had more stigma than Italian people. To illustrate, the influence of nationality on knowledge, experience and media showed that when people were Dutch, they had a higher level of stigma. This result may be explained by the fact that in the sample of this study, Dutch people were half of the Italian people. Moreover, more Italian people had some professional experience which means, according to the fourth hypothesis, that in that subgroup there were more people who had a lower level of stigma. Therefore, the tenth hypothesis was not met. Nonetheless, these results were not significant and certain conclusions regarding the influence of nationality on the effects of knowledge, experience and media on the stigma of mental disorders in the population cannot be deduced.

According to these results, some general conclusions on how reducing stigma, in general, can be drawn. The amount of knowledge that a person has regarding a certain subject plays a big role in his or her level of stigma. Due to this, if people are informed more about sensitive topics, such as mental disorders, HIV/AIDS or obesity, they may start to be more conscious about their opinions and hold fewer stereotypes, prejudices and discriminations towards out-groups. Moreover, the information individuals receive and the medium through which they get them are also relevant. For instance, in this study, it was seen that people think that listening to the stories of individuals who were in a difficult situation and were able to successfully get better and lead a normal life may help them to get true and reliable information about the topic. This is because through personal stories people may get a more vivid picture of the problem and, by empathising with others, their stigma may be reduced (Rössler, 2016). This was also emphasised by looking at the level of the stigma of people who knew someone with some form of mental disorders. Being in contact with the topic may indeed create acceptance and reduce stigma (Rössler, 2016; Stout et al., 2004). Lastly, media, such as television and social media should not be used as the main source of information or at least, there is the need to create programs or posts which can give the correct information to people and where information cannot be manipulated.

### *5.1 Limitations (strengths) and further research*

This research had some limitations, but a few can be also regarded as strengths. Moreover, in this section, some recommendation for further research are given. The first limitation concerns the lack of literature to support this study. Much research on the field of mental disorders could be found, but it did not address variables which are important from a communication perspective, such as kind of media and kind of information. Due to this, it was not always possible to retrieve existing questions from questionnaires which aimed to measure variables in the context of mental disorders. For instance, the questions for the variable knowledge were retrieved from a scientific article where knowledge about fashion was measured. Nonetheless, this is also a strength of the study because it is what makes it new. Moreover, the hypothesis for the variable nationality was only based on Hofstede's cultural dimensions. However, also in line with the insignificant and contradictory results, these nations have a different background and history regarding mental disorders and because of this, more research should have been done on the subject before deducing a final hypothesis. Nevertheless, in-depth research on the subject

may have led to losing the aim of this study. Moreover, these results may be due to the fact that Italy and the Netherlands have similar cultures and the differences may have not been that relevant for this research.

The second type of limitations deals with the filling in of the questionnaire by the participants. Some people had some problems with the questions which asked to rank media from 1 to 8. Participants contacted the researcher to ask if they could insert the same number for more than one medium which was not possible. Moreover, older people did not really know what the medium podcast was since it is something that is mostly used within younger generations. Additionally, some participants did not insert their age in the blank space, but nothing or other words. This caused a few missing values. Lastly, some participants had personal experience with more than a person with some form of mental disorders and they struggled when they had to choose the kind of relationship since it was more than one. Therefore, a multiple choice question may have helped them.

Thirdly, some limitations concern the analysis of the results. For this study, it was decided to analyse the countries Italy and the Netherlands together. Nonetheless, these samples were not similar since there were 98 Italian participants and 48 Dutch participants. If people from different countries were analysed separately, considering also the reliability and validity tests of the variables per country, the regression and correlation analyses may have been more significant. Nevertheless, merging the two countries together allowed to have a bigger sample, which also increased the significance of the results and gave the possibility to make some conclusion regarding the population. Moreover, these nations have a similar culture and, due to this, the recommendations which could be for a country, could be the same for the other one. Additionally, the effects of the independent variables on the stigma of mental disorders were analysed altogether in one multiple regression and this may have led to losing some relevant results. Accordingly, when it was tried to investigate what was the difference between the effects of a multiple regression per construct and a multiple regression for all the variables, it was seen that in the first case, there were more significant results and due to this, it was decided to also keep those analyses, particularly the one for knowledge.

Another limitation in the analysis of the results was that the moderator proximity was an ordinal variable and was used as a scale variable. Using one analysis of variance and not one analysis of covariance for the influence of this moderator on the effects of the independent variables on the stigma of mental disorders may have caused some differences in the results. A further limitation was that for the variable kind of media, since it required participants to rank media and each medium had a different number, 16 variables were created, 8 for the most used, suitable, reliable and clearest and 8 for the least used, suitable, reliable and clear media. However, these variables were dummy ones and because of this, only the maximum and minimum were counted. Moreover, with the merging of the four questions per each medium, some data were lost. For example, a medium which sometimes was the least used, but it was also the most suitable was considered in the analysis as neither the maximum nor the minimum and this may have led to the missing of some valuable results. To partially counteract this, the frequencies of each initial question per medium were conducted to see what participants selected as media the most used, the most reliable, the most suitable and clearest, and which ones they selected as the least used, the least reliable, the least usable and the least clear. Another limitation about the analysis was that it was not possible to conduct a regression analysis of variance with more than 18 variables and, because of this, the variable kind of media was analysed separately from the others. However, having a moderation analysis with all variables may have led to more significant effects and a better overview of the influence of the moderators on the effects of the independent variables on stigma of mental disorders. Nonetheless, the effects of the moderators on kind of media were not significant and, due to this, it may be that including this variable in the analysis would have not made that much difference. A final limitation was that the effects of variables books most and podcast least on the stigma of mental disorders were not conducted by the software. This may cause the loss of some relevant

results. However, this was not a big problem and these results could be partially seen in the correlation analysis.

