An Exploration of Attitudes About Addiction: A Mixed-Methods Study Conducted Amongst Residents of Malta

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Abstract

This research explores attitudes about addiction held by residents of Malta. Attitudes impact funding, care, judicial decisions and governmental and criminal justice policies. On a micro level, attitudes influence choices about personal engagement in addictive behaviours and treatment seeking. Furthermore, negative attitudes promote stigma. Adopting a sociopsychological theoretical framework, this study examines the attitudes of residents of Malta as reflected in the endorsement of various models of addiction. Data was gathered using the parallel convergent mixed-methods approach. The results indicate that residents in Malta are likely to hold attitudes reflected in the endorsement of the psychological model over other models and this is manifested in compassionate and tolerant attitudes about addiction. The data, however, highlights the complexity of attitude adoption in that many people also hold attitudes that reflect endorsement of more than one addiction model concurrently, meaning that they may be compassionate, tolerant and liberal about some addiction issues but judgmental, discriminatory, or stigmatising about others. The study also examines moderators of attitudes about addiction, such as age, gender, level of education and religiousness. The study is important because it is the first empirical investigation of attitudes about addiction in Malta. The study concludes with some reflections on implications for policy development and makes recommendations for further research.

Keywords: addiction, attitudes, addiction models, compassion, tolerance

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List of Acronyms

SUD	Substance Use Disorder
PAAAS	Public Attitudes About Addiction Survey
RQ	Research Question
CI	Confidence Interval

Chapter 1: Introduction

Preamble

Public attitudes about addiction influence how persons who have an addiction are viewed and, ultimately, treated. They may contribute to either a punitive approach or compassionate approach. Addiction remains stigmatised. Understanding public attitudes can help inform psychoeducational interventions that aim to promote a more favourable environment for people who use have an addiction and can also help reduce the stigma surrounding them (Bustos-Gamiño et al., 2022).

Both attitudes and addiction have been widely studied in the social sciences. Attitudes have been studied for more than a century, with interest in the subject first peaking in the social psychology field in the 1920s and 1930s (McGuire, 1985). People's perceptions of the social and physical worlds are shaped by their attitudes. Perceptions, in turn, impact behaviour (Albarracin et al., 2008). Attitudes are crucial to organising our thoughts, feelings, and behaviours toward social phenomena (Regan & Fazio, 1977).

Addiction has been subject to longstanding debate (Wiens & Walker, 2015). Different models have been proposed to explain the phenomenon, among them, the Nature Model, the Disease Model, the Moral Model, the Psychological Model and the Social Model (Broadus & Evans, 2014; Mosher & Atkins, 2007). Different addiction models reflect different disciplinary interests and offer possible explanations for the phenomenon and are influenced by changing perceptions in society.

Gauging public attitudes to addiction is crucial to the development of an effective addiction prevention policy, prevention efforts and programmes and public awareness and education programmes that help create a more favourable environment for individuals with addiction difficulties (Broadus & Evans, 2014). Furthermore, public attitudes may impact funding, care

(Singleton, 2010), judicial decisions and governmental (Fisher, 2006) and criminal justice policies (Broadus & Evans, 2014; Hser et al., 2007). On a micro level, attitudes influence treatment seeking (SAMSHA, 2012) and personal use (Trafimow,1996) and can lead to the experience of stigma.

There is a substantial body of research on attitudes in relation to addiction (e.g., Amos et al., 2006; Crawford & Heather, 1987; Grunt Weinendy & Grubbs, 2021; Kalebka et al., 2013; Meurk et al., 2014; Soverow et al., 1972). However, as Broadus and Evans (2014) point out, the attitude instruments used in most studies generally encompass the tenets of only one or two selected addiction models rather than the tenets of all five models.

In Malta, no research on attitudes about addiction among the general population has been carried out to date. This study will address this gap using the mixed-methods approach.

