Statistical Analysis and Evaluation of Stigmatization in a Managerial Environment

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Dissertation submitted in partial fulfilment of requirements for the MSc Business, at the Universidade Católica Portuguesa, 04.01.2021

Abstract

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The concept of mental health is not accepted universally in our society and, accordingly, does not enjoy the same attention as physical health. People suffering from a mental illness not only have to cope with their symptoms, they face prejudices, wrong stereotypes and stigma regularly. Hence, one intention should be to set an end to stigma, also within the working context. Especially during the ongoing Covid19-pandemic our health and the well-being of the people we care about is a matter of daily concern. The threat to our physical health is immense; nevertheless, due to lockdowns, minimization of social contacts and recommendations to stay home, we are further reminded that a good health itself is characterized not only by physical health, but also by our mental health. The aim of this dissertation is to clarify the process of stigma of mental illnesses and create awareness about it as understanding the concept of stigma is a prerequisite to decide on strategies for its reduction. The findings of this study illustrate that stigma is impacted by the causal attribution of illness; humans tend to make more stigmatizing judgments when an illness is a mental illness that is attributed to mind compared to an illness that is physical and attributed to the body. Furthermore, this research found that mere information about mental illness issues is not a sufficient way to reduce stigma which leads to the proposal of seminars and workshops within a managerial context to educate employees about stigma and reduce it.

Keywords: *Mental Health; Mental Illness Stigma; Stigma; Stigma in a managerial context; Trait attribution; Strategies to end stigma.*

O conceito de saúde mental não é universalmente aceite na nossa sociedade e, consequentemente, não goza da mesma atenção que a saúde física. As pessoas que sofrem de uma doença mental não só têm de lidar com os seus sintomas, como também enfrentam o estigma. Assim, uma das intenções deveria ser pôr fim ao estigma, também dentro do contexto de trabalho. Especialmente durante a actual pandemia de Covid19, a nossa saúde e bem-estar das pessoas de quem cuidamos é uma questão de preocupação diária. A ameaça à nossa saúde física é imensa; devido aos bloqueios e minimização dos contactos sociais, somos ainda recordados de que uma boa saúde em si é caracterizada não só pela saúde física mas também

pela nossa saúde mental. O objectivo desta dissertação é esclarecer o processo de estigma das doenças mentais e criar consciência sobre o mesmo, pois a compreensão do conceito de estigma é um pré-requisito para decidir sobre estratégias para a sua redução. As conclusões deste estudo ilustram que o estigma é afectado pela atribuição causal da doença; os seres humanos tendem a fazer julgamentos mais estigmatizantes quando uma doença mental é atribuída à mente em comparação com uma doença física e atribuída ao corpo. Além disso, esta investigação descobriu que a mera informação sobre questões de doença mental é uma forma insuficiente de reduzir o estigma, levando à proposta de seminários e workshops num contexto de gestão para educar os funcionários sobre o estigma e reduzi-lo.

Palavras-chave: Saúde mental; Estigma de doença mental; Estigma; Estigma num contexto de gestão; Atribuição de traços; Estratégias para acabar com o estigma.

Acknowledgements

First of all, I would like to thank my parents for supporting me in every journey I plan and for giving me the opportunity to study at Católica University in Lisbon. It has always, and will always, mean a lot to me and I know that they will always be behind me giving me a huge security and support for every idea I have.

A special thank you goes to my brother who I consider as my biggest idol. He always supports me when I have already struggled in believing the impossible.

Furthermore, I would like to every one of my friends who supported me in the work that was created in this thesis, without the support of friends and colleagues this work would not have been the same.

I would also like to express my sincere gratitude to Professor Sofia Jacinto. Her knowledge and valuable insights into psychology and business inspired me throughout this process, alongside with her dedication, motivation and exceptional guidance.

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Introduction

"The single most important barrier to overcome in the community is the stigma and associated discrimination towards persons suffering from mental and behavioural disorders."
- The World Health Organisation (2001, p. 98)

Background and Problem Statement

More than 792 million people worldwide suffered from a mental illness in 2017. Specifically, anxiety disorder with 284 million and depression with 264 million patients mark the two most common mental conditions globally (Statista, 2017). Especially, these two mental illnesses have been found to be increasing due to the Covid-19 pandemic – 2020, 54 million more people than in 2019 suffered from a depressive disorder while there were 76 million more than in 2019 facing an anxiety disorder according to a study conducted by the Lancet in 2020. The study further alludes, the countries that had the highest numbers of Covid-19 patients also reflected the strongest increase of mental illnesses in their population (The Lancet Study, 2020). The numbers are considered as alarming, in part because available solutions are far from sufficient. This is especially troubling when taking into account the fact that people are not undergoing the treatment for mental illnesses offered and improved for them. Personal barriers and system-level barriers are potential reasons for this. Personal reasons for avoiding treatment could be poor mental health literacy or the conviction that treatment as such does not help. System barriers on the other hand include long waiting times for treatment therapies, financial struggle or insurance issues (Corrigan et al., 2014). All these negative reasons are further impacted in a negative way by stigma. Stigma does not only work as an impediment for treatment, but it also creates an additional burden for mentally ill individuals (Corrigan, 2006). Symptoms of a mental illness, if intense and untreated, may be associated with high psychological, and sometimes physical suffering which impacts the overall life quality, including social and work contexts. In addition, mental illnesses lead to negative social reactions due to the mentioned stigmatization which happens in various forms and makes life even more difficult for the affected (Corrigan, 2000). The beginnings of stigma research are traced back to Goffman, who was one of the first persons to state that patients with mental disorders do not only face the actual symptoms but also wrong prejudices, judgements, and treatment of others due to the overall stigmatization of psychological conditions (Goffman, 1963).

Relevance for Research

Generally speaking, stigma is a challenge for today's society and is especially difficult for those who suffer from a mental illness. Nevertheless, people with a mental condition strive for a normal everyday life and often pursue a job where they are treated in a normal manner, without being stigmatized. In order to make things more convenient for them to follow their intention, a societal shift is required in order to eliminate stigma. This is not limited to the responsibility of international- or national institutions to adapt new policies and regulations for more protection towards people who suffer from mental illness. However, the issue of stigma is also a managerial problem, implying the responsibility of the employer and every employee to reflect and correct possible stigmatizing behavior. The current working culture in most companies is required to change to a working culture in which mentally ill people are fully accepted. For this it is important for the employer to understand the concept of stigma and how it evolves in the workplace as well as within the overall working culture of a company. Once this precondition is fulfilled, the employer is able to start introducing measures that lead to more awareness and peoples' understanding of the topic, ultimately followed by the reduction of stigma. One reason for writing this thesis is the clarification of this specific topic: Establishing an in-depth understanding of the concept of stigma and raising the awareness about it.

Another reason for this research is to close the existing knowledge gap regarding stigma in the world of business compared to the extensive research that has been done in relation to stigmatization in the field of psychology. This connection will be established throughout this thesis and the problem will be elaborated from the perspective of a business environment.

Aims and Scope

This dissertation takes part in the research focused on better understanding stigma towards mental illnesses and possible ways to change the current, rather negatively characterized situation people with a mental illness are in. Firstly, the intention is to explore the impact of the level of awareness about mental illnesses on stigmatizing behaviour. Secondly, the impact of causal attribution of illnesses, namely when it is attributed to the body or the mind, on stigmatization will be researched. Following an experimental paradigm, in the present study participants were asked to share their evaluations on fictitious employees who were described to them in a managerial context.

The focus of this dissertation lies on stigma of mental illnesses, with a specific focus on the managerial and working environment. The overall research will allow the reader to better understand judgments about how a person's personal traits and working competence are evaluated given different conditions. Stigma will be measured in this thesis with social distance scales and the evaluation and prediction of the working performance in the given scenarios. Therefore, this thesis will answer the following research questions:

Research Question 1: Are levels of stigma of mental illness prevalent in the work environment?

Research Question 2: How does the level of awareness of mental illness influence stigmatizing behaviour?

Research Question 3: Has the Covid-19 pandemic an impact on stigma and if so, how?

Research Question 4: How does causal attribution of symptoms of illnesses affect perceptions about others and stigmatizing reactions in a managerial context?

Hypotheses

Hypothesis 1

Individuals with a direct level of awareness make fewer stigmatizing responses when they are confronted with an illness that is attributed to mind compared to being introduced to an illness attributed to the body. The effect of level of awareness on stigmatizing responses therefore depends on the effect of causal attribution.

Hypothesis 2

Direct and indirect level of awareness about mental illness leads to less stigmatizing judgements and responses than an absent level of awareness.

Hypothesis 3

Individuals make more stigmatizing judgements towards a person suffering from a mental illness, being attributed to the mind, compared to a person that endures a physical illness that is attributed to body.

Dissertation Outline

This dissertation is divided into six chapters. The current chapter introduces the topic of mental illness stigma, the background and the problem statement, the aim and scope of this study and lastly, the relevance. In chapter two the existing literature review and possible theories for stigma are explained. The following chapter three states the methodology that was used to collect the required data for the study. The chapter is again divided into a detailed description of the participants of the survey, the materials and the procedure, the method, and the design. Afterwards, results are described in chapter four, followed by an extensive discussion about the impact of these results, their limitations, impact for the managerial context, and recommendations for future research. Finally, the most prominent results are summarized in the conclusion.

Literature Review

This chapter alludes general theories and studies with respect to mental illness and its stigma out of the psychological field. After the general definitions of mental health and mental illness, the term stigma as such is explained and different explanatory approaches are presented. Afterwards, the Social Attribution Model as proposed by Corrigan is examined, followed by the explanation of the Attribution Theory of Weiner. In the end of this chapter, cases of different stigma as well as the reason for them and strategies to reduce stigma are outlined.

I Definition of Mental Health and Illness

The research at hand focuses on stigma, specifically stigmatizing judgements towards individuals with a mental illness in a managerial context. The examination of the literature regarding mental illness stigma requires clarification of the concepts of *mental health* and *mental illness*. The World Health Organization (WHO) defines mental health as part of someone's overall well-being and highlights that this does not solely imply an absence of mental illness. However, besides the absence of mental illness, a mentally healthy person, according to the WHO, is presumed to be able to realize his or her abilities and to cope with stress on a normal level. Furthermore, a person with a good mental health has the capability to be productive and creates a contribution in any form to his or her community (WHO, 2018).

Mental illness, on the other hand, is defined as a health condition which impacts the human mind and impedes overall brain functions (Corrigan et al., 2014). A mental illness can lead to changes in one's identity and modifications in the perception of "self" (Malla & Garcia, 2015). Following the definition of the Diagnostic and Statistical Manual of Mental Disorders (DSM) mental illness is characterized by a dysregulation within the mind or brain leading to either distress or a disruption of a person's function in everyday life (American Psychiatric Association, 2013).

Given the above definitions, it can be concluded that mental health is not considered as the direct opposite of mental illness. Although a person may experience peaks of suffering or has contextual lower performance associated to a lower emotional or cognitive ability, this person can still be considered healthy and capable when he or she gives a relevant and adequate contribution. Subsequently, someone who has no mental illness can still have a low level of mental health (Keyes, 2005). Keyes created a model in his study, claiming that mental health and mental illness are not opposite ends on a single continuum. However, they should rather

be considered on a two continua model, in which mental health is viewed as a complete state and not only the absence of a mental illness (Keyes, 2005). Mental health and mental illness are related, however, they both indicate different amplitudes: While mental health implies the presence or absence of mental health, mental illness alludes presence or absence of mental illness (Wersterhoff & Keyes 2010). To sum it up, people who are affected by a mental illness can still have a good degree of mental health and therefore belong, by the definition of the WHO, to the ones being mentally healthy, as they fulfill the presumed conditions. However, despite the fact that people with mental illness are still capable to successfully conduct tasks, stigma is highly pervasive in our society (Follmer & Jones, 2017), also including the work and managerial contexts. Hence, the need arises to investigate the reasons for stigma and the conditions in which stigma responses are reduced at work, which will be done in the following.

Definition and Models of Stigma

The origin of the word 'stigma' is traced back to the Greek and expresses; 'a mark of shame' or 'discredit or a sign' (Merriam-Webster Dictionary, 2021). Stigmatizing behavior towards people with mental illness is characterized by multifaceted behaviors (Penn & Martin, 1998) and exists towards various visible- (different skin color) as well as invisible-traits (sexuality or mental illness with symptoms being not as clear as other forms of attributes). This dissertation will focus on the stigma of the latter – mental illness.

Public Stigma and Self-Stigma

A distinction is made between two types of stigma, namely *public stigma* and *self-stigma*. Public stigma is defined as stigma that is endorsed by the public towards a stigmatized group. Self-stigma exists when the person who belongs to this stigmatized group starts to internalize the critics made from outside (Corrigan et al., 2014). With this process the people affected by stigma start to adapt the claims made from the external environment in the evaluation of themselves (Fung et al., 2009). Public stigma takes on various forms, for instance, people who suffer from a mental illness are often disadvantaged when it comes to housing search or employment processes compared to people without a mental illness (Corbière et al. 2011). The consequences of self-stigma can be observed when people who are faced by stigma in their environment start to stigmatize themselves. They decrease their self-esteem and their overall confidence levels in themselves are negatively influenced (Corrigan & Rao, 2012). Perhaps, the most drastic consequence of self-stigma, is the reduction of the intention and the

behavior to seek help (Corrigan & Rao, 2012). This can lead to isolation and symptoms aggravation as well as, in the worst cases, to situations in which people commit suicide. Despite improvements in psychotherapy, people do not want to identify themselves as someone being mentally ill and thus, big parts of the now available treatment to heal psychological illnesses is not used due to stigma (Corrigan et al.,2014).