Lastly, the factor analysis to measure the validity and the Cronbach's alpha to measure the reliability of the questionnaire showed some basic limitations of this study. Not all the constructs were reliable. For instance, two questions for the construct stigma and four questions for the construct experience did not score high enough in the reliability test. This result for the variable stigma is a bit contradictory since the questions were retrieved from other questionnaires which reliability was proven. Nonetheless, the pre-test to measure the reliability of those studies was made with a different sample which was also more homogenous and this may have led to unreliability for this study (Kenny et al., 2018; Link et al., 2004; Taylor & Dear, 1981). For the variable experience, this result may be due to the fact that participants, when they did not have personal experience and/or professional experience, did not have to answer to the following questions about experience. This may have given missing values which decreased the reliability of this construct. Indeed, once the questions were deleted these variables scored higher in the reliability test. Accordingly, the regression analysis and the analysis of variance were conducted without the questions which had missing values. Moreover, for the factor analysis, validity was not always met for all variables and according to the results, more factors should have been created per construct. Additionally, all statement of kind of media had a value higher than .60 (Appendix 5, Table 2). However, even if these results can be considered valid, the analysis was made by doing the analysis in two groups of 4 factors, thus television, internet, social media and newspapers and word-of-mouth, podcast, radio and books. This was done because of the large amount of factors and due to this, the validity increased.

Accordingly, for further research, it is advised to use this study as a pre-test for reliability and validity. Additionally, after having edited this questionnaire in line with the results and limitations, a bigger study should be made with a bigger and more homogenous sample. Therefore, it is advised to change the questions of stigma which did not meet reliability and to only keep the first questions of personal experience and professional experience. For validity, different factors should be created according to the factor analysis. Furthermore, it is advised to change the questions for kind of media with a 5-point Likert scale, thus to make the questionnaire more user-friendly and have more complete results. Moreover, proximity can be used as a moderator, but only if the kind of answer is changed and people can insert the number of kilometres or if analysis of covariance is used to conduct the analysis. Lastly, if the difference between the stigma of mental disorders between nations needs to be investigated, more insightful information on the background of the nations' laws, assets, history and culture should be found.

Additionally, this questionnaire had many questions which asked participants their opinion, such as the amount of knowledge they think they had, or if media portrait the mentally ill in a negative way or not. However, people may have not been honest when answering these questions because of their holding, subconscious or unspeakable, stereotypes. Because of this, for further research, it is recommended to do an observational study or any kind of study in which people are given certain stimuli, such as watching a film about mental disorders or listening to a story where a mental disorder is explained by a psychologist. At the same time, their reactions can be recorded. Hypothetically, their answers will come from the unconscious and, thus, it might be possible to find out participants' real attitudes towards mental disorders. Nonetheless, this kind of studies requires high protection of privacy and there may be ethical problems. Finally, it is advised to conduct studies which focus on one or two mental disorders since in the category "mental disorders" is included illnesses which differ from each other in severity, recovery expectancy and behaviour disturbances. This could give more insights on which are the mental disorders that may influence the most the stigma of mental disorders. For instance, a mental disorder like schizophrenia may imply symptoms which can be more dangerous for the people

in the surrounding than depression. By doing this, it may be possible to create more specific measures towards the reduction of stigma within society.

## 6. Recommendations

This paper aimed to see the influence that being knowledgeable enough, being experienced and the media have on the stigma of mental disorders. Once conducted the research, the purpose was to use the results to build the base for communication strategies able to reduce the stigma of mental disorders within society. In light of the aforementioned results, some recommendations can be given to organisations, associations and supporters who everyday fight to reduce the stigma of mental disorders.

It was found that when people have more knowledge, their level of stigma is also lower. Because of this, people should be informed and educated about mental disorders (Corrigan & Watson, 2002; Rössler, 2016). Moreover, even if age did not have a significant influence on stigma, most of the results brought to the conclusions that younger generations should mostly be the ones to be addressed and educated when trying to reduce stigma. Because of this, it is recommended to approach the Minister of Education through, for instance, lobbying (Hall & Dearnorff, 2006), for the creation of a short education program in one of the last years of high school. By already making individuals aware of this issue early in life, it may happen that, in the long run, more acceptance will be created and the stigma reduced (Hodes & Gau, 2016). Moreover, many young people, nowadays, have some struggles during their adolescence and they may get depressed or have some form of dysfunctional behaviour. Due to this, making all students aware of the commonness of mental disorders and what they imply might lead to create more acceptance and ability to help each other when a few classmates go through a rough time during their teenagers' years (Hodes & Gau, 2016). Additionally, it was found that personal experience and personal information, thus contact with people who have or had some form of mental disorders or the topic of mental disorders and information which comes from personal experiences, can help reduce the stigma of mental disorders. Therefore, in these education programs, teachers could invite people who had some form of mental disorders to tell students about their experiences. This may touch individuals emotionally and lead them to be more interested and sensitive about this topic (Rössler, 2016). Furthermore, the medium books was selected as the most suitable, reliable and the clearest and it was also the medium which had a positive influence on the decrease of the stigma of mental disorders. Because of this, in school books of subjects like history, biology and literature, something about the topic of mental disorders should be mentioned. These particular subjects were chosen because of the genetic aspect that may influence mental illnesses and the presence in history of many famous people who had some form of mental disorders and how some of them were still able to conduct a successful and happy life. By doing this, students may also get more aware of the importance of the topic and how much it is present in society.

In general, older generations who are already out of high school should also be addressed. This may be done via an awareness campaign. The media to use should be books and television whilst the one that is not advised to be used is social media. This last recommendation is because, according to the results, when people selected social media as the least used, reliable, suitable and clear, their stigma was lower. Moreover, nowadays, the information in social media cannot always be considered reliable and truthful (Westerman, Spence, & Van Der Heide, 2014). Sometimes, it is edited and false which might only lead to an increase of stigma (Westerman et al., 2014). Eventually, books may be used to inform people by means of stories of people who had some form of mental disorders and some medical information if the reader is interested. Nonetheless, books are only read by people who are interested in the subject and it may be hard to advertise a book for people who are not interested in it. Because of this, even if television may have a bad influence in the way the mentally ill are framed, this medium, when used correctly, may convey correct information (Rössler, 2016; Stout et al., 2004) and it is perceived as easy to use (Fill & Turnbull, 2017). Moreover, it may help to changing the way television portrays the mentally ill. For instance, between TV programs, a commercial may be sent on air where a person who had mental disorders talk about his or her experience in short and where an emotional

message is sent. At the bottom of the screen, the hashtag #reducingstigma may be shown as an identification mark for the awareness campaign.