Rationale and Research Questions

Addiction is a complex phenomenon that affects society at large, not only the individuals involved. The mind constantly evaluates social phenomena for the opportunities they present or the threats they pose. These evaluations operate as a catalyst for action and have a significant influence on behaviour and decision-making (Sanbotmatsu et al., 2014). Attitudes about addiction among the general population influence the general public's behaviour toward individuals with addiction as well as policy. Attitudes about addiction influence all systems within a society, specifically: the self, through beliefs and personal use choices; the public perception of individuals with addiction issues and of their significant others; public discourse, social interaction; public policy; and, legislation (Broadus & Evans, 2014). To illustrate, a moralistic attitude may be less tolerant of addiction, resulting in stigma and lack of compassion and, ultimately, preventing individuals from seeking treatment. An empathic attitude, on the other hand, may help the individual fully reintegrate into society, following treatment. Attitudes also influence state-level decisions. For example, a collective attitude inclined toward compassion and tolerance may help secure funding for better

treatment services. This is why understanding society's attitude about addiction is crucial to the creation of targeted, well-researched and effective interventions and initiatives (Duffy et al., 2016).

The aim of this research study is to explore the attitudes of residents of the Maltese Islands about addiction using the mixed-methods approach. Its objective is to partly fill a gap in the Maltese evidence base on addiction studies. Understanding the attitudes of the general public is crucial for the development of effective prevention, treatment, and addiction related policies.

This research agenda lends itself to the following specific research questions:

1. Which models of addiction best reflect the attitude/s that residents of Malta have about addiction?
2. Are any demographic differences evident in the different attitudes/models that residents of Malta have about addiction?
3. What does an in-depth exploration of the attitudes about addiction held by residents of Malta reveal about them and society?

Conceptual Framework

This study's theoretical framework is a sociopsychological one, rejecting the assumptions that human behaviour can be comprehended in a vacuum, independently of social influence and/or interactions. Individuals develop their knowledge on the basis of the influences within their environment and shared interactions with others that lead to a better comprehension of the world (Burr, 2003). The research will also be guided by a biopsychosocial theoretical framework of addiction. Both frameworks are explained further below.

Social Psychological Conceptual Framework of Attitudes

The attitudes construct has always maintained its place at the top of social psychology literature (Crano et al., 2010) and has also featured strongly in the literature pertaining to other disciplines (Eagly et al., 1993). Attitude is defined as a mental or neurological state of readiness that

is organised by experience and has a direct or dynamic impact on an individual's response to all objects and circumstances to which it is linked (Allport, 1935). The attitudes concept has long been regarded as an "indispensable concept" (Allport, 1935, p. 798) in the field of social psychology, mainly because anything that has to do with reacting, such as feelings, thoughts, and behaviour, is acknowledged to be saturated with the evaluative meaning that attitudes provide (Eagly & Chaiken, 1998). Attitudes can be simply described as one's assessment about the self and others and the concepts and objects in one's world (Petty et al., 1997). Research on the social psychology of attitudes has examined how attitudes are formed (e.g. Edwards, 1990; Glasman & Albarracín, 2016: Jones & Eiser, 2014; Olson & Kendrick 2008; Regan & Fazio, 1977); how attitudes influence behaviour (e.g., Ajzen et al., 2018; Fazio, 1986; Fazio & Roskos-Ewoldsen, 2005); and, how attitudes may change and be changed (e.g. Albarracin & Shavitt, 2018; Bohner & Dickel, 2011; Forgas et al., 2010; Olson & Zanna, 1993; Prislin & Wood, 2005).

A person's attitude about addiction includes their point of view (cognition); how they feel about the issue (affect); and the activities/actions (behaviours) they participate in as an outcome of their attitude (Breckler, 1984; Pickens, 2005; Jain, 2014). As Pickens (2005) explains, attitudes help us determine how we view situations and how we react to them. Attitudes may consist solely of an ongoing judgment/evaluation of an individual or item, or can involve emotional reactions to objects and individuals. Internal cognitions or beliefs and thoughts about persons and objects are also created through attitudes. Attitudes influence how we act toward an object or individuals. While cognition and affect are personal and unique (internal) to the individual, behaviour can be observed (external).

Biopsychosocial Theoretical Framework of Addiction

"Addiction is a socially defined construct" influenced by time, research and culture (West, 2001, p.5). Various theoretical models have been developed by scientists and academics to attempt to explain the phenomenon of addiction. These socially constructed models reflect and influence

public attitudes. The main models are: the Nature Model, the Biological Model, the Moral Model, the Psychological Model and the Sociological Model. The models offer possible causes for addiction and reflect different attitudes about addiction.