II The Role of Society in Mental Illness Stigma

On an overall societal level, the concepts of mental health and mental illness have not yet reached full acceptance and mental illness is still associated with increased levels of stigma. This lack of acceptance is, in part, sustained by media content that presents misconceptions about mentally ill people. In the media mentally ill are often times illustrated as dangerous, unpredictable people someone should be afraid of (Rössler, 2016). From a medical and psychological point of view significant improvements in the treatment of mental illnesses can be observed. Additionally, from an overall political perspective, there are improvements: Governments are assigning higher budgets for the mental health sector and more institutions are recognizing the importance of mental health and its awareness (The Lancet, 2020). For instance, the United Nations mentioned mental health as one of its sustainable development goals (Sustainable Goals UN, 2015) and the new elected German regime included a new paragraph for mental health in its new coalition agreement in 2021(Coalition Agreement SPD, 90 Alliance/Greens & FDP, 2021). All in all, the shift to a society becoming more aware of mental illnesses and existent stigma has been initiated, however, much has still to be understood and adapted.

III Impact of Mental Illness Stigma at Work

Studies prove that people with depression are impacted positively from regular work as their general health increases, their self-esteem becomes stronger (Gold et al., 2014) and they obtain more structure in their everyday life (Boot et al., 2015). Furthermore, mentally ill people who work frequently, have the feeling of a purpose in life and engage more often in the enhancing of social contacts (Boot et al., 2015). However, stigma overweighs many of these positive aspects as it presents an important barrier to find and keep work for individuals with mental illnesses (Brohan et. al, 2014) (Scheid, 1998). Stigma reactions happening at work can be categorized as public stigma which, for instance, can be observed when employers hesitate to hire persons who revealed their mental illness (Corrigan, 2004). An American study found

that within 117 companies, 68% of those hired persons from minority groups, 41% employed persons with a general medical illness, however, only 33% of the questioned businesses were fine with hiring persons suffering from mental illnesses (Scheid, 1998). A further study found that the overall attitude towards people with mental illness was that people who suffer from a physical disability have an easier process to find work than those who suffer from a mental illness like schizophrenia, learning disability or depression. The study stated a significant difference in employers' opinion to hire people with mental illnesses compared to those who had physical illnesses existed (Zissi et. al, 2007). Within the daily working context, mentally ill individuals face the loss of credibility and generally speaking, they are not given much responsibility regarding working tasks (Brohan et al., 2012). In 2010, the costs for mental health were estimated to around USD 2.5 trillion worldwide due to low productivity or absentness. This number is expected to rise to approximately 6.0 trillion USD by 2030 (The Lancet, 2020). These numbers are alarming and further highlight a reason for people being reluctant to be honest and open about their mental illness as they are afraid of not being hired or stigmatized (The Lancet, 2020).

IV Models Explaining Stigma

Three models explain the origin of stigma, namely the sociological-, the motivational-, and the cognitive model. The sociological model takes the sociocultural perspective and alludes uneven social structures as the reason for stigma. The motivational model indicates basic psychological needs as the origin of stigma whereas the cognitive model examines that the reason for stigma is the result of how people process information. Within this model, the attention lies on the thinking process and how humans make categorizations and generalizations about others (Corrigan et al., 2004). The focus of this dissertation is placed on the explanation of social cognitive models.

Social Attribution Model

A generic social cognitive model of the process of stigma within an individual's thought-process is presented in the following. It illustrates the relationship between stigma signals, stereotypes and the resulting discrimination (Corrigan, 2000). The overall process is defined by an observed signal leading to a certain stereotype, which then ends in stigmatizing behavior.

Signals. Signals are the starting point of the thought-process and function as a trigger for a person to refer to a stereotype within one's mind. Examples for signals are labels, symptoms, skill deficits, and appearances (Penn & Martin, 1998). Firstly, the label of a mental illness by itself or the assumption of a label in some cases is sufficient as a signal leading to stereotypes. More specifically, it is possible that the mere observation of a person walking out of a psychological clinic implies a signal leading to stigma. Moreover, a study showed that individuals were stigmatized even though they did not show any abnormal symptoms, however, the label as such was enough to stigmatize them (Link, 1987). Another signal that accelerates negative stigmatizing behavior are actual symptoms observed. Studies have shown that irregularities in language, poor social skills or signals in body language lead to stigmatizing behaviors (Corrigan, 2000). The last possibility of a signal is appearance, meaning physical attractiveness and personal hygiene that can be considered as indicators of mental illness leading to stigmatizing behaviors (Corrigan, 2000).

Stereotypes. As soon as signals have been observed or recognized, these trigger stereotypes that add meaning to them. Stereotypes are defined as cognitive structures humans have in their minds and they influence the perception people take (Corrigan, 2000). These are created and developed through certain events and emotions. A stereotype as such does not directly lead to stigmatizing behavior. The person can still decide to act upon this stereotype or not. Typical stereotypes of people that are mentally ill are dangerous, mentally ill are inferior to healthy people or seen as unfortunate due to their condition (Coehen & Sturening, 1962).

Behavior. The last element of the cognitive model is the actual behavior. The behavior, in case of stigma is discrimination and is the end result of the observation of a signal and the action upon a negative stereotype by a person. This discrimination is categorized as stigma, more specifically public stigma (Corrigan, 2000).

Attribution Theory

The human brain always tries to find and use methods to work as efficient as possible when it comes to decision-making. Once a method has been found, decisions and judgments are made using a short-cut, also referred to as heuristics, instead of thinking completely rational (Marewski et al., 2010). This process mainly happens unconsciously and often times leads to biases. However, humans can also reflect rationally on their behavior, and are able to correct their behaviors. The Attribution theory, proposed by Fritz Heider in 1958, first formulated in

1972 by Bernard Weiner, further proves this process of human thinking. Individuals, according to this theory, aim to analyze and find causal connections of events that happen. Hereby, they are able to explain the situation and can name reasons for why certain things happened (Weiner, 1985). Consequently, once a causal link to a situation has been established, thought patterns, beliefs and stereotypes are created that are stored in the brain and can be retrieved at any time in the future. Important to note, is the overall outcome of attributions: Attributions are neither based upon factual assumptions nor are they from an objective perspective; they represent a subjective evaluation of the observer of the situation. Moreover, humans tend to neglect circumstances of situations and the overall picture of what happened. This bias is called correspondence bias, also known as fundamental attribution error (Gilbert & Malone, 1995). The correspondence bias can be traced back to the fact that once trait inferences are developed, they are revised automatically and used in a very spontaneous way. It is not easy to revert these as they function as a kind of habit in human brains. Overall, the Attribution Theory clarifies the process underlying stigma. Additionally, it gives explanations to why differences are prevalent when it comes to the causal attribution of an illness which will be elaborated in the following.

V Body and Mind Gap

In relation to illnesses, the construct of controllability was found as an attribution that impacts the perceptions people have (Corrigan, 2000). Controllability refers to the ill person's responsibility to his or her disease. Here, a distinction is drawn between onset and offset responsibility. Onset responsibility defines the responsibility of the sick person for having the illness. Offset responsibility is the responsibility of the person for the course and the maintenance of that condition, meaning how the person is coping with the illness and how much effort is given to change the situation. The aspect of controllability leads to the causal attribution and gives clarification about why humans seem to have higher stigma towards someone who has a mental illness compared to someone with a physical illness. When studying causal attribution, there are dispositional attributions and situational attributions. Dispositional attributions are caused by the person affected, whereas situational attributions are the outcome of something that happened in the environment of this person, also categorized as external causes (Ramachandran, 2012). The first group of attributions is considered as controllable, whereas the second group is categorized as uncontrollable. Based on research, mental illnesses generally received more negative reactions than physical illnesses (Crandall & Moriarity,

1995). A reason for this is the opinion of people that mental illness is more controllable, as it involves the mind, implying dispositional attributions since it is within oneself, than physical illnesses that is mainly caused by external factors. All in all, it can be concluded that due to humans' willingness to find an attribution to every event, they are at risk to make an attribution error. Humans tend to have higher stigma towards an illness which is considered to be controllable.

Examples for stigma towards people with physically illness

It is important to recognize that besides stigma towards mentally ill, stigmatizing responses also occur for physical illnesses conditions. This is also traced back to the attribution theory and the aspect of controllability. Studies show that people who have HIV or lung cancer are often viewed as being responsible for the onset of their illnesses and they are stigmatized based on this assumption (Dunn et al., 2016) (Miller et al., 2007). The same is applicable for people who suffer from obesity with the difference that besides onset responsibility, also offset responsibility is considered high and people therefore make stigmatizing evaluations. This is due to the fact that body weight is seen as controllable. Often, obesity is associated with laziness and irresponsibility even though the context of the situation of why the person is obese is not known (Stangl et al., 2019).

VI The case of the COVID19- pandemic and its relation to Mental Health/Stigma

Since the beginning of the Covid-19 pandemic lives of humans all over the world have been impacted dramatically. This impact is not solely attributable to the risk of being infected or the virus itself but to the negative consequences in form of economic crises, the fear of a possible collapse of the health system, social isolation, and the overall mental health conditions that are developed by individuals when facing the current situation. Besides the negative mental impacts there were also positive effects as the Covid-19 pandemic accelerated the awareness about the importance of mental health and the awareness about mental illnesses. It increased the accessibility to support in those matters and the services for the people who are affected by mental illnesses. People started talking about their mental illnesses, their anxiety, and their stress levels or other psychological issues. Moreover, people who open up about their mental illness recognize that they are not on their own as they get to know more people who face the same situation (UN, 2020).

VII Reduction of Stigma

Researchers all over the world are conducting studies on possible ways to reduce stigma on mental illnesses and to support individuals that are affected by it (Corrigan et al., 2014). Corrigan and Penn (1999) proposed three different strategies for mental stigma reduction, namely, protest, education, and having contact with a person who is mentally ill. Protest relates to the event where people protest against the existent stigmatization, education refers to the process of people being informed about mental illness, and contact involves the meeting of a healthy person and a person who is mentally ill. The strategy relevant to this dissertation and research, is the strategy of education and information. Studies show that the effects of stigma are moderated by more awareness about the topic (Corrigan et al., 2014). Awareness about mental illness does not only clarify the current situation of stigma but also leads to more sensibility of the person who is informed. Furthermore, it could be proven that humans who have a broader understanding of mental illnesses are less likely to stigmatize (Brockington et al.,1993). Therefore, it is assumed that increased awareness about mental illnesses reduces negative stereotypes and subsequently leads to lower levels of stigma (Weiner, 1985; Foersterling, 1985).

VIII Conclusion based on Theory

All in all, the theory and studies already done in relation to stigma, prove that stigma is prevalent within social life as well as in a managerial context. The process of stigma starts with the observance of a signal, triggering a negative stereotype and resulting in discrimination. The theory underlying stigmatizing behaviors is traced back to the attribution theory. Furthermore, the differences in stigmatizing behaviors towards different kinds of illnesses is referred to the construct of controllability. In order for institutions and the employer to reduce stigma, possible ways as protest, education, and contact were proposed.

Methodology

The first goal of this dissertation is to find out if stigmatizing behaviours towards mental illness in a managerial context is influenced by different levels of awareness on the topic of mental illness. Secondly, the aim is to understand how stigma varies with the causal attribution of an illness, namely an illness attributed to the body compared to one attributed to the mind. To analyse these questions, a quantitative methodology was used following an experimental paradigm.

I Participants

In total a sum of 207 participant have answered the questionnaires, for each of the six possible surveys, more than 30 participants responded, creating a statistically relevant data collection. Of these 207 participants, 47.8% were female whereas 50.2% were male and 1.4% decided not to reveal their gender. The age ranged from 10 up to 65 years, however most of the participants were between 25 and 35. Most of the participants were from Germany, represented by 72.9%, second most people came from Portugal. Besides that, most of the questioned participants were full-time employees (62.3%). The questionnaire was conducted completely in English.

II Materials

The following paragraph elaborates on the materials that were used to support the questionnaire. The materials consist of independent and dependent variables, their measurements and the content of the presented vignettes. All elements and their contents that aimed to make the experience of the survey vivid and as realistic as possible, are examined in this chapter.

Involved variables

Derived from the hypotheses, two independent variables can be identified, namely *the level of awareness of mental illness* and *causal attribution of illness*. The dependent variable involved in this study is *stigmatization*, measured and explained by the responses made by the participants. This is measured with social distance scales and different types of evaluations of working traits of an introduced person.