Furthermore, producers of daily programs on television could be asked to host someone who is known as trustworthy to explain the problem and to give a more positive and reliable picture of the mentally ill. Research showed that psychiatrists may be considered as reliable hosts when the right information and a positive message need to be conveyed (Stout et al., 2004). Additionally, every time there is a film with the topic of mental disorders on television, corrective information should be given (Rössler, 2016). For instance, in the beginning, there should be written that what is portrayed in the film may be an exaggeration of the mentally ill and it should not be taken as a true example. Lastly, if producers, journalists and screenwriters were educated about mental disorders, they may start to give more reliable and objective information and, in this way, the problem may be solved by tackling the origin of the source (Rössler, 2016; Stout et al., 2004). Consequently, according to the results, if people get aware of and know about the negative way in which media portrait mental disorders, the stigma may be reduced (Westerman et al., 2014). The hashtag should always be shown as a symbol of this campaign.

According to the results, the context (next to or far away from a psychiatric facility) or the nationality of these measures taken to reduce the stigma do not matter. Moreover, as it was seen in previous research, the problem of the stigma of mental disorders is present in all Europe. Nonetheless, in general, in cities where there is a psychiatric facility, citizens should have the right to be informed about decisions which may have an influence of their lives. Accordingly, people of trust or power, like the mayor of a city or a trustworthy doctor, may organise a meeting to talk to all the citizens about the topic of mental disorders, how it is a problem, inform people about it and involve them in the decisions which may have an influence on their lives. Furthermore, this may be particularly important for people who live next to a psychiatric facility. As literature shows, when people are not actively included in the decision in their neighbourhood, they may hold negative feelings and, consequently, their level of stigma may increase (Noblett et al., 2015). Because of this, the communication employers and the managers of the psychiatric facilities should organise meetings where people get informed about what the services of the psychiatric facilities are and about the process of rehabilitation of the patients. Moreover, it should be said if there are some patients that have the possibility to go out, but they may create discomfort to other people. Moreover, the organisers should include in those meetings people who were able to successfully recover and they are willing to tell their stories to give a clearer image of mental disorders (Rössler, 2016). This should also be done to improve the environment around psychiatric facility and help people with mental disorders who are going through rehabilitation to successfully integrate into society (Wahl, 2012).

Additionally, even if people with some professional experience had a lower level of stigma, people working in the psychiatric facility should also be involved, particularly if they are new employees. This is because, as it was seen, improving knowledge has in general benefits on reducing the stigma and people who work every day with the mentally ill need to justly empathise with their patients to be able to cure them (Noblett et al., 2015). Eventually, people should also be actively involved in the discussion and be allowed to have a say when deciding about some issues, like, for instance, the construction of a new mental health department in the hospital. Due to this, individuals might feel more involved and get a positive feeling regarding the mentally ill with a consequent decrease of stigma (Wahl, 2012). Overall, by giving the right knowledge to individuals, they may be able to accept the presence of a psychiatric facility in their neighbourhoods with a consequent decrease of stigma and ease of the process of rehabilitation of patients.

Finally, the government, and in particular policymakers, should be offered education programs where they are taught about mental disorders. This is because they are the ones who create laws which hinder the possibility for the mentally ill to have the same rights as everyone else. Consequently,



according to the structural stigma theory which states that the stigma of mental disorders is reinforced by the way in which the law structures society, the stigma may reduce (Overton & Medina, 2008; Wahl, 2012). For instance, education programs may be organised to teach lawyers about mental disorders and what the different syndromes imply. Furthermore, they should be shown videos of or invite people who successfully recovered and try to let them empathise with the character. Eventually, all these measures mentioned above, if applied correctly and monitored, will lead to the reducing of stigma within society, to more acceptance and to a better quality of life for people who suffer or suffered of some form of mental disorders.

## **7. Conclusions**

This paper started by explaining how the stigma of mental disorders is a relevant problem in society and how most of the measures taken so far to reduce this stigma are not working effectively and are hardly based on actual research. To illustrate, the Dutch association SIRE in its campaign to reduce stigma used the media social media and radio in order to inform people about mental disorders. As it was found in this study, these media are not the right ones to use when conveying information about mental disorders and they may only make the problem worst. Consequently, this research aimed to identify how some factors influence the stigma of mental disorders from a communication perspective in order to build the bases for a reliable communication plan to reduce the stigma.

The factors selected for this study were knowledge, experience and media. The people who participated in this study were Dutch and Italian. Overall, only some results can be considered valid and due to this, inference about the whole Dutch and Italian population on the effects of these factors on the stigma of mental disorders and the influence of the age, proximity and nationality could not be made. However, a few results were conclusive and inference was made. This research showed that more than half of the participants had a moderately high level of stigma and this means that the stigma of mental disorders is indeed a real problem which is relevantly present nowadays. Moreover, it was seen that direct contact with the topic of mental disorders and personal experience from people who have or had some form of mental disorders are important factors to reduce stigma. Further, the kind of media that is used to convey information matters and people should be informed mostly through books or programs which are controlled, can give unbiased information and cannot be manipulated. Additionally, how society is structured plays a big role in the creation and persistence of the stigma of mental disorders. Due to this, the government, mostly policymakers, should be addressed in order to change some of the social structures which block the reduction of stigma in society, as well as the Minister of Education should be asked to implement school programs with the subject of mental health.

The most important result found is that knowledge is the most important factor for reducing stigma; knowledge of the topic of mental disorders, knowing someone with some form of mental disorders or knowing that the way society thinks is influenced by the media. It may take a long time, but if people were informed better about mental disorders and they interacted more with this subject, they would be able to better understand it. Their acceptance would increase and, consequently, their level of stigma would decrease and the environment where they live would just become a better place.