It would be naive to believe that a single model could encompass all the answers to explain a topic as complex as addiction; a model may be able to explain some processes but not others (Bernhard, 2007). The Biopsychosocial Model emerged in response to the Biological Model of addiction which has historically dominated the field of addiction. Engel (1977) called for the need to relinquish the biological model in favour of the biopsychosocial one which encompasses components from three of the five different models. The latter model stipulates that genetic/biological, psychological and social factors all contribute to addiction and that all should be taken into account in prevention and treatment matters (Becoña, 2018; Graham, 2008; Skewes & Gonzales, 2013). In fact, the Vietnam Veteran Study (Robins, 1993) found that some of the heroin-addicted soldiers' consumption and dependence levels reverted back to pre-war levels on their return home. This indicates that factors such as being away from home, death, war, and helplessness had contributed to their addiction (Becoña, 2018). Addiction can only be correctly conceived if all of these aspects are taken into account (Skewes & Gonzales, 2013).

Key Terms

Attitude: "An attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935, p. 810).

Addiction: "A **repetitive** pattern that increases the **risk** of disease and/or associated **personal and social** problems" (Marlatt et al., 1988, p. 224).

Attitude object: a stimulus which elicits an attitude response. It can be anything including an item, a person, a group of individuals, a place, an issue, a concept or a construct.

Research Approach

This study takes a mixed-methods approach using a convergent parallel design based on surveys and interviews. This allows the researcher to understand and explain the data that has been obtained quantitatively through statistical analyses and attempt to understand its complexity using qualitative methods (Creswell, 1999). The mixed-methods approach is recognised as a fundamentally thorough method for social science research since it integrates thematic and statistical data (Tasshakkori & Teddlie, 1998).

In accordance with the chosen approach, the research is based on the philosophical underpinnings of pragmatism. It adopts an ontological stance of critical realism, together with a social constructionist epistemological and a transformative axiological view.

Expected Contribution

The study will partly fill a gap in the Maltese literature. It will shed some light on how individuals in Maltese society perceive addiction and provide insights on the level of tolerance and support of affected individuals; whether such individuals are impacted by stigma and discrimination; and, the likelihood of reintegration. The study will help identify educational gaps. It also aims to encourage policy makers to evaluate current practices. The study may also pave the way for future research in this field. Given that it is the first study of its kind to be carried out locally, it can also act as a baseline for future research on attitude changes and trends.

Overview of Chapters

The introductory chapter presented a preamble to the study and the rationale behind the chapter and outlined the study aims and objectives. It also explained the key concepts of the study and identified the expected outcomes of the study. The second chapter presents a review of the relevant literature. The third chapter discusses the methodological approach, including the philosophical underpinnings of the study and describes the research design. The fourth chapter presents the findings and the fifth chapter presents a discussion of the findings. The concluding

chapter highlights the main findings and discusses the limitations of the study and its implications while putting forward recommendations for future research in this area.

Chapter 2: Literature Review

Introduction

This chapter discusses the attitude construct in detail. It then presents the five models of addiction and the attitudes reflected through endorsement of the models. The discussion then moves on to how attitudes influence public policy and social systems and how they are measured.

Attitudes

Some people support legalising cannabis, giving non-contributory benefits to individuals with addictions and providing government funding for treatment and others do not. Some people advocate for individuals experiencing addiction and are empathic and willing to help in their desistance process. Others feel that such individuals brought their issues upon themselves and argue that it is up to them to solve them. The key difference between the two groups of people is their attitude. Understanding the concept of attitude is critical to bringing about social change.

A Short History of Attitudes and Attitude Research

Allport (1935) writes that "the concept of attitude is probably the most distinctive and indispensable concept … it has virtually established itself as the keystone in the edifice of American social psychology" (p. 798). He defined attitude as a "mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (Allport, 1935, p.810). Other authors have coined different definitions of attitude. Definitions share the common understanding that attitudes are an individual's general evaluations about objects, issues, places, other individuals and the self (Petty & Briñol, 2010; Eagly & Chaiken, 1993; Ostrom, 1969). It is a response to a stimulus, i.e., the attitude object (Breckler, 1984).