(1) Level of awareness

The variable of level of awareness involved three conditions, namely a direct level of awareness, an indirect level of awareness, and an absent level of awareness. These were structured in three vignettes, each participant, however, only saw one of the optional vignettes. Within the condition of direct level of awareness, participants were informed about numbers of mental illness issues. This condition was chosen to analyse how participants stigmatize others when they are informed about mental issue and its impact. A positive impact was assumed on the way people stigmatize after being reminded of mental illness numbers. Within the indirect level of awareness, participants were reminded of the Covid-19 pandemic. It was used to examine the impact of the pandemic on how people stigmatize, since, based on the theories made, the pandemic increased the debate on mental health problems and its impact on work- environments and accomplishments. The underlying assumption for this variable was that this vignette would have a positive impact on stigmatizing as society was confronted with mental illnesses due to Covid-19 pandemic related lockdowns and the overall situation about risk and health. The last vignette, namely the vignette about heart disease, does not have a level of mental illness information as such. It functions as a control condition to compare its effect with the effects of the mental illness campaign and the Covid-19 pandemic reminder. The heart disease campaign was selected as it involves a serious disease that can compromise work accomplishments and success, without a direct connection to mental illness or Covid-19 pandemic.

These three possible scenarios were connected to a randomizer on Qualtrics, used to ensure that the participants were only confronted with one scenario and not all three.

(2) Causal attribution of illness

The second independent variable involved two possible conditions, namely an illness attributed to the mind, depression, and an illness attributed to the body – diabetes. A second vignette with two possibilities was presented to the participants, including the manipulation of causal attribution.

Both vignettes were built in an identical way, the only difference being the character and illness that was introduced. The participants were confronted with the scenario that they were given the responsibility for a project at work and they had to choose an employee to collaborate

with. This information was introduced, as the focus of this research is to explore how participants decide in a scenario at workplace, in which responsibility is involved and the outcome of a project is decisive. To manipulate causal attribution of illness two different collaborators were introduced, one employee with depression, categorized a mental illness and another with diabetes, defined as physical illness. Both employees were presented as very good employees with the exact same characteristics and working traits, the only difference being that the first person had depression and the second had diabetes.

Dependent Variable

The dependent variable in this dissertation is the stigmatization of illnesses with a focus on the stigmatization of mental illnesses specifically. The variable is measured by managerial stigma, social distance scales, and an attribution score. The materials that were used in this regard consisted of the Managerial Decisions Scale created by the author of this dissertation, the Attribution Questionnaire created by Corrigan (AQ9), the social distance scale of Schomerus and the Workplace Social Distance Scale that was developed by Yoshii and colleagues.

III Scales used within the Questionnaire

Managerial Decisions scale

The first measurement that was introduced in the survey consisted of questions in a managerial context. In this part, participants had to decide regarding the employees who were introduced in the vignette before, namely Helena (depression) or Sara (diabetes). The first question was: “When you think about Helena/Sara, would you choose her for your project?”. The answers are given on a 7-point Likert Scale, labelled as “1” being “not likely at all” and “7” “totally likely”. It was the only question on this page as the intention was to receive an intuitive answer. The following page entailed the same 7-point Likert Scale and the following questions to evaluate (1) “How likely is it that Helena/Sara will close the next deal with success?” (2) “How likely is it that you would continue to collaborate with Helena/Sara after the project has finished?” (3) “How likely is it that you will meet Helena/Sara also besides work to have lunch or dinner together?”.

Attribution Questionnaire (AQ9)

The second measurement used, was the Attribution Questionnaire AQ9 (Corrigan, 2003), consisting of nine questions. Corrigan established this scale to address nine typical stereotypes people have about people with a mental illness. For the scope of this research, the questions were asked in the context of a psychological illness, however, besides them being further introduced in the situation of a person having a physical illness to compare the answers. The scale was slightly adapted in statement (8) to make it suitable to a physical illness. No further adaption was made. Participants were requested to evaluate the statements given which are listed as follows:

(1) "Helena/Sara is to blame for his illness" (2) "I would have sympathy for Helena/Sara", (3) "Helena/Sara would make me angry", (4) "I would feel unsafe around Helena/Sara", (5) "Helena/Sara would terrify me", (6) "If I were an employer, I would interview Helena/Sara for a job", (7) "If I were in charge of Helena's/Sara's treatment, I would require her to take her medication'. (8) "I think it would be best for Helena's community if she were put away in a psychiatry clinic", was changed for the body attribution into "I think it would be best for Sara's community if he were put away in a clinic." (9) 'I would help Helena/Sara '.

Social Distance Scale

The scale was created by Schomerus et al. 2013 to find out what emotional reactions people have about people that are mentally ill. The rationale for the usage in this dissertation at hand is to assess emotional responses regarding the named characters (Helena/Sara) and the differences of reactions regarding a person with depression (Helena) compared to a person with diabetes (Sara).

The scale consists of 10 elements that were used to ask the participants to indicate how they would react to both managers. One element of the scale was removed for the purpose of this study as it was characterized as a non-stigmatizing element by the author of this thesis, namely element (8) "I feel sympathy". It was specifically excluded since it would lead to a distorted result of stigmatizing behaviours.

A 5-point Likert scale was used, anchored with “1 - Does not apply at all” and “5 - Applies completely”. (1) “I feel uncomfortable”, (2) “The person provokes fear” , (3) “I feel insecure”, (4) “I am amused”, (5) “I react angrily”, (6) “I feel annoyed”, (7) ”The person provokes my incomprehension”, (8) “I feel the need to help” and (10) “I feel pity”.

Working Social Distance Scale

The last scale that was used was the Workplace Social Distance Scale. Yoshii et al., 2015 changed a scale developed by Whatley (1959) into a 7- point scale that can be applied to a work setting. This scale asks about the general opinion and is as such not connected to the introduced characters. The scale points are described as “1 – Do not agree at all” and “9 – Completely agree”.

The statements used are: (1) “It would bother me to work next to a co-worker with a mental health condition”, (2) “It is best not to associate with a co-worker with a mental health condition who has been in a mental hospital”, (3) “Manager with mental health conditions should not be allowed to teach how to work at the workplace”, (4) ”I would rather not hire a person with a mental health condition who had been in a hospital”, (5) “I would not employ someone if I knew they had a mental health condition”, (6) “I believe organizations take a risk when employing people with mental health conditions” and (7) “I believe people should try to conceal their mental health conditions at work.”

Procedure

In order to prove the hypotheses that were created in the introduction of this thesis, an online survey was created and distributed via the software Qualtrics. The survey was shared to contacts on the social media platforms: LinkedIn, Instagram, WhatsApp as well as via E-Mail. Additionally, the survey was shared in the company the author currently works at, asking approximately 55 people to participate. A total of six surveys were created and evenly shared. Participants were sent a link that would randomly assign them to one of those six experimental conditions:

- Three conditions of level of awareness conditions that were introduced in the first part of the study and manipulated between subjects; and
- Two conditions of causal attribution of illness that were also manipulated between-subjects and presented in the second part of the study.

The questionnaire started with an introduction page informing participants about the topic of the survey and asking for their consent to use their entered data. With respect to the topic of the study, it was explained that the survey deals with social interactions at work. The actual topic of stigma was not included, to avoid potential biases in the answers. Following the consent page, the condition of the first independent variable level of awareness was introduced to the participants and one of the three above explained campaigns was presented in a vignette. Subsequently, the participants were presented the managerial scenario as well as the managerial questions and were introduced to the possible employees they could chose for the project. Thus, the condition of causal attribution was implemented in the questionnaire. After the introduction of either Helena, having depression or Sara, suffering from diabetes, the structure of the question for both scenarios remained the same. Afterwards, The Social Distance Scale, Corrigan's Attribution Questionnaire AQ9 and Working Social Distance scale, described in the Materials Section, were presented.

Demographics

At the end of the survey, participants were asked about their work and personal demographics. Specifically, participants were asked for their general demographics like gender, age and nationality.

Design

The design of the survey followed a between-subject factor survey through a randomized survey and conditions that are explored within subjects. Hereby, two variables were explored, being the level of information condition with three conditions (Mental Illness Campaign, Covid-19 pandemic Campaign, Heath Disease Campaign) and the causal attribution with two conditions (mind attribution and body attribution), resulting in six experimental conditions between participants. Through the randomization of the surveys, a participant either saw a mental health campaign, Covid-19 pandemic reminder or heart disease campaign and introduced to an employee having a psychological issue (Helena-Depression) or a physical health condition (Sara-diabetes).

Results

The current chapter describes the results of the present research. For each measurement scale used in the questionnaire, a two-way ANOVA test was conducted between subjects in both factors, particularly the level of awareness and causal attribution. Following the ANOVAs, t-tests were run to enhance the understanding of the results and to further investigate whether the presumed hypotheses can either be accepted or rejected. Henceforth, the test results of each measurement scales, namely the Managerial Decision Scale (based on a scale from 1 to 7, 7 being the highest stigmatizing answer), the Social Distance Scale (based on a scale from 1 to 5, 5 being the highest stigmatizing answer), Attribution Questionnaire (based on a scale from 1 to 9, 9 being the highest stigmatizing answer) and Working Distance Scale (based on a scale from 1 to 9, 9 being the highest stigmatizing answer), are provided and explained in detail.

I Results of the Managerial Decisions Scale

The data analysis of the Managerial Decisions Scale started with the performance of a two-way ANOVA test. Given the results of this test, a statistically significant main effect of the level of awareness was found with F (2, 201) = 4.89, p = .008, $\eta^2_{partial}$ = .046. This effect could be attributed specifically to the group of indirect level of awareness and the group of absent level of awareness. The indirect level of awareness ($M_{indirect}$ = 3.03, $SE_{indirect}$ = 0.12) led to a higher managerial stigma than the group of absent level of awareness (M_{abs} = 2.50, SE_{abs} = 0.12). This difference of M = 0.52 was significant (p = .007, 95% CI [0.12 to 0.93]). These results lead to a rejection of hypothesis 2, since, contrary of what has been assumed, indirect level of awareness leads to higher and not lower managerial stigma than no awareness of mental illness. Considering the results of the ANOVA in relation to the factor of causal attribution, no main effect on managerial stigma could be found as F (1, 201) = 0.19, p = .662, $\eta^2_{partial}$ = .001. Hence, the condition of the mind attribution (depression) (M_{mind} = 2.76, SE_{mind} = 0.10) was not significantly different from the body attribution (diabetes) condition (M_{body} = 2.70, SE_{body} = 0.10). Besides the results above, the results of the two-way ANOVA test illustrated that there was no statistically significant interaction between causal attribution and level of awareness as F (2,201) = 1.22, p = .296 and partial $\eta^2_{partial}$ = .012.

Hypothesis 1

Although the ANOVA test did not prove an interaction effect of the two variables, further t-tests were conducted as a main effect of level of awareness could be established. To enhance the understanding of the results regarding this effect, scores in the managerial stigma

of the group of direct level of awareness and the group of indirect awareness for each causal attribution condition were compared with each other. A significant result was found for the condition of body attribution (diabetes) as the difference between the direct level of awareness (M_{direct} = 2.48, SD_{direct} = 0.98) and indirect level ($M_{indirect}$ = 3.09, $SD_{indirect}$ = 1.19) was significant with t (75) = -2.45, p = .017. Based on these results it can be concluded that an indirect level of awareness leads to higher stigmatizing results towards a body attributed illness than direct level of awareness. The t-test results for the condition of the mind attribution illness (depression) had no statistically significant result as t (63) = -0.531, p = .597. Hence, the group of direct level of awareness (M_{direct} = 2.84, SD_{direct} = 0.91) did not significantly differ from the body attribution (diabetes) condition ($M_{indirect}$ = 2.96, $SE_{indirect}$ = 0.88).

Hypothesis 2

To enhance the findings made with the ANOVA tests regarding the managerial stigmatizing responses of the groups of direct and indirect level of awareness compared to an absent level of awareness, t-tests were conducted with the specific focus on the mind causal attribution. The first t-test found differences comparing the group of indirect level of awareness ($M_{indirect}$ =2.96, $SD_{indirect}$ = 0.88) and the group of absent level of awareness (M_{absent} = 2.48, SD_{absent} = 0.88). This difference was M= 0.48, 95% CI [0.047 to 0.92] and was indicated as significant as t (63) = 2.22, p = .030. Based on this result the conclusion was drawn, that the managerial stigma was higher in the group of indirect level of awareness than in the group of no level of awareness, therefore rejecting hypothesis 2. The test involving a comparison between direct (M_{direct} = 2.84, SD_{direct} = 0.91) and absent level of awareness (M_{abs} = 2.48, SD_{abs} = 0.88) showed no statistically significant difference as t (62) = 1.64, p = .107.

Table 1

Means and Standard Deviations on the Measure of Managerial Decision Scale

	Level of Awareness							
	Direct Level of Awareness		Indirect Level of Awareness		Absent Level of Awareness		Total	
Causal Attribution	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Managerial Decisions Scale								
Mind Attribution (Depression)	2.84	0.91	2.96	0.88	2.48	0.88	2.76	0.91
Body Attribution (Diabetes)	2.48	0.98	3.09	1.19	2.53	1.07	2.7	1.11
Total	2.64	0.96	3.03	1.05	2.50	0.98		

The results of *Table 1* show that an indirect level of awareness is characterized by a higher managerial stigma compared to absent level of awareness which was a statistically significant result. Furthermore, the tendency can be observed that both direct level of awareness and indirect level of awareness have higher managerial stigma scores than an absent level of awareness. Considering the direct level of awareness, the tendency becomes clear that mind attribution illness was higher stigmatized than body attribution illness, whereas within the indirect level of awareness, the value of body attribution stigma was higher than mind attribution. Overall managerial stigma was higher within the indirect level of awareness, both, for mind and body attribution.