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## 9. Appendix

### Appendix 1: Comparison between the Netherlands and Italy

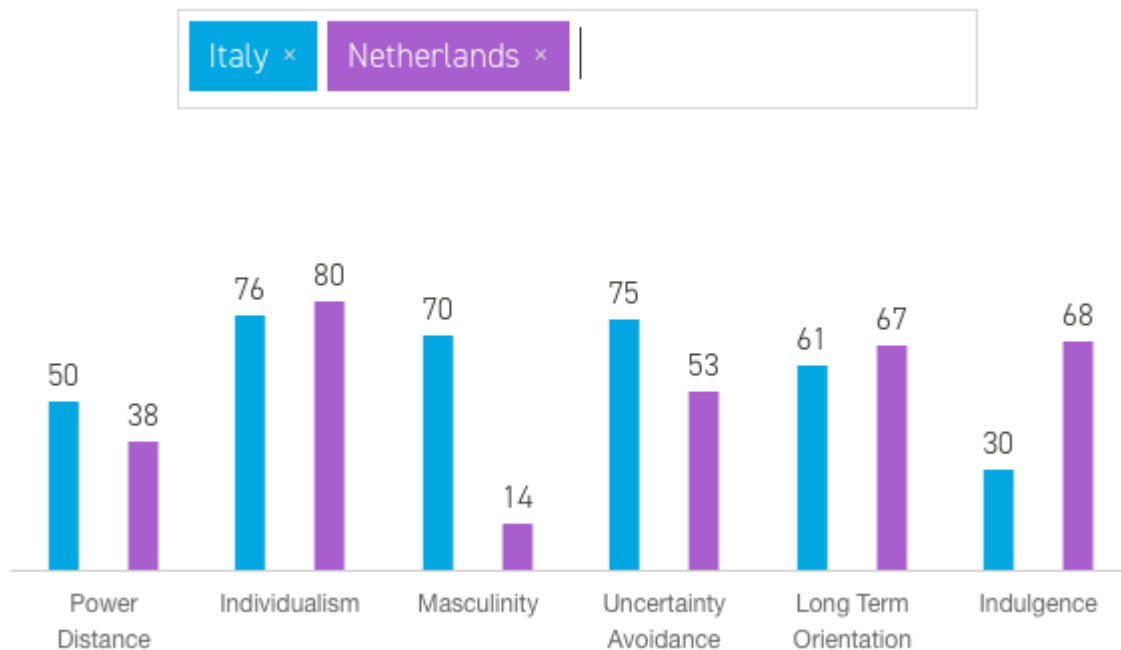


Figure 1. Hofstede cultural dimensions: comparison between the Netherlands and Italy (Hoftside Insight, n.d.).

### Appendix 2: Questionnaire links

Dutch: [https://utwentebbs.eu.qualtrics.com/jfe/form/SV\\_e3rLIndFoY23N89](https://utwentebbs.eu.qualtrics.com/jfe/form/SV_e3rLIndFoY23N89)

English: [https://utwentebbs.eu.qualtrics.com/jfe/form/SV\\_dcA5R1WGb0gzzaB](https://utwentebbs.eu.qualtrics.com/jfe/form/SV_dcA5R1WGb0gzzaB)

Italian: [https://utwentebbs.eu.qualtrics.com/jfe/form/SV\\_bkkJjEGwfaPaxIV](https://utwentebbs.eu.qualtrics.com/jfe/form/SV_bkkJjEGwfaPaxIV)

### Appendix 3: Introduction of questionnaire

Thank you for deciding to take part in this study.

In this questionnaire, it will be asked from you to answer some questions on the topic of mental disorders. Filling in this questionnaire will take you around 10-15 minutes.

I would like you to know that this questionnaire is not to test you, but only to get insights of which are the main factors that influence people's idea of mental disorders. Therefore, there are no right or wrong answers. Further, it is important for you to know that this research was approved by the ethical committee of the University of Twente. Your answers will not be shared with anyone outside this study and your data will be treated anonymously.

If you encounter any problems when filling in this questionnaire please contact me (see contact information below). If you would like to have some extra information about this study and about the end results, you are more than welcome to contact me.

You are free to quit this study whenever you want.

Contact information:

Bartali Valentina



Appendix 4: Reliability test

Table 1  
Cronbach's alpha

Variable	IT+NL	IT	NL
	$\alpha$	$\alpha$	$\alpha$
Stigma of mental disorders	.55	<b>.61</b>	.46
Stereotype	.18	.14	.21
Prejudice	-.29	-.29	-.58
Discrimination	<b>.80</b>	<b>.82</b>	<b>.74</b>
Stigma of mental disorders (Q1, Q2, Q3, Q4, Q6, Q7, Q9, Q10, Q11, Q12)	<b>.68</b>	<b>.71</b>	<b>.66</b>
Knowledge	<b>.74</b>	<b>.77</b>	<b>.68</b>
Lack of knowledge	<b>.88</b>	<b>.90</b>	<b>.84</b>
Believing in myths	.59	<b>.66</b>	.43
Experience	.36	.43	-.46
Personal experience	.02	-.08	.09
Professional experience	.31	.40	-.79
Experience (Q35, Q38)	.50	.49	.54
Framing	<b>.61</b>	<b>.62</b>	.53
Kind of information	.57	.49	<b>.68</b>
Kind of media television	<b>.79</b>	<b>.73</b>	<b>.74</b>
Kind of media internet	<b>.86</b>	<b>.83</b>	<b>.83</b>
Kind of media social media	<b>.81</b>	<b>.78</b>	<b>.86</b>
Kind of media newspapers	<b>.72</b>	<b>.72</b>	<b>.75</b>
Kind of media word-of-mouth	<b>.79</b>	<b>.81</b>	<b>.74</b>
Kind of media podcast	<b>.89</b>	<b>.86</b>	<b>.95</b>
Kind of media radio	<b>.83</b>	<b>.83</b>	<b>.78</b>
Kind of media books	<b>.73</b>	<b>.74</b>	.57

Appendix 5: Factor analysis

Table 2  
Factor analysis

Item	Factor Loading			
	1	2	3	4
<b>Factor analysis 1: Stigma of mental disorders (stereotype, prejudice, discrimination)</b>				
1. I think people with mental disorders are unpredictable	.18	<b>.58</b>	.01	
2. I think that most people with mental disorders have lack of knowledge	.24	.09	<b>.68</b>	
3. I think that one of the main causes of mental disorders is lack of power	.23	-.04	.53	
4. I think that mental disorders are illnesses like any other	.19	-.01	-.74	
5. I would feel unsafe being around someone who has mental disorders	.14	<b>.78</b>	.12	
6. I am not scared of people with mental disorders	-.15	-.67	-.05	
7. I think, in general, it is easy to interact with someone who has mental disorders	-.29	.47	-.25	

8. I think people with mental disorders deserve our sympathy	-12	-.31	-.32	
9. I would not be comfortable if a person with a mental disorder was a teacher in a school	<b>.58</b>	.39	.13	
10. I think that employers should not hire people with mental disorders	<b>.80</b>	.17	0.02	
11. I think people with mental disorders should not have the right to vote	<b>.84</b>	.07	.24	
12. I think that landlords should not rent houses or flats to people with mental disorders	<b>.82</b>	.09	0.9	