The history of the attitude construct parallels the history of the field of social psychology. Attitudes have been studied for more than a century, with the finest writers identifying three peaks

of attitude literature: the 1920s and 1930s, when researchers focused on the foundations of attitude and its measurement; the 1950s and 1960s, with the focus on attitude change; and, the 1980s when the focus was on attitude systems (McGuire, 1985). The literature also suggests a fourth peak that focused on dual-process models following Moscovici's (1985) work and implicit attitude measurement tests (Crano et al., 2008). The attitude construct has consistently maintained its place as a priority focus in social psychology (Crano et al., 2008; Eagly & Chaiken, 1993). The construct provided the foundation for research on countless topics in the field of social psychology (Briñol & Petty, 2012).

Attitude Structure: Cognitive, Affective and Behavioural Components

The general evaluative synthesis of the information gathered from an attitude is derived from three different correlates: cognitive, affective and behavioural information (Eagly & Chaiken, 1993; 1992; Zanna & Rempel, 1988). Attitudes do not necessarily include all correlates (Olson & Zanna, 1993). The cognitive component of attitude emerges through a deliberate "rational" process involving cognitions when an individual processes information about the attitude object and forms a belief (Eagly & Chaiken, 1993). For instance, a person may come to believe that individuals with sex addiction are a danger to society. The affective component comprises emotions, moods, and sympathetic nervous system responses (Breckley, 1984) that an individual manifests to the attitude object (Eagly & Chaiken, 1993). Lastly, the behavioural component incorporates a person's overt actions towards the attitude object (Eagly and Chaiken, 1993). The three components are measured on an evaluative dimension of meaning continuum that ranges from extremely positive to extremely negative (Eagly & Chaiken, 1993).

For an attitude to exist, it makes sense to think of it as a form of knowledge structure stored in memory or generated during judgment. Some theorists (e.g., Fazio, 1995) suggest that attitudes can be seen as object-evaluation connections; an attitude may be thought of as a basic two-node semantic network, with one node representing the object, the second node indicating the object's

global evaluation and the connection between the two nodes reflecting the strength of the association (Fabrigar et al., 2005).

Attitudes may differ from simple object-evaluation associations, referred to as intra-attitudinal structures, to inter-attitudinal structures which are more complex grouped knowledge structures within which an individual's mind attitudes towards different attitude objects are linked (Eagly & Chaiken, 1998). The structure of an attitude may differ according to accessibility, that is, activation potential, and availability, that is, memory storage (Eagly & Chaiken, 1998). The structures of attitudes are not bipolar; individuals may accept certain aspects/attributes, reject others or hold a neutral position (Eagly & Chaiken, 1998).

Attitude Function

In a broad sense, attitudes help individuals adapt to their environment (Eagly & Chaiken, 1998). Social psychologists have identified different functions of attitudes: value expressive, social adjustive, ego defensive, utilitarian, and object appraisal, labelled by Katz (1960) as the knowledge function (Ajzen, 2001; Briñol et al., 2019; Eagly & Chaiken, 1998). The value expressive function deals with the expression of attitudes that are consistent with the individuals' values and self-concept (Katz, 1960). The social adjustment function is concerned with the manner in which attitudes moderate social connections and facilitate or disrupt interactions (Smith et al., 1956). The ego defence function highlights the fact that attitudes enable the self to defend itself from potentially threatening realities (Katz, 1960). The utilitarian function emphasises the role of attitudes in positive and negative outcomes, maximising rewards, minimising punishments, or both (Eagly & Chaiken, 1998). The object appraisal function concerns the very general function of appraising the attitude object in relation to one's concerns (Eagly & Chaiken, 1998).

Attitude Formation and Change

Attitude formation describes the transition from having no attitude about an item to developing a positive or negative attitude about it (Oskamp, 1991). The way an attitude is acquired

has a significant impact on the way an individual behaves (Bordens & Horowitz, 2008). Attitudes are acquired in a variety of ways.

Mere Exposure. Mere exposure happens when one sees an object fleetingly and forms an attitude about it (Bornstein & D'Agostino, 1992). Exposing an individual to an object will most likely result in increasing their feelings towards that object (Zajonc,1965). This is also referred to as the truth effect (Moons et al., 2009). The mere exposure effect was found in a number of addiction studies (e.g., Chen et al., 2016; Morgenstern et al., 2013; Zerhouni et al., 2016).