II Results of the Social Distance Scale Schomerus

For the Social Distance Scale, the first test conducted was an overall two-way ANOVA to investigate an interaction effect and main effects. Considering the results, a statistically significant main effect of level of awareness was found with $F\ (2,\ 201) = 3.68, p = .027$,

$\eta^2_{partial}$ = .035**.** More specifically, the group of direct level of awareness (M_{direct} = 2.13 SE_{direct} = 0.07) differed from the group of absent level of awareness (M_{absent}= 1.89 SE_{absent} = 0.07). This difference of M=0.26 was significant as 95% CI [0.01 to 0.51] p= 0.040. Based on the named results, the conclusion can be drawn that higher social distance scores were prevalent in the group with a direct level of awareness than in the group with no level of awareness, therefore, hypothesis 2 was rejected. Studying the main effect of causal attribution, no statistically significant difference in the Social Distance Scores for mind attribution and body attribution was found as F (1, 201) = 0.025, p = .874, $\eta^2_{partial}$ = .000. Hence, the condition of the mind attribution (depression) (M_{mind} = 2.05, SE_{mind} = 0.06) was not significantly different from the body attribution (diabetes) condition (M_{body} = 2.04, SE_{body} = 0.05). The results of the ANOVA test showed that there was no statistically significant interaction between level of awareness and causal attribution on the Social Distance Score as F (2,201) = 1.718, p = .182 and $\eta^2_{partial}$ = .017.

Hypothesis 1

To deepen the understanding of the results regarding the level of awareness on managerial stigmatizing responses, an independent-samples t-test was conducted. This test specifically explored the differences in the social distance scores between the group of direct level of awareness and the group of indirect awareness for each causal attribution condition. For the mind attribution conditions, no significant result has been found as t (63) = 1.495, p = 0.14. This implied that the condition of direct level of awareness (M_{direct} = 2.25, SD_{direct} = 0.60) and the condition of indirect level of awareness ($M_{indirect}$ = 2.04, $SD_{indirect}$ = 0.56) did not differ significantly. In addition to that, for the condition of the body attribution illness (diabetes), there was no statistically significant difference found as t (75) = -0.981, p = 0.330. Again, the groups of direct level of awareness (M_{direct} = 2.03, SD_{direct} = 0.70) and indirect awareness did not differ in a significant way ($M_{indirect}$ = 2.19, $SD_{indirect}$ = 0.66). These results lead to a rejection of hypothesis 1 as no interaction was found and neither a significant result within further t-tests.

Hypothesis 2

In order to determine differences in the Social Distance Scores and to decide whether hypothesis 2 can be accepted, a t-test was run. This test compared the groups of direct level of awareness and the group of absent awareness. The focus was the condition of the mind attribution (depression), subsequently the answers of body attribution (diabetes) groups were

excluded from this analysis. The results of the test showed a statistically significant result: The level of the Social Distance Score was higher in the group of direct level of awareness (M_{direct} = 2.25, SD_{direct} = 0.60) than in the group of absent awareness (M_{absent} = 1.87, SD_{absent} = 0.54). This implies a statistically significant difference of M= 0.38, 95% CI [0.10 to 0.67], t (62) = 2.27, p = .009. To conclude, the group of direct level of awareness had a higher social distance score than the group of no level awareness, thus partially rejecting the presumed hypothesis 2. A second independent-samples t-test was made to determine if the differences in the Social Distance Scores between the group of indirect level of awareness ($M_{indirect}$= 2.04, $SD_{indirect}$= 0.56) and the group of absent awareness (M_{absent} = 1.87, SD_{absent} = 0.54) were significant. However, no statistically significant difference was found between these two groups as t (63) = 1.23, p = .222. Subsequently, presumed hypothesis 2 further was partially rejected.

Table 2

Means, Standard Deviations and Marginal Means on the Measurement of Social Distance Scale

	Level of Awareness							
	Direct Level of Awareness		Indirect Level of Awareness		Absent Level of Awareness		Total	
Causal Attribution	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Schomerus Social Distance Scale								
Mind Attribution (Depression)	2.25	0.69	2.04	0.56	1.87	0.54	2.05	0.59
Body Attribution (Diabetes)	2.03	0.70	2.19	0.66	1.90	0.49	2.04	0.64
Total	2.13	0.67	2.11	0.62	1.88	0.61		

The results stated in *Table 2* suggest that even though no interaction effect between the independent variables was found, the tendency of the conditions of direct level of awareness has higher scores within the mind attribution than within the body attribution. Besides this, looking at the indirect level of awareness higher attribution scores were found in relation to body attribution than mind attribution. Furthermore, the direct level of awareness is characterized by a higher Social Distance score compared to no level of awareness which was also proven to be significant as mentioned above.

III Results of the Attribution Questionnaire

For the Attribution Questionnaire of Corrigan, a two-way ANOVA test was conducted. A statistically significant main effect of causal attribution was found as $F(1, 201) = 28.177$, $p = .000$, $\eta^2_{partial} = .123$. In detail, the group confronted with a mind attribution illness (depression) ($M_{mind} = 3.71$ $SE_{mind} = 0.06$) differed from the group that was introduced with an illness attributed

to the body (M_{body} = 3.25 and SE_{body} = 0.06). This difference was M=0.46 and significant since 95% CI [0.29 to 0.63], p = .000. Based on this result, hypothesis 3 could be accepted, claiming that differences between causal attribution exist. No statistically significant main effects of the level of awareness were found as F (2, 201) = 1.457, p = .235, $\eta^2_{partial}$ = .014. Furthermore, the data indicated that there was no statistically significant interaction between the variable of causal attribution and level of awareness for the Attribution Questionnaire score as F (2,201) = 0.139, p = .871, $\eta^2_{partial}$ = .001.

Hypothesis 1

A t-test was run to explore the effect of causal attribution combined with a direct level of awareness. There was statistically significant difference between the group of mind attribution (M_{mind}= 3.58, SE_{min}=0.17) and body attribution (M_{bod} =3.17, SE_{bod} =0.81) as t (70) = 2.33, p= .022, CI 95% [0.06 to 0.77]. This result indicates that, even though no Interaction effect was found, there is an overall tendency that under a direct level of awareness the Attribution Scores are higher in the condition of mind attribution compared to body attribution.

Hypothesis 3

To deepen the understanding regarding the effect of causal attribution, an independent samples t-test was run, without taking the condition of level of awareness into account. The Attribution Score was higher in the group of mind attribution (depression) (M_{mind} = 3.71, SD_{mind} = 0.71) than in the group of body attribution (diabetes) (M_{body} = 3.25, SD_{body} = 0.52). This indicated a difference of M=0.46 that was statistically significant since 95% CI [0.29 to 0.63], t (205) = 5.388, p = .000. Thus, it can be concluded that the overall levels of stigma were higher in the groups of mind attribution compared to the groups of body attribution which supports hypothesis 3.

Table 3

Means, Standard Deviations and Marginal Means on the Measurement of the Attribution Questionnaire

	Level of Awareness							
	Direct Level of Awareness		Indirect Level of Awareness		Absent Level of Awareness		Total	
Causal Attribution	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
	Attribution Questionnaire							
Mind Attribution (Depression)	3.58	0.97	3.80	0.52	3.74	0.56	3.71	0.71
Body Attribution (Diabetes)	3.17	0.51	3.28	0.62	3.31	0.40	3.25	0.52
Total	3.35	0.77	3.52	0.63	3.51	0.53		

The results of *Table 3* suggest that, even though no interaction was found between the independent variables, there is a tendency of an interaction effect, looking at the condition of direct level awareness. Within this condition, the attribution score for mind attribution implies higher stigmatizing responses than within the group of body attribution. Within the tests made, this result was proven to be significant with a t-test. This further applies for the indirect level of awareness in which the same situation occurred. Considering the main effect of causal attribution as mentioned previously, a significant difference existed between the groups of mind attribution and body attribution which is also indicated in the table, taking into account the total means.

IV Results – Results of Workplace Social Distance Scale

A two-way ANOVA analysis was conducted on the independent variables within the Workplace Social Distance scale. A statistically significant main effect of level of awareness was found with F (2, 201) = 3.361, p = .037, $\eta^2_{partial}$ = .032. This effect was traced back to the group of indirect level of awareness (M_{ind} = 3.61, SE_{ind} = .16) and absent level of awareness (M_{abs} = 3.03, SE_{abs} = 0.16). The difference of M= 0.58 was significant (95% CI [0.04 to 1.12] p = .031). Thus, the overall conclusion was made that there existed higher Workplace Social Distance Scores in the group with a indirect level of awareness than in the group with no level of awareness. This implied a rejection of hypothesis 2. For causal attribution no statistically, significant difference was found in the Workplace Social Distance Score as F (1, 201) = .011, p = .916, partial $\eta^2_{partial}$ = .000. Hence, within this scale the condition of the mind attribution (depression) (M_{mind} = 3.32, SE_{mind} = 0.13) was not significantly different from the body attribution (diabetes) condition (M_{body} = 3.30, SE_{body} = 0.12). The results of the overall ANOVA indicated that there was no statistically significant interaction between causal attribution and level of awareness for the Workplace Social Distance Score as F (2,201) = 1.304, p = .274, $\eta^2_{partial}$ = .013.

Hypothesis 1

To better understand the results regarding the main effect of the type of awareness, an independent-samples t-test was conducted to test the differences in the social distance scores between the group of direct level of awareness and the group of indirect awareness for each causal attribution condition. For the body attribution conditions a statistical difference has been found as t (75) = -2.061, p = 0.043. The Social Distance Scores of the group of direct level of awareness (M_{direct} = 3.09, SD_{direct} = 1.27) differed significantly from the group of indirect level of awareness ($M_{indirect}$ = 3.70, $SD_{indirect}$ = 1.35) within the body attribution condition. This implies the conclusion that higher levels of workplace social distance scores were triggered towards a body attributed illness (diabetes) within the condition of indirect level of awareness compared to the condition of direct awareness. For the condition of the mind attribution illness (depression), there was no statistically significant difference found as t (63) = .021, p = .983. This indicates that the groups of direct level of awareness (M_{direct} = 3.52, SD_{direct} = 1.12) did not differ in their responses compared to indirect level of awareness (Mind $_{indirect}$ = 3.51, SD $_{indirect}$ = 1.44) when confronted with a mind attribution illness.

Hypothesis 2

An independent-samples t-test was conducted to determine if differences in the Workplace Social Distance Scores between the group of direct level of awareness and the group of absent awareness existed. The focus was only on the condition of the mind attribution illness (depression); therefore, the groups of body attribution were not taken into account for this analysis. No statistically significant difference was found as t (62) = 1.960, p = .055 between the groups of between direct level of awareness (M_{direct} = 3.52 SD_{direct} = 1.26) and absent level of awareness (M_{absent} = 2.93 SD_{absent} = 1.10. A second independent-samples t-test was run to determine if there were differences in the work social distance scores between the group of indirect level of awareness ($M_{indirect}$ = 3.51 $SD_{indirect}$ = 1.44) and the group of absent awareness (M_{absent} = 2.93 SD_{absent} = 1.10). Again, no statistically significant difference was found between these groups as t (63) = 1.798, p = .077.

Table 4

Means, Standard Deviations and Marginal Means on the Measurement of the Working Social Distance Scale

	Level of Awareness							
	Direct Level of Awareness		Indirect Level of Awareness		Absent Level of Awareness		Total	
Causal Attribution	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Workplace Social Distance Scale								
Mind Attribution (Depression)	3.52	1.26	3.51	1.55	2.94	1.10	3.32	1.29
Body Attribution (Diabetes)	3.09	1.26	3.70	1.35	3.12	1.34	3.30	1.33
Total	3.28	1.27	3.61	1.39	3.03	1.22		

Based on the results of *Table 4* a first observation can be made looking at the condition of direct level awareness. Within this condition, the Workplace social distance score related to a mind attribution higher than when related to a body attribution. Even though, no significant interaction effect was found within the ANOVA analysis, this indicates a tendency of such. A second observation related to the interaction effect tendency can be concluded in that the indirect level awareness led to higher scores related to the body attribution condition than related to the mind attribution. This result, as mentioned previously, was significant.

Discussion

The current chapter elaborates on the findings of the data analysis and discusses the emerging implications in a managerial context. Firstly, all key findings from the Result Section are summarized. Secondly, all hypotheses will be scrutinized and it will be discussed whether they could be accepted or rejected. Thirdly, potential limitations of this research, managerial implications and possibilities regarding future research will be examined. Lastly, the chapter will be ended with an overall conclusion.