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**Factor analysis 2: Kind of media: television, internet, social media, newspapers.**

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13television. Which media do you generally use to find information about any subject? Rate these media from 1 = the least used to 8 = the most used.	.39	-.10	<b>.70</b>	.003
13internet. Which media do you generally use to find information about any subject? Rate these media from 1 = the least used to 8 = the most used.	<b>.78</b>	-.18	.18	-.08
13socialmedia. Which media do you generally use to find information about any subject? Rate these media from 1 = the least used to 8 = the most used.	-.05	<b>.69</b>	-.18	-.18
13newspapers. Which media do you generally use to find information about any subject? Rate these media from 1 = the least used to 8 = the most used.	-.24	-.29	.05	<b>.57</b>
14television. Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable.	.20	-.10	<b>.68</b>	-.01
14internet. Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable.	<b>.77</b>	-.09	.21	-.04
14socialmedia. Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable.	.08	<b>.79</b>	-.03	-.08
14newspapers. Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable.	-.02	-.24	.08	<b>.71</b>
15television. Where do you think it is possible to find the most reliable information about mental disorders? Rate these media from 1 = the least reliable to 8 = the most reliable.	.04	.06	<b>.85</b>	.02
15internet. Where do you think it is possible to find the most reliable information about mental disorders? Rate these media from 1 = the least reliable to 8 = the most reliable.	<b>.84</b>	.06	-.04	-.08
15socialmedia. Where do you think it is possible to find the most reliable information about mental disorders? Rate these media from 1 = the least reliable to 8 = the most reliable.	-.20	<b>.83</b>	-.01	-.13
15newspapers. Where do you think it is possible to find the most reliable information about mental disorders? Rate these media from 1 = the least reliable to 8 = the most reliable.	.05	-.17	-.07	<b>.76</b>
16television. In your experience, which of the following media give you the clearest information about mental disorders? Rate these media from 1 = the least clear to 8 = the clearest.	.13	-.02	<b>.87</b>	.04
16internet. In your experience, which of the following media give you the clearest information about mental disorders? Rate these media from 1 = the least clear to 8 = the clearest.	<b>.89</b>	-.11	.10	-.05

16socialmedia. In your experience, which of the following media give you the clearest information about mental disorders? Rate these media from 1 = the least clear to 8 = the clearest.	-21	<b>.81</b>	.02	-.25
16newspapers. In your experience, which of the following media give you the clearest information about mental disorders? Rate these media from 1 = the least clear to 8 = the clearest.	-.11	.01	.000	<b>.80</b>
<b>Factor analysis 3: kind of media: word-of-mouth, podcast, radio, books.</b>				
13word-of-mouth. Which media do you generally use to find information about any subject? Rate these media from 1 = the least used to 8 = the most used.	-.26	-.13	.52	-.21
13podcast. Which media do you generally use to find information about any subject? Rate these media from 1 = the least used to 8 = the most used.	<b>.80</b>	.15	.08	-.17
13radio. Which media do you generally use to find information about any subject? Rate these media from 1 = the least used to 8 = the most used.	.06	<b>.76</b>	-.16	-.09
13books. Which media do you generally use to find information about any subject? Rate these media from 1 = the least used to 8 = the most used.	-.06	-.03	.05	<b>.67</b>
14word-of-mouth. Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable.	.08	-.17	<b>.80</b>	.02
14podcast. Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable.	<b>.84</b>	.04	-.05	-.18
14radio. Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable.	.16	<b>.78</b>	.01	-.02
14books. Which media do you think is the most suitable to use to inform the public about mental disorders? Rate these media from 1 = the least suitable to 8 = the most suitable.	.11	.09	-.09	<b>.76</b>
15word-of-mouth. Where do you think it is possible to find the most reliable information about mental disorders? Rate these media from 1 = the least reliable to 8 = the most reliable.	.05	-.09	<b>.83</b>	-.07
15podcast. Where do you think it is possible to find the most reliable information about mental disorders? Rate these media from 1 = the least reliable to 8 = the most reliable.	<b>.87</b>	.15	-.05	.01
15radio. Where do you think it is possible to find the most reliable information about mental disorders? Rate these media from 1 = the least reliable to 8 = the most reliable.	.09	<b>.85</b>	-.12	-.01
15books. Where do you think it is possible to find the most reliable information about mental disorders? Rate these media from 1 = the least reliable to 8 = the most reliable.	-.46	.002	-.15	<b>.68</b>
16word-of-mouth. In your experience, which of the following media give you the clearest information about mental disorders? Rate these media from 1 = the least clear to 8 = the clearest.	.004	-.07	<b>.89</b>	-.02
16podcast. In your experience, which of the following media give you the clearest information about mental disorders? Rate these media from 1 = the least clear to 8 = the clearest.	<b>.85</b>	.19	-.05	-.06

16radio. In your experience, which of the following media give you the clearest information about mental disorders? Rate these media from 1 = the least clear to 8 = the clearest.	.17	<b>.80</b>	-.21	.13
16books. In your experience, which of the following media give you the clearest information about mental disorders? Rate these media from 1 = the least to 8 = the clearest.	-.32	-.09	-.13	<b>.75</b>

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**Factor analysis 4: Kind of information**

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21. If I want to know more about mental disorders, I would like to get information from medical or scientific sources	-.04	<b>.89</b>	.06
22. When doctors talk about mental disorders in medical terms, I think I get the best information on the subject	-.24	.26	<b>.81</b>
23. If I want to know more about mental disorders, I would be interested in the influence that a mental disorder has on relationships	.17	<b>.76</b>	.21
24. When psychologists talk about mental disorders, I think I get the best information on the subject	.28	.04	<b>.85</b>
25. I think that the best way to understand people with mental disorders is by listening to/reading/watching the stories of people suffering or that suffered from mental disorders	<b>.83</b>	.22	-.01
26. When people with mental disorders talk about their experiences, I think I get the best information on the subject	<b>.84</b>	-.08	.06

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**Factor analysis 5: Knowledge (kind of information, believing in myths)**