Direct Personal Experience. Attitudes are also formed through direct personal experience (Borden & Horowitz, 2008; Pickens, 2005). Research suggests that attitudes established via direct behavioural experience with an attitude object are better able to predict subsequent behaviour than attitudes formed through indirect experience (Fazio et al., 1978). Consequently, individuals are less susceptible to being persuaded to abandon attitudes formed through direct behavioural experience (Bordens & Horowitz, 2008).

Learning. Individuals learn about their culture's views, beliefs, and actions through socialisation with family and friends, through schools, places they frequent and the media (Bordens & Horowits, 2008). From a young age, children are exposed to their parents' behaviours and are influenced by their attitudes. In fact, until adolescence, most children exhibit political, religious, and social views that are very similar to those of their family members (Oskamp & Schultz, 2005). For example, studies found a significant correlation between more permissive and tolerant parental attitudes toward substance use and children's attitude and use (e.g., Bahr et. al., 2005; Moore et al., 2010).

Research (e.g., Krosnick et al., 1992; Stats & Stats, 1958; Zanna et al., 1970) suggests that attitudes can be formed through classical conditioning. Not only can classical conditioning influence a person's attitudes, it can influence them while the person is unaware of the stimuli that

serve as the foundation for this kind of conditioning. This learning process is called subliminal conditioning

In operant conditioning, simply rewarding (e.g., by praising) or punishing (e.g., by scolding) a child for expressing an attitude can affect that child's beliefs (Bordens & Horowits, 2008). The process can be subtle, with rewards being as simple as psychological acceptance expressed through an embrace, praise or a friendly grin (Branscombe & Baron, 2023).

Attitude formation also occurs through observational learning (ref. Social Learning Theory, Bandura, 1977). This is done through the mechanism of social comparison. If a person's opinions coincide with those of others, that person is likely to believe that their thoughts and attitudes are correct (Branscombe & Baron, 2023)! This observation has been supported by studies (e.g., Secchi & Bui, 2018) that have found that people change their attitudes in group settings. In fact, people's attitudes are often grounded in the groups to which they belong (Smith & Hogg, 2008). Attitudes generate group stereotypes or normative inferences about actions and traditions; they enable the development of norms that lower ambiguity and govern social interaction. Attitudes are rooted in social consensus (Smith & Hogg, 2008). Being exposed to negative views about unacquainted individuals held by persons that are perceived to be similar to oneself is likely to lead to the adoption of the same views (Branscombe & Baron, 2023; Maio et al., 1994). For example, an accompanying adult who observes another adult crossing the road to avoid service users mingling outside an out-patients detoxification centre is likely to learn to do the same.

The Role of the Media. The role of the media in moulding public attitudes about key political and social problems has been a topic of much analysis and long-standing debate. Issues which attract substantial media attention are brought to the forefront of the public's consciousness through agenda setting (Fields, 2005; Wilson & Wilson, 2001) and are, thus, perceived as having priority when it comes to intervention (Scheufele & Tewksbury, 2007). Agenda setting and media framing may create stigma against particular groups (McGinty et al., 2019) by accentuating certain

aspects over others (Chong & Duckman, 2007) prompting viewers to blame the individual rather than social factors, for example (Iyengar, 1996). The narrative that this process generates influences public attitudes (Brown & Midberry, 2022). For example, individuals who misuse drugs are often marginalised by the media; they are depicted as ‘outsiders’ and ‘folk demons’ (Downes, 1977) and as a threat to society (Taylor, 2008).

Group Settings and Social Networks. Research suggests that by age one, children are influenced by and start to interpret the world around them by observing others' emotions (Moses et al., 2001). Individuals within a group that they identify with safely assume that the group has values and morals that are analogous with their own. Cohen (2003) found that an individual’s attitude about social problems was solely determined by the stated position of the political party with which the individual was affiliated.

While strong social support from a congruent social network results in attitudes being more resistant to change, support from a heterogenous social network with differing views leads to attitudes being less resistant to change (Visser & Mirabile, 2004). Furthermore, when faced with disputes, individuals change their attitudes to reduce conflict and convey opinions that align with those of others, without the need for persuasive arguments or explicit facts (Levitan & Verhulst, 2016). On occasions, rather than modifying their attitudes, individuals may find themselves presenting one viewpoint to one audience and another to another audience (Branscombe & Baron, 2023).