I Summary of Key Findings

The first three main findings are the main effects for each of the researched factors, namely the level of awareness about mental illness and the causal attribution on the dependent variable stigmatizing responses. Firstly, the main effect of level of awareness was discovered within the Managerial Decisions Scale as well as within the Workplace Social Distance Scale. Specifically, it was proven that stigmatizing responses were stronger for the indirect level awareness of mental illness, compared to an absent level of awareness. In addition to that, within the Social Distance Scale, further proof of the main effect of level of awareness was found. In this case, however, the significant result indicated higher social distance scores in the group of direct level of awareness than within the group of absent level of awareness. The third main finding was found in the results of the analysis of the Attribution Questionnaire. Here, the main effect of causal attribution was observed, proving higher stigmatizing scores within the condition of mind attribution (depression) compared to the condition of body attribution (diabetes). Although a general interaction effect between the level of awareness and causal attribution could not be proven by the conducted two-way ANOVA tests, general tendencies could be observed, and further t-test results could give clarity about these propensities. First of all, it could be observed that stigma responses within the condition of direct level of awareness, within all used measurement scales, were higher when the participants had to evaluate a person with depression which was defined as mind attributed, compared to when the person described in the vignette had diabetes, defined as a body attributed illness. As the effect of the same stigmatizing scores did not occur towards someone with diabetes when informed about mental illness, a tendency of an interaction effect is suggested, as mental illness campaigns, the direct level of awareness, may increase stigma of mental illness towards people with the mental illness. Besides this suggested tendency, within the Attribution Questionnaire this conclusion could be proven to be significant in the conducted t-test.

Overall, stigma levels within this research were found to be very low. However, one cannot conclude that they did not exist. The study informed participants about the illness of the introduced person as well as the fact that the person is a very good employee as well as very motivated. Therefore, the results could even be lower.

II Interpretation of the Results

Hypothesis 1

The effect of level of awareness on stigmatizing responses depends on the effect of causal attribution. Individuals with a direct level of awareness make fewer stigmatizing responses towards someone with a mental attributed illness compared to body attribution illness.

An overall interaction effect level of awareness and causal attribution on stigmatizing responses could not be proven by the ANOVA tests as no significant results were found. However, as a main effect of the level of awareness was found to be significant, further t-tests were conducted to explore the impact and differences between the two independent variables. As mentioned in the key findings, it was discovered that within the level of direct awareness, individuals stigmatized more when they were introduced to a person with depression than when confronted with a person having diabetes. Therefore, the conclusion was made that the information about mental illness, defined as a direct level of awareness, trigger stigmatizing responses towards someone with a mind attributed illness more than towards someone with a body attributed illness. This tendency leads to a partial acceptance of hypothesis 1. A possible reason for this is given by the Social Attribution Model that was created by Corrigan and based on the Attribution Theory by Weiner. Humans tend to make causal connections for events that happen, and this causal connection is initiated by the observation of a signal. This signal leads to a thought pattern, stereotype which then leads to the behaviour in the end. Applied in this case at hand explaining higher stigma towards mind attribution, the mere label of mental illness functioned as a signal. Thus, negative stereotypes about people with depression were triggered inevitably leading to higher stigmatizing scores. This is further reinforced by the role of controllability. As mentioned in the Literature Review, illnesses that are attributed to the mind are seen as controllable whereas illnesses attributed to body are evaluated as not controllable. In detail the onset responsibility of someone having a physical condition compared to someone with a mental condition is recognized lower.

Hypothesis 2

Direct and indirect level of awareness about mental illness lead to less stigmatizing judgements and less managerial stigmatizing responses than absent level of awareness.

A main effect of the level of awareness could be proven with the ANOVA tests. Within the Managerial Decision Scale and the Workplace Social Distance Scale it was discovered that stigmatizing responses were stronger for an indirect level of awareness compared to an absent level of awareness. Based on this, hypothesis 2 was partially rejected since indirect level of awareness were, other than presumed, higher and not lower than absent level of awareness. Within the Social Distance Scale, a further main effect of level of awareness implied that higher social distance scores were existent in the group of direct level of awareness compared to the group of absent level of awareness. This led to the complete rejection of hypothesis 2 as the contrary to what has been assumed was applicable. These two results suggest that people who are confronted with a direct or indirect level of awareness about Mental illness issues are triggered by the given information and judge more stigmatizing than without being aware of the topic of mental illness. A possible explanation is offered by the Attribution Theory and the Correspondence Bias (Gilbert & Malone, 1995). In the questionnaire, participants of direct level of awareness were confronted with numbers about mentally ill people, the economic costs and information that people die from suicide due to their conditions. This information may have functioned as signals and triggered certain negative stereotypes about mental illness. Subsequently, the evaluation of the group seeing the Mental Health Campaign was more negative compared to the group who observed the Heart Disease Campaign with no level of awareness regarding mental illnesses. The same applies for the Covid-19 Campaign, the indirect level of awareness. A connection between Mental illness and Covid-19 was built within the Literature Review, leading to the assumption here that people were motivated by the Covid-19 Campaign triggering stereotypes about mental illness. Furthermore, what could be observed was that these stigmatizing judgments were the result of ignoring the context of the scenario which is related to the Correspondence Bias. The person that is introduced in the vignette during the survey is described as a highly competent and motivated person who suffers from depression. Besides this, it is illustrated that she failed a deadline due to being exhausted from a project she had worked on before. Participants were specifically made aware of the fact that this failure has nothing to do with her illness. Yet, stigmatizing responses have been made, suggesting the circumstances around were neglected. The correspondence bias assumes that people judge upon similar patterns disregarding contextual circumstances, thus attributing

behaviour to people and their personality (Gilbert, 2002). It explains that individuals sometimes hold a lack of awareness and follow incorrect thought patterns which would apply in the case of the first hypothesis as well. Overall, hypothesis 2 was rejected as direct and levels of awareness

Hypothesis 3

People overall have a higher stigmatizing scores towards a person suffering from a mental illness that is attributed to the mind, namely a psychological condition, compared to a person that endures an illness attributed to body, namely from a physical condition.

Within the Attribution Questionnaire, the main effect of casual attribution was found proving higher scores of stigmatizing judgments when an illness was attributed to mind (depression) compared to when an illness was considered as body attributed (diabetes). The definition of stigma made by Goffman in 1963 describes stigma as a form of attribution that is characterized by negative stereotypes; it can happen either towards a particular person or a whole group in a society (Goffman, 1963). His theory suggests that people create attributes that are considered 'normal' and then, decide on attributes that are not accepted which inevitably lead to a stigma towards a person or a group that has these attributes. Having this in mind, an explanation for the causal attribution being higher when it is a mental illness can be found in his theory combined with the Labelling Theory. This theory assumes that the label of a mental illness can be sufficient as a trigger for stigma. It further examines that besides the label no signal for an aberrant behaviour of the mentally ill person must be given for stigma (Link, 1987). Applied to the questionnaire of this study, participants were introduced to an employee who was diagnosed with depression and had failed a project in the week before. However, according to the psychologist in the scenario, the person to the point of the questionnaire was well and fully capable of working. The label itself in this case was enough for participants to evaluate this person differently than how they evaluated the person who was introduced as having diabetes. This can be further underlined by the aspect of controllability, namely that people tend to have more negative stereotypes towards illnesses that are controllable compared to illnesses that are not controllable. As mentioned earlier, illnesses of mind are considered as controllable whereas illness of body are considered to be uncontrollable. A potential future study to research the effect of a label could be conducted, including the comparison of a vignette indicating the mere diagnosis of a psychological illness

and a vignette that only names symptoms, without significantly naming the illness they come from. This way, the above made assumption can further be elaborated on.

III Most relevant Findings and their Managerial Implications

Several findings of the above are of high relevance when it comes to managerial implications and are explained in the following section. Based on the finding that a direct level of awareness leads to more stigmatizing responses, the implication arises that simply providing information about mental illness is not sufficient as a strategy for reducing stigma. Besides this, a level of no awareness, in this research information about heart diseases, led to lower stigmatizing responses compared to direct level awareness. This underscores the sensitivity of the issue and should be considered by employers when considering a strategy to address stigma. Thus, merely raising awareness about mental illness led to negative effects which is indeed not a sufficient measure to reduce stigma. A potential proposal to integrate this information within the managerial context would be for employers to concentrate on strategies like proper education or contact, rather than only stating information about mental illness. As it is already done with company values like ethics, for instance, online workshops or offline seminars could be introduced within the schedule of employees. These workshops could be combined with the message of overall ways to care for one's mental health and further, introduce stigma topics. The moment one reflects on mental health and is made aware of actual stigma, stereotypes that are anchored within one's mind may change and lead to an overall reduction of stigma. Besides the finding of level of awareness, also the finding regarding causal attribution lead to implications within a managerial context. Again, a form of education could be used, to reduce this effect, making clear that this distinctive behavior exists. However, also on the side of the employer the recommendation may be made that in case an employee informs about a mental illness, to be sensitive about the topic, to be open and to ensure whether this information should be kept confidential asking the affected. Furthermore, the employer should keep in mind that humans have the tendency to stigmatize and be aware that he or she himself/herself is not spared from this risk when acting towards someone who is affected by mental illness. Another finding of relevance were the low stigmatizing scores that were found within the results. Even though the stigma levels in this dissertation were observed not as high as expected, stigma should not be considered to be not existent. Previous studies and theories show that stigmatizing behaviors is prevalent within the working context and leads to self-stigma.

Therefore, employers should be aware that it exists and decide on possible strategies to overcome it.

IV Potential Limitations

Several limitations are recognized considering the study at hand; those are examined in the following. One initial starting point of this research is based on the study of Corrigan and Colleagues (Corrigan et al., 2014) who concluded that three strategies are possible for the reduction of stigma, namely education, protest, and contact. The assumption was that employees who had a direct level of awareness through information about Mental Health Issues would be reminded of the existence of stigma and stigmatize less. Even though information can be part of education, it is debatable if it can be classified as such. Another aspect was the expectation that aware participants would have lower stigmatizing scores compared to the group who had no level of awareness. An effect of the level of awareness was found, nonetheless it cannot be concluded that this effect leads to an overall conclusion that being aware of information about Mental Illness Issues leads to higher stigma. Here, the effect of the information on the campaign itself should be explored even further to see whether this is true. The limitation lies within the rather superficial information that was used as the information given as such does not fall into the definition of education. Additionally, the questionnaire requested participants to imagine that they would be at work which does not count as a real-life scenario and the results might differ in another experimental set up. Besides the questionnaire itself, the sample used was highly diverse and the number of surveys for each condition group varied due to uneven numbers in the randomizing process. Thus, results could alter slightly and be, in the end, not fully representatively.

V Future Research

The research conducted in this dissertation has been a small piece for the overall research of stigma. Based on the findings that were shown and presented in this work, further research topics will be elaborated on in the following. A relevant direction of research would be a comparison of the level of awareness with other strategies of stigma reduction. As mentioned, studies have elaborated on three possible ways to evade stigma, namely education, contact or protest. It would be interesting to compare these three strategies related to the workplace. Based on this research, it was not a possibility to reduce stigma, however, more research in this regard should be made. Interesting would be further research to see if a deeper

level of information about mental health and its consequences would lead to different behaviors. Since one limitation that was stated was the assumption that other factors can influence attribution, future research could study these other factors and evaluate how these make a difference in the way people stigmatize. Another relevant topic to research on would be the influence of a potential power gap in the workplace, meaning that participant groups are given different roles in the workplace and are then compared with each other. The relevant question would be whether someone would choose a person to work with or to hire when he or she is company owner compared to when he or she is just a regular employee.

Conclusion

To conclude the overall findings of this thesis, another look is taken upon the research question that were raised in the beginning. First of all, one intention was to find out whether levels of stigma towards mental illness are prevalent in the environment of work. Based on theories and studies, this can be affirmed. Even though, stigma levels within the data analysis of this research were not as high as expected by the author, differences between mental illness and physical illness as well as overall stigmatizing responses could be found. Furthermore, it is concluded that level of awareness has an influence on stigmatizing responses, in that it leads to higher stigma levels. The Covid-19 pandemic overall has an impact on stigma as to people being less stigmatizing towards mental illnesses that arose due to lockdowns. Furthermore, society is more open to talk about mental health and mental illnesses, as numbers of mentally ill have risen due to the restrictions. However, the data analysis could not prove a significant effect on the overall impact of Covid-19. The most important aspect is the fact that stigma towards people with a mental illness exists and employers that are aware of this, have the possibility to reduce stigma in the form of education. The shift to a more open culture in relation to mental illness, is required to make it easier for people with a mental condition to continue their intentions and dreams.