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27. I know pretty much about mental disorders	<b>.86</b>	.01
28. When people talk about mental disorders, I feel enough knowledgeable to participate in the conversation	<b>.88</b>	.06
29. When I read about mental disorders, I know enough to tell if the information is true or not	<b>.83</b>	.02
30. Among my circle of friends, I am one of the “expert” on mental disorders	<b>.84</b>	.06
31. I am sure I will not be affected by a mental disorder	-.24	<b>.57</b>
32. I think that children cannot experience mental disorders	.05	<b>.68</b>
33. I think that mental disorders are not curable	.07	<b>.67</b>
34. I can do nothing for a person with mental disorder	.23	<b>.76</b>

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**Factor analysis 6: Experience (personal experience, professional experience)**

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35. I have (or had) experience with mental disorders	.57	<b>.60</b>
36. Which kind of personal experience do (or did) you have?	-.05	-.83
37. I often deal with the subject of mental disorders or people with mental disorders	<b>.87</b>	-.02
38. Have you ever been working in a psychiatric facility?	<b>.88</b>	-.03
39. How long have you been working in a psychiatric facility?	<b>.84</b>	-.07
40. What was/is your work occupation in the psychiatric facility?	-.22	.52

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*Appendix 6: Regression analysis in-depth results variable Experience*

*1. Experience*

*1.1 Study 1*

This study measured the effects of personal experience, type of personal experience, quantity of personal experience, professional experience, quantity of professional experience and type of professional experience on stigma of mental disorders. The proportion of variance, so what was explained by the model, was 14%. This was significant,  $F(6, 42) = 2.25, p = 0.6$ . The proportion of

variance, so what was explained by the model, was 24%. This was significant,  $F(2, 142) = 9.31, p < .001$ .

Table 11  
*Multiple Regression Analysis with Stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	2.94	.44	6.76	.000	2.06	3.82
Personal experience1	-.04	.10	-.38	.71	-.24	.17
Type of personal experience2	.02	.03	.83	.41	-.04	.09
Quantity of personal experience3	.01	.07	.11	.91	-.14	.16
Professional experience1	.05	.06	.85	.40	-.07	.16
Quantity of professional experience2	-.15	.06	-2.56	.01	-.27	-.03
Type of professional experience3	-.01	.03	-.47	.64	-.07	-.05

Notes. a. Dependent variable: Stigma of mental disorders  
b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

### 1.1 Study 2

This model measured the effects of having personal experience and professional experience on stigma of mental disorders. The proportion of variance, so what was explained by the model, was 12%. This was significant,  $F(2, 142) = 9.31, p < .001$ .

Table 12  
*Multiple Regression Analysis with Stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	3.05	.10	31.47	.000	2.86	3.25
Personal experience1	-.08	.03	-3.02	.003	-.13	-.03
Professional experience1	-.03	.02	-1.79	.08	-.07	-.003

Notes. a. Dependent variable: Stigma of mental disorders  
b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

### Appendix 7: One analysis of variance for kind of media

#### 1. Kind of media

##### 1.1 Age

##### 1.2 Kind of media most

In this model, it was analysed if the effect of television most, internet most, social media most, newspapers most, word-of-mouth most, podcast most, radio most and books most is stronger when people are older. A regression analysis of variance, with the alpha level of .05, was run. This model explained 13% of variance on level of stigma of mental disorders in the data and was not significant,  $F(15,121) = 1.23, p = .26$ .

Table 13  
*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	2.55	.22	11.59	.000	2.12	2.99
Age	.000	.004	.07	.94	-.01	.01
Television most	.18	.59	.31	.76	-.98	1.34
Television most *age	.01	.01	.58	.57	-.02	.03
Internet most dummy	-.15	.37	-.41	.68	-.88	.58
Internet most*age	.01	.01	.69	.49	-.01	.02
Social media most	-.05	.01	.69	.49	-2.00	1.91
Social media most*age	.004	.02	.22	.89	-.03	.04
Newspapers most	1.69	.99	1.71	.09	-.27	3.64
Newspapers most*age	-.03	.02	-1.43	.16	-.06	.01
Word-of-mouth most	.08	.66	.12	.91	-1.22	1.37
Word-of-mouth most*age	.003	.01	.23	.82	-.02	.02
Podcast most	-.21	.73	-.29	.77	-1.65	1.23
Podcast most*age	.01	.01	.56	.58	-.02	.03
Radio most	.26	2.32	.11	.91	-4.34	4.85
Radio most*age	-.01	.05	-.22	.83	-.10	.08
Books most	--	--	--	--	--	--
Books most*age	--	--	--	--	--	--

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

### 1.2.1 Kind of media least

In this model, it was analysed if the effect of television least, internet least, social media least, newspapers least, word-of-mouth least, podcast least, radio least and books least is stronger when people are older. A regression analysis of variance, with the alpha level of .05, was run. This model explained 13% of variance on level of stigma of mental disorders in the data and was not significant,  $F(15,121) = 1.24, p = .25$ .

Table 14

*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	.62	1.20	.52	.60	-1.76	3.00
Age	.04	.02	1.50	.14	-.01	.09
Television least	1.75	1.27	1.38	.17	-.76	4.27
Television least*age	-.03	.03	-1.19	.24	-.08	.02
Internet least	3.59	2.61	1.37	.17	-1.59	8.76
Internet least*age	-.06	.05	-1.16	.25	-.16	.04
Social media least	2.25	1.24	1.82	.07	-.20	4.70
Social media least*age	-.04	.03	-1.69	.09	-.09	.01
Newspapers least	1.22	1.79	.68	.50	-2.32	4.76
Newspapers least*age	-.02	.04	-.37	.71	-.10	.07
Word-of-mouth least	1.86	1.38	1.36	.18	-.86	4.59
Word-of-mouth least*age	-.03	.03	-1.20	.23	-.09	.02
Podcast least	1.84	1.24	-1.48	.14	-.62	4.30
Podcast least*age	-.03	.03	-1.18	.24	-.08	.02
Radio least	2.28	1.27	1.80	.08	-.23	4.79
Radio least*age	-.04	.03	-1.44	.15	-.09	.01
Books least	--	--	--	--	--	--
Books least*age	--	--	--	--	--	--

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

### 1.3 Proximity

#### 1.3.1 Kind of media most

In this model, it was analysed if the effect of television most, internet most, social media most, newspapers most, word-of-mouth most, podcast most, radio most and books most is stronger when people live next to a psychiatric facility. A regression analysis of variance, with the alpha level of .05, was run. This model explained 12% of variance on level of stigma of mental disorders in the data and was not significant,  $F(15,130) = 1.14, p = .33$ .