Attitude Change

Attitude change occurs when an individual’s evaluation shifts from one value to another. Persuasion is the key to attitude change. In a context where persuasion is possible, an individual or a group of individuals (the recipient) receives communication (a message) from another individual or group of individuals (the source) in a particular setting (the context). Successful persuasion occurs when the recipient’s attitude is modified in the desired direction (Petty & Briñol, 2010).

Polarisation occurs when an individual moves further towards their initial inclination, while depolarisation occurs when an individual moves further away from their initial inclination (Petty & Wegener, 1998).

People come across messages aimed at changing attitudes on a daily basis (Branscombe & Baron, 2023). Persuasion makes use of rational and/or emotional arguments to persuade others to alter their attitudes and/or behaviour and is present in every aspect of everyday life (Bordens & Horowits, 2008). Different variables effect persuasion, among them: the communicator, gender and status (Eagly, 1983), expertise (Petty & Cacioppo, 1986a), trustworthiness, credibility and familiarity (Branscombe & Baron, 2023). Fear appeals are another persuasive method used to change attitudes (e.g., pictures on cigarette packets). In persuasion settings, attitude change outcomes fall within a continuum ranging from "maximal acceptance", i.e., accepting the attitude, to "maximal boomerang", i.e., rejecting/resisting the attitude (Petty & Wegener, 1998, p.324).

Persuasive messages which can ultimately lead to attitude change may be processed in two different ways: central route processing and peripheral route processing. In central route processing, the message is processed in a thorough way through thoughtful consideration and scrutiny of the information and arguments being put forward. The process does not always result in acceptance of the attitude; in fact, if the individual finds the elaboration process incongruous, they might even reject it. However, if their attitude changes, the change would be enduring and stable (Bordens & Horowits, 2008). In peripheral route processing, the individual may not be able to understand the message or is simply not interested in learning new information (Bordens & Horowits, 2008). Peripheral routes are very reactive to emotional cues (Petty & Cacioppo, 1986b). This type of processing often results in attitude change; however, since the individual has not engaged in an elaboration process, the shift is unstable and susceptible to counter-pressures (Kassin et al., 1990).

Values, Ideologies and Social Representations: Three Constructs Related to Attitude

Three intertwined key constructs that are related to the attitude construct are values, ideologies and social representations.

Our attitudes are the 'medium' through which our values are expressed (Ball-Rokeach et al., 1984). A value is a perception of what is ideal; it serves as a benchmark for conduct and a road map for activities (Bordens & Horowitz, 2008). One's expectation (reflected in one's attitude) that an individual who steals should be severely punished even if they have a substance use disorder (SUD) is likely to stem from the value of honesty. Values are broad, abstract concepts, while attitudes are focused on things, people, and circumstances. A value encompasses several linked attitudes (Bordens & Horowitz, 2008). Different attitudes prioritise different values.

Ideologies are value and attitude systems assembled around an abstract theme (McGuire, 1985); they are "cultural beliefs that justify social arrangements" (Maciones & Gerber, 2010). The literature describes two main ideological dimensions: compassion versus competitiveness; and, moral regulation versus individual freedom, which may account for domain variations (e.g., social values, cultural differences, political and social ideologies) in individual differences (Ashton et al., 2005). Dominant ideologies are perpetuated by power in society and those who have power are most likely to have their ideology prioritised. Of note is that each of the constructs, that is, attitudes, values and ideologies, is related to the other constructs: ideologies impact values, values impact attitudes, attitudes affect values and values affect ideologies (Maio et al., 2006).

Values, ideologies and attitudes feed into the construct of social representations (Moscovici, 1961). Howart (2006) postulates that, throughout the years, the social concept of attitude became individualistic, subjective, asocial and apolitical. Moscovici (1961) posits that individuals respond to social objects on the basis of a collective and socially constructed reality. Thus, an individual's evaluation of an attitude object is dependent upon the individual's environment (Sammut et al., 2015). Social representations are a type of common-sense knowledge generated by individuals in

daily conversation in order to give meaning to new or unfamiliar objects or occurrences (Bovina et al., 2014). When individuals are interested in a social problem, they are likely to pay more attention to pertinent media stories and to debate the subject within reference groups (Staerklé, 2009). Individuals adopt a perspective based on common reference information after being exposed to different points of view and opposing ideological beliefs (Clémence, 2001).