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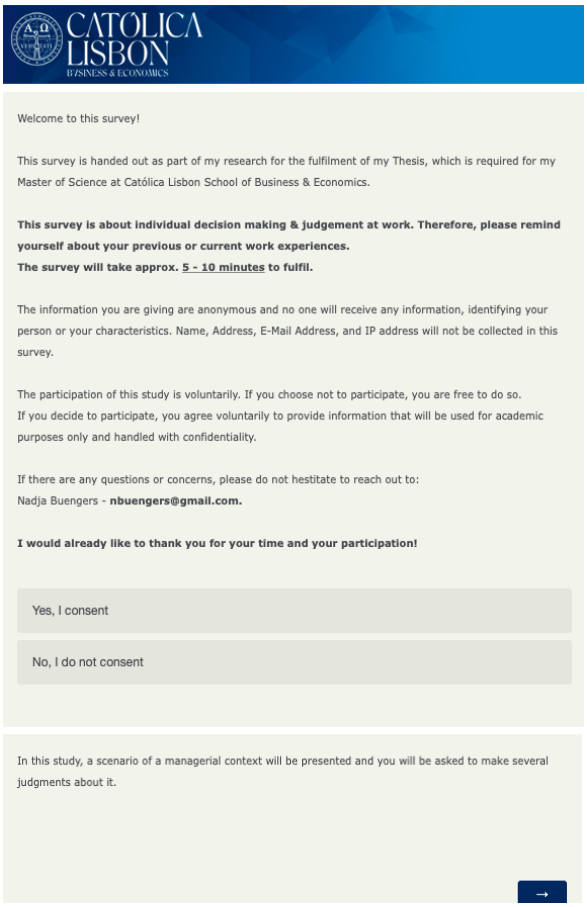
Appendix

Appendix I – Survey

Block 1: Introduction



CATÓLICA LISBON
BUSINESS & ECONOMICS

Welcome to this survey!

This survey is handed out as part of my research for the fulfilment of my Thesis, which is required for my Master of Science at Católica Lisbon School of Business & Economics.

This survey is about individual decision making & judgement at work. Therefore, please remind yourself about your previous or current work experiences.
The survey will take approx. 5 - 10 minutes to fulfil.

The information you are giving are anonymous and no one will receive any information, identifying your person or your characteristics. Name, Address, E-Mail Address, and IP address will not be collected in this survey.

The participation of this study is voluntarily. If you choose not to participate, you are free to do so.
If you decide to participate, you agree voluntarily to provide information that will be used for academic purposes only and handled with confidentiality.

If there are any questions or concerns, please do not hestitate to reach out to:
Nadja Buengers - **nbuengers@gmail.com.**

I would already like to thank you for your time and your participation!

Yes, I consent

No, I do not consent

In this study, a scenario of a managerial context will be presented and you will be asked to make several judgments about it.

→

Block 2: Three possibilities of first vignette

Covid-19 Campaign

CATÓLICA LISBON
BUSINESS & ECONOMICS

The next paragraph will contain a scenario. Please read it carefully:

You are working as a marketeer for the company Keramis Marketing, based in Lisbon. After the peaks of the ongoing Covid19 - pandemic, the world is slowly returning back to normal, most of your colleagues are vaccinated and back to regular office hours.
The CEO of your company created a new campaign proposal for the clients of Keramis, introducing the rule to keep wearing masks in the office at all times due to the possibility of another Corona outbreak.

Your CEO comes up to you and introduces his proposal (please see the poster below). He asks you for your opinion about whether the message he wants to show with the campaign is clear & if such campaign is feasible.

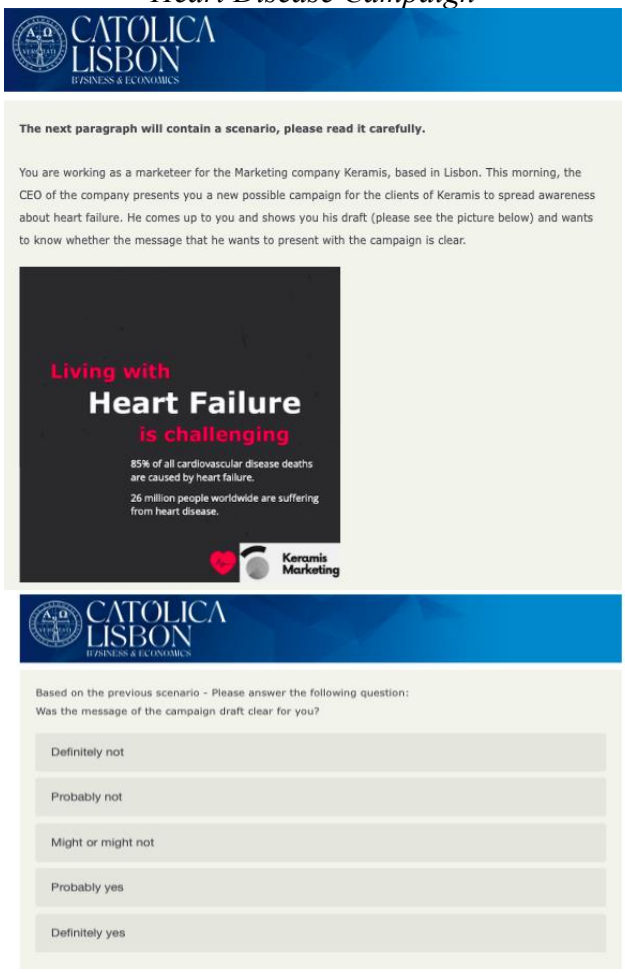
Mental Health
Campaign

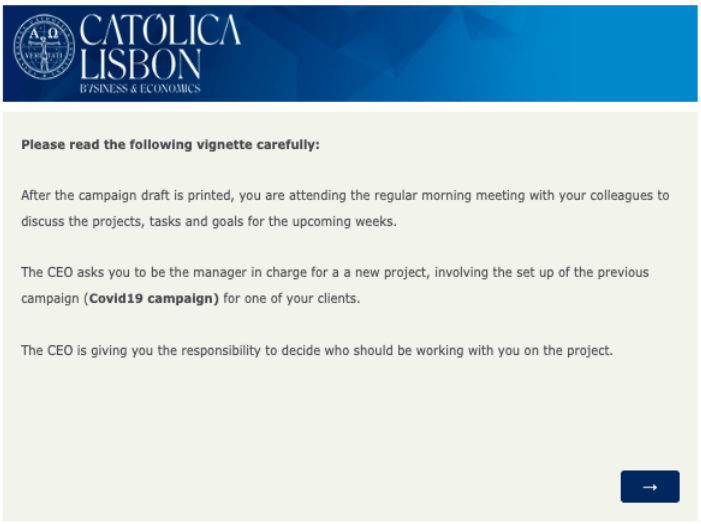
CATÓLICA LISBON
BUSINESS & ECONOMICS

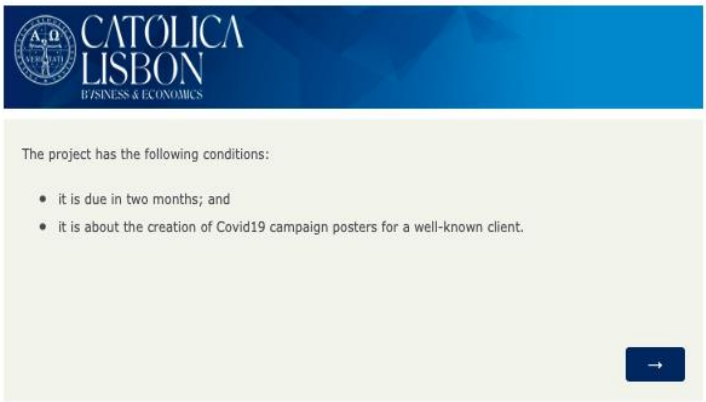
The next paragraph contains a scenario, please read it carefully.

You are working as a marketeer for the company Keramis Marketing, based in Lisbon. This morning, the CEO of the company presents you a new possible campaign poster for the clients of Keramis to introduce the topic of mental health into the company culture.
He comes up to you with his first draft of the campaign poster (please see picture below) and asks you whether the message he wants to present is clear enough.

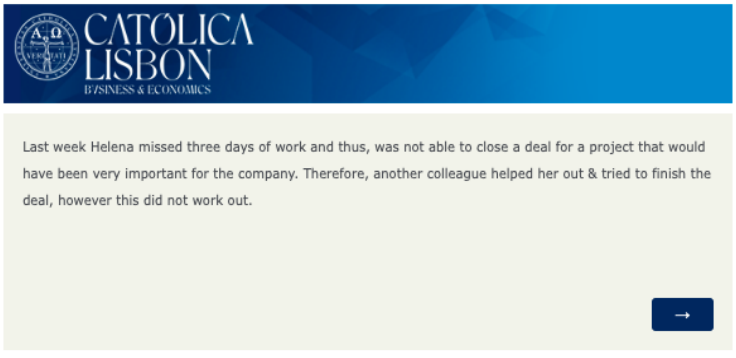
Heart Disease Campaign

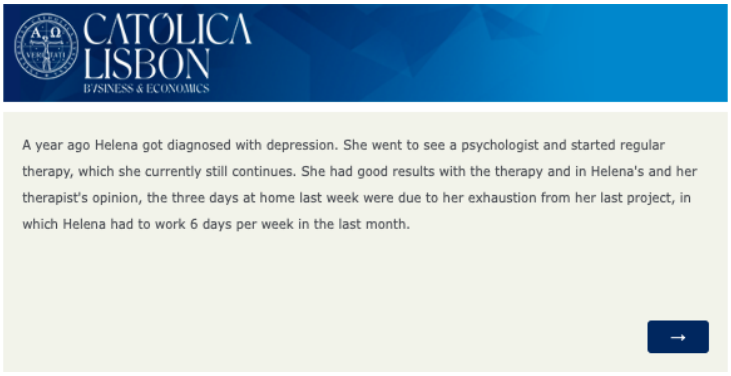


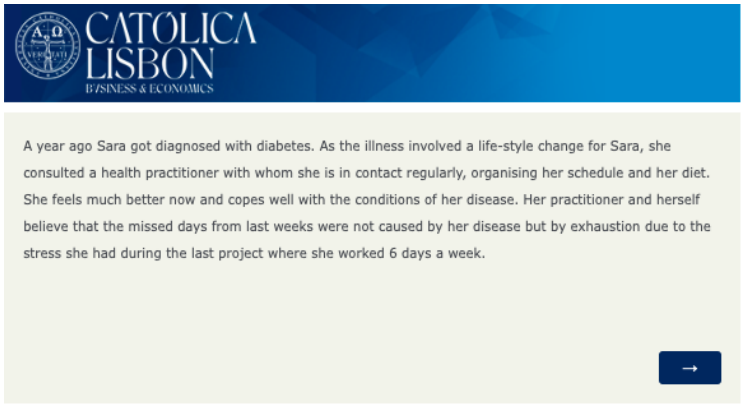




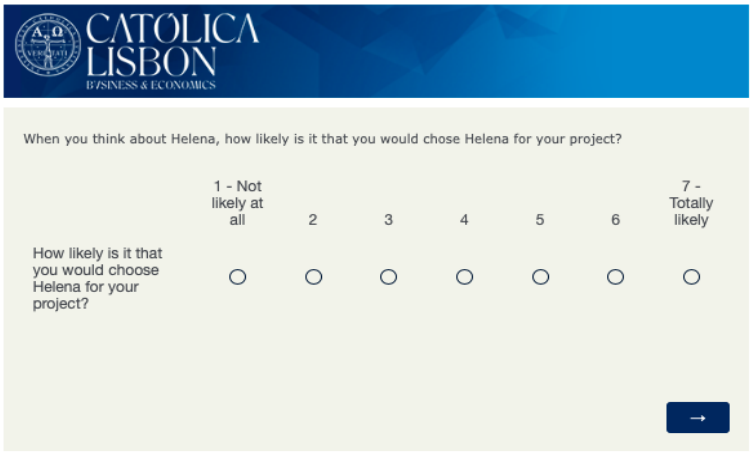
Introduction of employee (either depression or diabetes possibility)

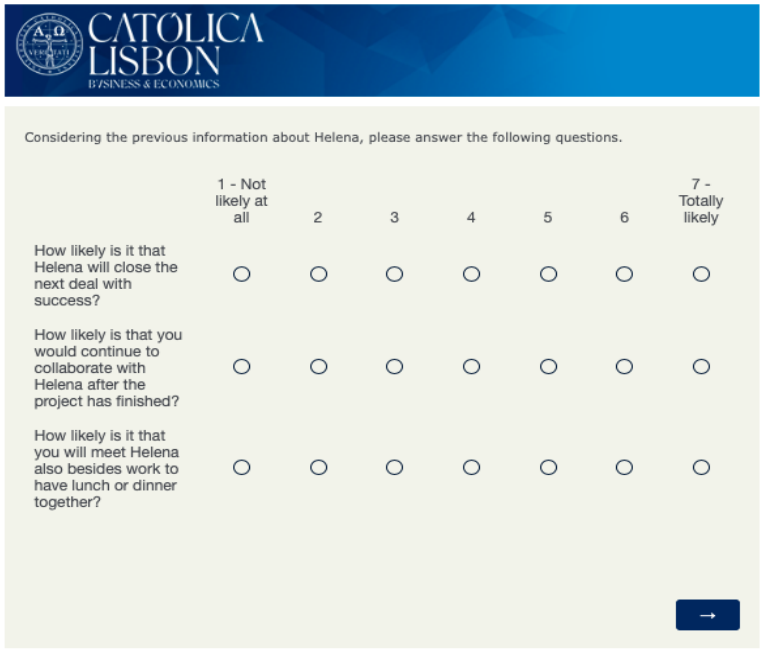






Managerial Decisions Scale





Social Distance Scale – Schomerus

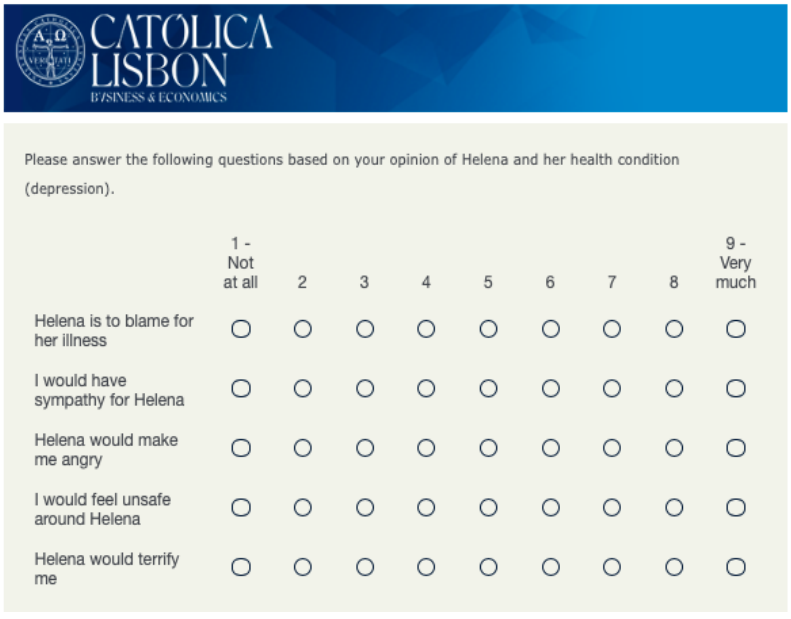
CATÓLICA LISBON
BUSINESS & ECONOMICS

Please evaluate the following statements based on your opinion about Helena.