Table 15

*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	2.63	.13	19.86	.000	2.37	2.89
Proximity	-.03	.06	-.46	.65	-.14	.09
Television most	1.00	.47	2.14	.03	.07	1.92
Television most*proximity	.18	.17	-1.06	.29	-.51	.15
Internet most	-.24	.30	-.81	.42	-.83	.35
Internet most*proximity	.11	.12	.96	.34	-.12	.34
Social media most	.04	.37	.11	.91	-.70	.78
Social media most*proximity	.06	.16	.35	.73	-.25	.36
Newspapers most	.42	.91	.46	.64	-1.38	2.22
Newspapers most*proximity	-.04	.33	-.12	.90	-.69	.61
Word-of-mouth most	.22	.44	.49	.62	-.66	1.09
Word-of-mouth most*proximity	.001	.19	.004	1.00	-.38	.38
Podcast most	-.55	.86	-.64	.52	-2.25	1.15
Podcast most*proximity	.31	.38	.83	.41	-.43	1.05
Radio most	-1.56	2.37	-.66	.51	-6.24	3.13
Radio most*proximity	.47	1.38	.34	.74	-2.27	3.21
Books most	--	--	--	--	--	--
Books most*proximity	--	--	--	--	--	--

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

### 1.3.2 Kind of media least

In this model, it was analysed if the effect of television least, internet least, social media least, newspapers least, word-of-mouth least, podcast least, radio least and books least is stronger when people live next to a psychiatric facility. A regression analysis of variance, with the alpha level of .05, was run. This model explained 13% of variance on level of stigma of mental disorders in the data and was not significant,  $F(15,130) = 1.33, p = .20$ .



Table 16

*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	1.31	.82	1.60	.11	-.31	2.93
Proximity	.60	.41	1.45	.15	-.22	1.41
Television least	1.39	.89	1.55	.12	-.38	3.16
Television least*proximity	-.63	.47	-1.36	.18	-1.55	.29
Internet least	3.13	1.59	1.97	.05	-.01	6.28
Internet least *	-1.27	.78	-1.63	.11	-2.82	.28
proximity						
Social media least	.91	.84	1.08	.28	-.75	2.57
Social media least *	-.44	.42	-1.07	.29	-1.26	.38
proximity						
Newspapers least dummy	-.50	1.94	-.26	.78	-4.34	3.34
Newspapers least *	.11	.77	.14	.89	-1.41	1.63
proximity						
Word-of-mouth least	1.41	.86	1.64	.10	-.29	3.11
Word-of-mouth least*proximity	-.64	.43	-1.49	.14	-1.49	.21
Podcast least	1.75	.84	2.05	.04	-.06	3.44
Podcast least*proximity	-.71	.42	-1.69	.09	-1.55	.12
Radio least	1.51	.87	1.73	.09	-.222	3.24
Radio least*proximity	-.57	.41	-1.37	.17	-1.38	.25
Books least	--	--	--	--	--	--
Books least*proximity	--	--	--	--	--	--

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

#### 1.4 Nationality

##### 1.4.1 Kind of media most

In this model, it was analysed if the effect of television most, internet most, social media most, newspapers most, word-of-mouth most, podcast most, radio most and books most is stronger when people are of Italian nationality. A regression analysis of variance, with the alpha level of .05, was run. This model explained 11% of variance on level of stigma of mental disorders in the data and was not significant,  $F(14,131) = 1.15, p = .32$ .

Table 17

*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	2.58	.06	43.99	.000	2.46	2.70
Nationality	.03	.20	.16	.88	-.37	.43
Television most	.35	.23	1.48	.14	-.12	.81
Television most*nationality	.19	.37	.52	.61	-.54	.93
Internet most	.10	.14	.71	.48	-.18	.38
Internet most*nationality	-.16	.29	-.56	.58	-.73	.41
Social media most	.15	.21	.72	.47	-.27	.57
Social media most*nationality	.001	.35	.004	1.00	-.69	.69
Newspapers most	.26	.40	.65	.52	-.53	1.05
Newspapers most*nationality	.01	.52	.03	.98	-1.01	1.04
Word-of-mouth most	.29	.19	1.49	.14	-.10	.67
Word-of-mouth most*nationality	-.32	.40	-.80	.43	-1.11	.47
Podcast most	.04	.26	.15	.88	-.47	.55
Podcast most*nationality	.18	.41	.45	.65	-.62	.99
Radio most	.001	.76	.001	.99	-1.51	1.51
Radio most*nationality	--	--	--	--	--	--
Books most	--	--	--	--	--	--
Books most*nationality	--	--	--	--	--	--

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

#### 1.4.2 Kind of media least

In this model, it was analysed if the effect of television least, internet least, social media least, newspapers least, word-of-mouth least, podcast least, radio least and books least is stronger when people are of Italian nationality. A regression analysis of variance, with the alpha level of .05, was run. This model explained 10% of variance on level of stigma of mental disorders in the data and was not significant,  $F(15,130) = .97, p = .49$ .

Table 18

*Interaction Model with stigma of mental disorders as Dependent Variable*

	b	SE	t	p	95% CI	
					LL	UL
(Constant)	2.40	.23	10.43	.000	1.94	2.85
Nationality	.11	.50	.21	.83	-.89	1.10
Television least	.23	.29	.80	.43	-.34	.80
Television least*nationality	.10	.61	.16	.87	-1.11	1.30
Internet least	1.10	.56	1.95	.05	-.01	2.22
Internet least*nationality	-.76	.98	-.78	.44	-2.69	1.17
Social media least	.16	.24	.64	.53	-.33	.64
Social media least*nationality	-.04	.52	-.08	.94	-1.06	.98
Newspapers least	-.12	.63	-.20	.85	-1.36	1.11
Newspapers least*nationality	.50	1.20	-.42	.68	-1.88	2.88
Word-of-mouth least	.23	.27	.82	.41	-.32	.77
Word-of-mouth least*nationality	.47	.72	.65	.52	-.96	1.90
Podcast least	.34	.24	1.40	.16	-.14	.82
Podcast least*nationality	-.01	.52	-.02	.98	-1.05	1.02
Radio least	.52	.30	1.74	.08	-.07	1.10
Radio least*nationality	-.45	.60	-.75	.46	-1.63	.74
Books least	--	--	--	--	--	--
Books least*nationality	--	--	--	--	--	--