	1 - Does not apply at all	2	3	4	5 - Applies completely
I feel uncomfortable	○	○	○	○	○
Helena provokes fear	○	○	○	○	○
I feel insecure	○	○	○	○	○
I am amused	○	○	○	○	○
I react angrily	○	○	○	○	○
I feel annoyed	○	○	○	○	○
Helena provokes my incomprehension	○	○	○	○	○
I feel the need to help	○	○	○	○	○
I feel pity	○	○	○	○	○

→

Attribution Questionnaire - Corrigan



CATÓLICA LISBON
BUSINESS & ECONOMICS

Please answer the following questions based on your opinion of Helena and her health condition (depression).

	1 - Not at all	2	3	4	5	6	7	8	9 - Very much
Helena is to blame for her illness	○	○	○	○	○	○	○	○	○
I would have sympathy for Helena	○	○	○	○	○	○	○	○	○
Helena would make me angry	○	○	○	○	○	○	○	○	○
I would feel unsafe around Helena	○	○	○	○	○	○	○	○	○
Helena would terrify me	○	○	○	○	○	○	○	○	○

	1 - Not at all	2	3	4	5	6	7	8	9 - Very much
If I were an employer, I would interview Helena for a job	○	○	○	○	○	○	○	○	○
If I were in charge of Helena's treatment, I would require her to take her medication	○	○	○	○	○	○	○	○	○
I think it would be best for Helena's community if she was put away in a hospital	○	○	○	○	○	○	○	○	○
I would help Helena	○	○	○	○	○	○	○	○	○

→

Workplace Social Distance Scale

CATÓLICA LISBON
BUSINESS & ECONOMICS

The following statements are asking about your general opinion of co-workers.

	1 - Do not agree at all	2	3	4	5	6	7	8	9 - Completely agree
It would bother me to work next to a coworker with psychosis*	○	○	○	○	○	○	○	○	○
It is best not to associate with a coworker with a mental health condition who has been in a mental hospital	○	○	○	○	○	○	○	○	○
Manager with mental health conditions should not be allowed to teach how to work at the workplace	○	○	○	○	○	○	○	○	○
I would rather not hire a person with a mental health condition who had been in a hospital	○	○	○	○	○	○	○	○	○
I would not employ someone if I knew they had a mental health condition	○	○	○	○	○	○	○	○	○
I believe organisations take a risk when hiring people with mental health conditions	○	○	○	○	○	○	○	○	○
I believe people should try to communicate their mental health conditions at work	○	○	○	○	○	○	○	○	○

* mental disease characterized by distortions in thinking, perception, emotions, language, sense of self and behaviour. Common psychotic experiences include hallucinations and delusions of the patient.

Demographic Section

What is your employment status?

- Full-time employee
- Part-time employee
- Unemployed (currently looking for work)
- Unemployed (currently not looking for a work)
- Student
- Retired
- Self-employed

Which of the following statements best describes your position?

- Someone supervises me, I supervise no one
- Someone supervises me, I supervise one or more employees
- I supervise one or more employees, no one supervises me
- None of the above applies

What is your gender?

- Male
- Female
- Non-binary / third gender
- Prefer not to say

What is your age?

Age

What is your nationality?

Appendix II: Outputs of SPSS analysis

Two – way Anova SPSS Outputs

Managerial Decisions Scale:

Descriptive Statistics

Dependent Variable: Managerial Stigma Score

Causal Attribution	Level of awareness	Mean	Std. Deviation	N
Mind attribution (Depression)	Direct Level of Awareness – Mental Health Campaign	2.8437	.91305	32
	Indirect Level of Awareness – Covid19 Campaign	2.9621	.88415	33
	No Level of Awareness – Heart Disease Campaign	2.4766	.88299	32
	Total	2.7629	.90813	97
Body attribution (Diabetes)	Direct Level of Awareness – Mental Health Campaign	2.4812	.97958	40
	Indirect Level of Awareness – Covid19 Campaign	3.0878	1.18909	37
	No Level of Awareness – Heart Disease Campaign	2.5303	1.07121	33
	Total	2.7000	1.10659	110
Total	Direct Level of Awareness – Mental Health Campaign	2.6424	.96124	72
	Indirect Level of Awareness – Covid19 Campaign	3.0286	1.05083	70
	No Level of Awareness – Heart Disease Campaign	2.5038	.97577	65
	Total	2.7295	1.01649	207

Tests of Between-Subjects Effects

Dependent Variable: Managerial Stigma Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	12.776[a]	5	2.555	2.567	.028	.060
Intercept	1532.344	1	1532.344	1539.436	.000	.885
CausalAttribution	.191	1	.191	.192	.662	.001
Levelofawareness	9.725	2	4.863	4.885	.008	.046
CausalAttribution * Levelofawareness	2.437	2	1.218	1.224	.296	.012
Error	200.074	201	.995			
Total	1755.000	207				
Corrected Total	212.850	206				

a. R Squared = .060 (Adjusted R Squared = .037)

Estimates

Dependent Variable: Managerial Stigma Score

Level of awareness	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Direct Level of Awareness – Mental Health Campaign	2.662	.118	2.429	2.896
Indirect Level of Awareness – Covid19 Campaign	3.025	.119	2.789	3.261
No Level of Awareness – Heart Disease Campaign	2.503	.124	2.259	2.747

Pairwise Comparisons

Dependent Variable: Managerial Stigma Score

(I) Level of awareness	(J) Level of awareness	Mean Difference (I–J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Direct Level of Awareness – Mental Health Campaign	Indirect Level of Awareness – Covid19 Campaign	-.362	.168	.097	-.768	.043
	No Level of Awareness – Heart Disease Campaign	.159	.171	1.000	-.254	.572
Indirect Level of Awareness – Covid19 Campaign	Direct Level of Awareness – Mental Health Campaign	.362	.168	.097	-.043	.768
	No Level of Awareness – Heart Disease Campaign	.522*	.172	.008	.106	.937
No Level of Awareness – Heart Disease Campaign	Direct Level of Awareness – Mental Health Campaign	-.159	.171	1.000	-.572	.254
	Indirect Level of Awareness – Covid19 Campaign	-.522*	.172	.008	-.937	-.106

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Schomerus Social Distance Scale

Descriptive Statistics

Dependent Variable: Social Distance Score

Causal Attribution	Level of awareness	Mean	Std. Deviation	N
Mind Attribution (Depression)	Direct Level of Awareness – Mental Health Campaign	2.2535	.60480	32
	Indirect Level of Awareness – Covid19 Campaign	2.0370	.56223	33
	No level of awareness – Heart Disease Campaign	1.8681	.54172	32
	Total	2.0527	.58577	97
Body Attribution (Diabetes)	Direct Level of Awareness – Mental Health Campaign	2.0333	.70282	40
	Indirect Level of Awareness – Covid19 Campaign	2.1862	.66101	37
	No level of awareness – Heart Disease Campaign	1.8990	.49172	33
	Total	2.0444	.63663	110
Total	Direct Level of Awareness – Mental Health Campaign	2.1312	.66571	72
	Indirect Level of Awareness – Covid19 Campaign	2.1159	.61659	70
	No level of awareness – Heart Disease Campaign	1.8838	.51311	65
	Total	2.0483	.61186	207

Tests of Between-Subjects Effects

Dependent Variable: Social Distance Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	3.839[a]	5	.768	2.106	.066	.050
Intercept	860.640	1	860.640	2360.561	.000	.922
CausalAttribution	.009	1	.009	.025	.874	.000
Levelofawareness	2.686	2	1.343	3.684	.027	.035
CausalAttribution * Levelofawareness	1.252	2	.626	1.718	.182	.017
Error	73.283	201	.365			
Total	945.605	207				
Corrected Total	77.122	206				

a. R Squared = .050 (Adjusted R Squared = .026)

Estimates

Dependent Variable: Social Distance Score

Level of awareness	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Direct Level of Awareness – Mental Health Campaign	2.143	.072	2.002	2.285
Indirect Level of Awareness – Covid19 Campaign	2.112	.072	1.969	2.254
No level of awareness – Heart Disease Campaign	1.884	.075	1.736	2.031

Pairwise Comparisons

Dependent Variable: Social Distance Score

(I) Level of awareness	(J) Level of awareness	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Direct Level of Awareness – Mental Health Campaign	Indirect Level of Awareness – Covid19 Campaign	.032	.102	1.000	-.214	.277
	No level of awareness – Heart Disease Campaign	.260*	.104	.039	.010	.510
Indirect Level of Awareness – Covid19 Campaign	Direct Level of Awareness – Mental Health Campaign	-.032	.102	1.000	-.277	.214
	No level of awareness – Heart Disease Campaign	.228	.104	.089	-.023	.479
No level of awareness – Heart Disease Campaign	Direct Level of Awareness – Mental Health Campaign	-.260*	.104	.039	-.510	-.010
	Indirect Level of Awareness – Covid19 Campaign	-.228	.104	.089	-.479	.023

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Attribution Questionnaire - Corrigan

Descriptive Statistics

Dependent Variable: Attributionscore

Causal Attribution	Level of awareness	Mean	Std. Deviation	N
Mind Attribution (Depression)	Direct Level of Awareness – Mental Health Campaign	3.5833	.96700	32
	Indirect Level of Awareness – Covid19 Campaign	3.7946	.52493	33
	No Level of Awareness – Heart Disease Campaign	3.7431	.55908	32
	Total	3.7079	.70916	97
Body Attribution (Diabetes)	Direct Level of Awareness – Mental Health Campaign	3.1694	.50948	40
	Indirect Level of Awareness – Covid19 Campaign	3.2763	.61509	37
	No Level of Awareness – Heart Disease Campaign	3.3064	.39872	33
	Total	3.2465	.51775	110
Total	Direct Level of Awareness – Mental Health Campaign	3.3534	.77055	72
	Indirect Level of Awareness – Covid19 Campaign	3.5206	.62698	70
	No Level of Awareness – Heart Disease Campaign	3.5214	.52848	65
	Total	3.4627	.65535	207

Tests of Between-Subjects Effects

Dependent Variable: Attributionscore

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	12.148[a]	5	2.430	6.398	.000	.137
Intercept	2487.749	1	2487.749	6551.349	.000	.970
CausalAttribution	10.700	1	10.700	28.177	.000	.123
Levelofawareness	1.106	2	.553	1.457	.235	.014
CausalAttribution * Levelofawareness	.105	2	.053	.139	.871	.001
Error	76.326	201	.380			
Total	2570.457	207				
Corrected Total	88.474	206				

a. R Squared = .137 (Adjusted R Squared = .116)

Estimates

Dependent Variable: Attributionscore

Causal Attribution	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Mind Attribution (Depression)	3.707	.063	3.584	3.830
Body Attribution (Diabetes)	3.251	.059	3.134	3.367

Pairwise Comparisons

Dependent Variable: Attributionscore

(I) Causal Attribution	(J) Causal Attribution	Mean Difference (I-J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Mind Attribution (Depression)	Body Attribution (Diabetes)	.456*	.086	.000	.287	.626
Body Attribution (Diabetes)	Mind Attribution (Depression)	-.456*	.086	.000	-.626	-.287

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Workplace Social Distance Scale

Descriptive Statistics

Dependent Variable: WSD Score

Causal Attribution	Level of awareness	Mean	Std. Deviation	N
Mind Attribution (Depression)	Direct Level of Awareness – Mental Health Campaign	3.5179	1.26311	32
	Indirect Level of Awareness – Covid19 Campaign	3.5108	1.44147	33
	No Level of Awareness – Heart Disease Campaign	2.9375	1.10056	32
	Total	3.3240	1.29355	97
Body Attribution (Diabetes)	Direct Level of Awareness – Mental Health Campaign	3.0893	1.26445	40
	Indirect Level of Awareness – Covid19 Campaign	3.7027	1.34787	37
	No Level of Awareness – Heart Disease Campaign	3.1169	1.33986	33
	Total	3.3039	1.33439	110
Total	Direct Level of Awareness – Mental Health Campaign	3.2798	1.27312	72
	Indirect Level of Awareness – Covid19 Campaign	3.6122	1.38594	70
	No Level of Awareness – Heart Disease Campaign	3.0286	1.22167	65
	Total	3.3133	1.31227	207

Tests of Between-Subjects Effects

Dependent Variable: WSD Score

Source	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model	16.037[a]	5	3.207	1.903	.095	.045
Intercept	2255.528	1	2255.528	1338.519	.000	.869
CausalAttribution	.019	1	.019	.011	.916	.000
Levelofawareness	11.328	2	5.664	3.361	.037	.032
CausalAttribution * Levelofawareness	4.394	2	2.197	1.304	.274	.013
Error	338.704	201	1.685			
Total	2627.204	207				
Corrected Total	354.740	206				

a. R Squared = .045 (Adjusted R Squared = .021)

Estimates

Dependent Variable: WSD Score

Level of awareness	Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Direct Level of Awareness – Mental Health Campaign	3.304	.154	3.000	3.607
Indirect Level of Awareness – Covid19 Campaign	3.607	.155	3.300	3.913
No Level of Awareness – Heart Disease Campaign	3.027	.161	2.710	3.345

Pairwise Comparisons

Dependent Variable: WSD Score

(I) Level of awareness	(J) Level of awareness	Mean Difference (I–J)	Std. Error	Sig.[b]	95% Confidence Interval for Difference[b]	
					Lower Bound	Upper Bound
Direct Level of Awareness – Mental Health Campaign	Indirect Level of Awareness – Covid19 Campaign	-.303	.219	.502	-.831	.225
	No Level of Awareness – Heart Disease Campaign	.276	.223	.649	-.261	.814
Indirect Level of Awareness – Covid19 Campaign	Direct Level of Awareness – Mental Health Campaign	.303	.219	.502	-.225	.831
	No Level of Awareness – Heart Disease Campaign	.580*	.224	.031	.039	1.120
No Level of Awareness – Heart Disease Campaign	Direct Level of Awareness – Mental Health Campaign	-.276	.223	.649	-.814	.261
	Indirect Level of Awareness – Covid19 Campaign	-.580*	.224	.031	-1.120	-.039

Based on estimated marginal means

*. The mean difference is significant at the .05 level.

b. Adjustment for multiple comparisons: Bonferroni.

Hypothesis 1 SPSS Outputs

Managerial Decisions Scale

Independent test between direct level of awareness and indirect level of awareness within body condition

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
ManagerialStigma	Direct Level of Awareness – Mental Health Campaign	40	2.4813	.97958	.15489
	Indirect Level of Awareness – Covid19 Campaign	37	3.0878	1.18909	.19549

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ManagerialStigma	Equal variances assumed	.467	.497	-2.451	75	.017	-.60659	.24753	-1.09969	-.11348
	Equal variances not assumed			-2.432	69.943	.018	-.60659	.24941	-1.10402	-.10915

Independent t-test results – Comparison condition direct level of awareness and indirect level of awareness within the mind condition

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
Managerialstigma	Direct Level of Awareness – Mental Health Campaign	32	2.8438	.91305	.16141
	Indirect Level of Awareness – Covid19 Campaign	33	2.9621	.88415	.15391

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Managerialstigma	Equal variances assumed	.008	.929	-.531	63	.597	-.11837	.22291	-.56383	.32709
	Equal variances not assumed			-.531	62.748	.597	-.11837	.22303	-.56409	.32735

Social Distance Scale - Schomerus

Independent t-test results – Comparison condition direct level of awareness and indirect level of awareness within the mind condition

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
Socialdistancescore	Direct Level of Awareness – Mental Health Campaign	32	2.2535	.60480	.10691
	Indirect Level of Awareness – Covid19 Campaign	33	2.0370	.56223	.09787

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Socialdistancescore	Equal variances assumed	.255	.615	1.495	63	.140	.21644	.14478	-.07289	.50576
	Equal variances not assumed			1.493	62.326	.140	.21644	.14495	-.07328	.50615

Independent t-test results – Comparison condition direct level of awareness and indirect level of awareness within the body condition

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
SDScore	Direct Level of awareness – Mental Health Campaign	40	2.0333	.70282	.11113
	Indirect Level of awareness – Covid19 Campaign	37	2.1862	.66101	.10867

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
SDScore	Equal variances assumed	.093	.761	-.981	75	.330	-.15285	.15580	-.46323	.15753
	Equal variances not assumed			-.983	74.977	.329	-.15285	.15543	-.46248	.15678

Workplace Social Distance Scale

Independent t-test results – Comparison condition direct level of awareness and indirect level of awareness within the body condition

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
WSDScore	Direct Level of Awareness - Mental Health Campaign	40	3.0893	1.26445	.19993
	Indirect Level of Awareness - Covid19 Campaign	37	3.7027	1.34787	.22159

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
WSDScore	Equal variances assumed	.352	.555	-2.061	75	.043	-.61342	.29770	-1.20646	-.02037
	Equal variances not assumed			-2.055	73.505	.043	-.61342	.29845	-1.20816	-.01868

Independent t-test results – Comparison condition direct level of awareness and indirect level of awareness within the mind condition

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
WSDScore	Direct Level of Awareness - Mental Health Campaign	32	3.5179	1.26311	.22329
	Indirect Level of Awareness - Covid19 Campaign	33	3.5108	1.44147	.25093

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
WSDScore	Equal variances assumed	2.567	.114	.021	63	.983	.00703	.33658	-.66557	.67964
	Equal variances not assumed			.021	62.372	.983	.00703	.33589	-.66432	.67839

Outputs t-test in relation to Hypothesis 2

Managerial Decisions Scale

Independent t-test results – Comparison condition indirect level of awareness and absent level of awareness

T-Test - MIND only indirect v no level

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
Managerial Stigma	Covid19 Campaign	33	2.9621	.88415	.15391
	Heart Disease Campaign	32	2.4766	.88299	.15609

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Managerial Stigma	Equal variances assumed	.139	.710	2.215	63	.030	.48556	.21922	.04749	.92363
	Equal variances not assumed			2.215	62.944	.030	.48556	.21921	.04749	.92362

Independent t-test results – Comparison condition direct level of awareness and absent level of awareness

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
Managerial Stigma	Mental Health Campaign	32	2.8438	.91305	.16141
	Heart Disease Campaign	32	2.4766	.88299	.15609

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Managerial Stigma	Equal variances assumed	.070	.793	1.635	62	.107	.36719	.22454	-.08166	.81603
	Equal variances not assumed			1.635	61.931	.107	.36719	.22454	-.08167	.81604

Social Distance Scale – Schomerus

Independent t-test results – Comparison condition direct level of awareness and absent level of awareness

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
Social Distance Score	Direct Level of Awareness – Mental Health Campaign	32	2.2535	.60480	.10691
	Absent Level of Awareness – Heart Disease Campaign	32	1.8681	.54172	.09576

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Social Distance Score	Equal variances assumed	.204	.653	2.685	62	.009	.38542	.14353	.09850	.67233
	Equal variances not assumed			2.685	61.263	.009	.38542	.14353	.09843	.67240

Independent t-test results – Comparison condition indirect level of awareness and absent level of awareness

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
Social Distance Score	Indirect Level of Awareness – Covid19 Campaign	33	2.0370	.56223	.09787
	Absent Level of Awareness – Heart Disease Campaign	32	1.8681	.54172	.09576

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Social Distance Score	Equal variances assumed	.007	.933	1.233	63	.222	.16898	.13701	-.10481	.44277
	Equal variances not assumed			1.234	62.998	.222	.16898	.13693	-.10465	.44261

Workplace Social Distance Scale

Independent t-test results – Comparison condition direct level of awareness and absent level of awareness

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
WSDScore	Direct Level of Awareness – Mental Health Campaign	32	3.5179	1.26311	.22329
	Absent Level of Awareness – Heart Disease Campaign	32	2.9375	1.10056	.19455

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
WSDScore	Equal variances assumed	.007	.933	1.960	62	.055	.58036	.29616	-.01165	1.17237
	Equal variances not assumed			1.960	60.860	.055	.58036	.29616	-.01187	1.17259

Independent t-test results – Comparison condition indirect level of awareness and absent level of awareness

Group Statistics

	Level of awareness	N	Mean	Std. Deviation	Std. Error Mean
WSDScore	Indirect Level of Awareness – Covid19 Campaign	33	3.5108	1.44147	.25093
	Absent Level of Awareness– Heart Disease Campaign	32	2.9375	1.10056	.19455

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
WSDScore	Equal variances assumed	3.728	.058	1.798	63	.077	.57332	.31883	-.06380	1.21045
	Equal variances not assumed			1.806	59.749	.076	.57332	.31752	-.06186	1.20850

Test Results Hypothesis 3

Attribution Questionnaire

Independent t-test results – Comparison condition mind and body attribution

Group Statistics

	Causal Attribution	N	Mean	Std. Deviation	Std. Error Mean
Corrigan Score	Mind Attribution (Depression)	97	3.7079	.70916	.07200
	Body Attribution (Diabetes)	110	3.2465	.51775	.04937

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Corrigan Score	Equal variances assumed	4.382	.038	5.388	205	.000	.46144	.08564	.29259	.63029
	Equal variances not assumed			5.286	173.664	.000	.46144	.08730	.28913	.63375

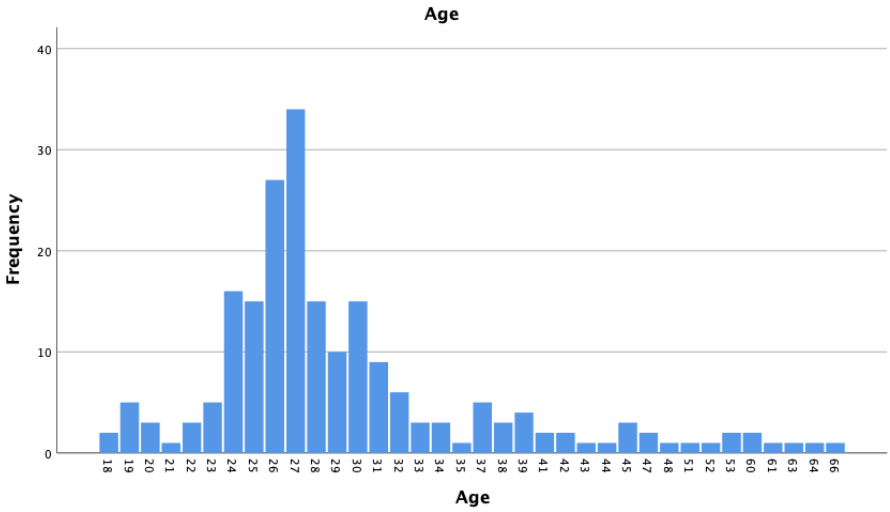
Demographics

Overview of Nationalities

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	American	1	.5	.5	.5
	Argentina	1	.5	.5	1.0
	Australian	1	.5	.5	1.4
	Austria	1	.5	.5	1.9
	Brazilian	1	.5	.5	2.4
	British	3	1.4	1.4	3.9
	Canadian	1	.5	.5	4.3
	Dutch	4	1.9	1.9	6.3
	Eritrean/German	1	.5	.5	6.8
	European	1	.5	.5	7.2
	French	1	.5	.5	7.7
	german	1	.5	.5	8.2
	German	151	72.9	72.9	81.2
	German/Russian	1	.5	.5	81.6
	Greek	1	.5	.5	82.1
	India	1	.5	.5	82.6
	Indian	2	1.0	1.0	83.6
	Iran	1	.5	.5	84.1
	Italian	1	.5	.5	84.5
	Norwegian	2	1.0	1.0	85.5
	Pakistan	1	.5	.5	86.0
	Pakistani	4	1.9	1.9	87.9
	Polish	1	.5	.5	88.4
	Portuguese	14	6.8	6.8	95.2
	Romanian	1	.5	.5	95.7
	Russian	3	1.4	1.4	97.1
	Slovenian	1	.5	.5	97.6
	Spanish	1	.5	.5	98.1
	US	1	.5	.5	98.6
	US-German	1	.5	.5	99.0
	USA	2	1.0	1.0	100.0
	Total	207	100.0	100.0	

Employment Status

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Full-time employee	129	62.3	62.3	62.3
	Part-time employee	19	9.2	9.2	71.5
	Retired	1	.5	.5	72.0
	Self-employed	9	4.3	4.3	76.3
	student	39	18.8	18.8	95.2
	Student	5	2.4	2.4	97.6
	Unemployed (currently looking for work)	4	1.9	1.9	99.5
	Unemployed (currently not looking for work)	1	.5	.5	100.0
	Total	207	100.0	100.0	



Gender

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	99	47.8	47.8	47.8
	Male	105	50.7	50.7	98.6
	Prefer not to say	3	1.4	1.4	100.0
	Total	207	100.0	100.0	