Notes. a. Dependent variable: Stigma of mental disorders

b. CI = confidence interval; LL = Lower Limit, UL = Upper Limit

*Appendix 8: Logbook*

Concepts	Related terms	Similar terms	Broader terms
Stigma of mental disorders definition	Stereotype, prejudice, discrimination	Mental illnesses, mental illnesses stigma	Stigma
Negative attitudes towards mental disorders	Stigma, self-stigma, positive attitudes, barriers of stigma	Negative behaviours	Attitudes

Strategies to solve stigma of mental disorders	Stigma of mental disorders associations	Stigma of mental disorders campaigns.	Strategies
Stigma of mental disorders in the media	How media frame mental disorders.	Framing	Media framing
Effect of amount of knowledge on stigma of mental disorders	Lack of knowledge	Measuring the effect of knowledge on stigma	Amount of knowledge questionnaires
Stigma of mental disorders questionnaires	Measuring stereotypes, measuring prejudice, measuring discrimination	Measuring stigma of mental disorders	Measuring stigma
Hofstede's culture dimensions	Differences between cultures, differences between nations	Cultural dimensions Hofstede	Cultural dimensions
Self-stigma of mental disorders definition	Consequences of self-stigma	Stigma against themselves	Self-stigma
Myths about mental disorders	Lies about people with mental disorders	Myths about people with mental disorders,	Myths
Acceptance of mental disorders from older people	The effect of nationality on stigma of mental disorders	Elderly and stigma of mental disorders	Nationality and mental disorders

	<b>Date</b>	<b>Database/ Set number</b>	<b>each action + search technique (and/or/truncatie/phrase searching)</b>	<b>Total hits</b>
1	10/03/2019	Google	Looked for “associations for mental disorders in Europe”, I read some websites, and I selected the biggest associations active at European level.	74.900.000
2	11/03/2019	UTwente library	Looked for “asylum” and I wanted to find general information about it. I selected the article gave me some background.	24.053
3	11/03/2019	UTwente library	Looked for “psychiatric facilities and functions”. I wanted to find some information about psychiatric facilities and after some reading, I selected the articles I found the most complete.	4.473

4	12/03/2019	Wiley Online Library	Looked for “mental illnesses stigma” and selected different articles and used many of them.	21.397
5	12/03/2019	UTwente library	Looked for “stigma of mental disorders” and selected articles according to their abstract and title	10.784
6	13/03/2019	UTwente library	Looked for “opinions about mental illnesses” and selected articles according to their abstract and title	5.264
7	10/04/2019	UTwente library	Looked for “mental health professional stigma” and “mental health professionals and stigma”. Selected studies where the stigma of people working in psychiatric facilities was measured	3.617
8	12/04/2019	UTwente library	Looked for “measuring amount of knowledge” and selected researches where they measured the amount of knowledge of participants	84.496
9	12/04/2019	Wiley Online Library	Looked for “stereotype and media” with filtered the Journal of Communication. After having read few of them, I selected the more suitable.	555
10	17/05/2019	Wiley Online Library	Looked for “framing theory”. Selected only articles which gave a description of what frame is and the implications of media framing.	222.573

### Reflection

Most of the research on the stigma of mental disorders was done in the last 50 years. What I decided to do was to look at different studies from the ‘60s until now. This is because I needed to have a general background about the stigma of mental disorders and understand the research patterns. Therefore, I looked at more outdated sources as well as at more recent ones. My searching technique was to download all the articles I found on the subject and afterwards, read them and decide which one to keep and if I needed to download more articles related to a subtopic of my research.

I initially used terms such as “history of mental disorders”, “associations for mental disorders in Europe” and in general “stigma of mental disorders”. What I found were many studies measuring the attitudes towards the mentally ill, but I could not find a link between these researches and the strategies used to tackle the problem from supporters and associations. I found these results pretty interesting because this meant that my study was something new. Moreover, I tried to use search terms such as “communication strategies against stigma of mental disorders” and “communication factors”. The studies I found were only related to strategies that were trying to solve the problem by using education and the right media according to them. However, it was not explained why these means were used and there were no background studies to ensure that educating people and using media was the right way to tackle the problem. Nonetheless, I was still not convinced about these findings because it looked that I was interpreting too much my searches according to what I wanted to find.

In April, when I was creating the questionnaire, I started to search for “stigma of mental disorders questionnaires” on the University of Twente library database in order to base some of the questions on literature. Surprisingly enough, I started to find more articles about the stigma of mental disorders and particularly, I bumped into an interesting article: “Conceptualizing and measuring mental illness stigma: The mental illness stigma framework and critical review of measures” by Fox, Earnshaw, Taverna, and Vogt (2018). This framework and critical review gave me confirmation about my previous conclusions; previous research did not always give valid and reliable results. Further, the authors emphasised on the fact that every solution that was tried out to tackle the problem was not based on any of the previous studies and it was not sure about the effectiveness of these solutions. Another relevant characteristic of this article is that it was dated 2018, thus the information retrieved is reliable, particularly when compared to other articles I found which studies are from the ‘80s.

I wonder why I did not find this article in my previous search. It looked that it was only due to the word “questionnaire” added to the search terms a month later. This made me reflect about all the times I was looking for articles and I could only find limited information and not always what I needed. A month later, whilst doing some other searches, I could find completely other articles about that previous subject. Now, I had a few months to write and edit the theoretical framework, but I do not always have this amount of time. Therefore, for a new search operation, I should try more words combinations when looking for something, to be sure to cover my subject as good as possible. Moreover, I should use the search terms combinations in different databases to be sure to get many articles and afterwards, scanning them and deciding which one can be useful and which one not.

In general, the database I used the most is the one from the University of Twente library. However, when I could not find something I tried the official databases of specific journals where I thought I could find what I was looking for, such as Journal of Communication for articles related to media. Furthermore, because studies about the stigma of mental disorders only start from the ‘60s, I decided to use also sources which were out-to-date. Nonetheless, I also tried to find the same information in more recent articles to ensure the validity of the information (particularly when naming scales used to measure stigma). Lastly, the theories I used were taught to me during these years of university, thus still relevant nowadays.