Conceptualising Addiction: The 5 Models of Addiction

The science of addiction is dogged by a lack of consensus over many of the fundamental concepts within the addiction construct itself, disagreements over how to describe and comprehend the phenomena within its purview, and disputes over what really belongs within that purview (West & Brown, 2013).

The Nature Model

The principle underlying this model is that individuals have an innate drive to use substances that is analogous to the drive individuals have for food and sex (Weil, 1986) motivated by the desire to alter consciousness (Mosher & Atkins, 2007). Human beings are born with the need for periodic variations in consciousness (Weil & Rose, 2018). The fascinating thing about substances is that they provide a quick and easy way to achieve a ‘high’, that is, an experience of euphoria, self-transcendence and lightness (Weil & Rosen, 1998). Although the ‘high’ remains at the root of substance use, there are other reasons why individuals would want to alter their state of consciousness, among them: to enhance their creativity, to alter moods, such as boredom, and for self-exploration (Weil & Rosen, 1998). Weil and Rosen (1998) point out that there are many individuals who consume substances, even heroin, and still function, fulfil their obligations and lead a healthy life. Moreover, they argue that addiction does not solely depend on the type of substance imbued but on the relationship one forms with the substance. As the authors remark, “any drug can be used successfully, no matter how bad its reputation, and any drug can be abused, no matter how

accepted it is" (Weil & Rosen, 1998, p. 27). The nature model takes a 'permissive' attitude towards substance use and, to some extent, supports the 'live and let live' philosophy but 'within limits!'

The Disease Model

The disease model is the most dominant model of addiction. Reference to addiction as a disease, dates back to at least 1784 when Benjamin Rush referred to alcoholism as an odious disease (Mosher & Atkins, 2007). The model was ignored during the 19th and part of the 20th Century and only started to attract interest again after Alcoholics Anonymous was formed in 1935 (Mosher & Atkins, 2007). In a statement, Leshner (1997) postulated that more than 85% of addiction research worldwide is supported by National Institute on Drug Abuse (NIDA). Endorsed by such a powerful organisation, the model gained dominance. Analogous with the disease model is the slogan 'once an addict, always an addict' (Johnson, 1978).

The disease model medicalises addiction (Broadus & Evans, 2014; Mosher & Atkins, 2007). According to this model, addiction is a chronic, prone-to-relapsing, inheritable disease of the brain (Moshner & Atkins, 2007; National Institute of Drug Abuse, 2016). An individual with an addiction is described as having no agency because their brain has been "hijacked" giving them an uncontrollable drive to engage in the addictive behaviour (Bellum, 2013, para. 4). The individual's choice to experiment with, for example, substances, is regarded as having been superseded by a physiological and psychological compulsion (Wilbanks, 1989).

It has been suggested that the disease model increases social acceptance (Hyman, 2007) as it reduces stigma (Dackis & O'Brien, 2005) because blame and personal responsibility are diminished (Racine et al., 2015). However, evidence also suggests that the disease model does not always reduce the moralisation discourse surrounding addiction (Frank et al., 2017). Critics of the model argue that the model reduces society's, and the individual's, responsibility (Szazs, 1961).

The Moral Model

The moral model dominated the 19th and part of the 20th Century (Moshner & Atkins, 2007) particularly during the American Prohibition Era (Broadus & Evans, 2014).

One of Schaler's (2000) introductory statements is: "I maintain that 'addiction' is a myth. I deny that there is any such thing as 'addiction', in the sense of deliberate and conscious course of action which the person cannot stop" (p. xv). Within the context of this model, persons who have an addiction are seen as being morally feeble and having poor willpower and must will themselves through the desistance process to recover (Skewes & Gonzales, 2013). This model denies that there are any biological components of addiction (e.g., Fingarette, 1975). The model rejects scientific theory and research, as well as the comprehensive view that links individuals and the environment (Rusammen, 2000). It looks at individuals who have an addiction as individuals who refuse to adhere to societal ethical and moral standards. The assumption is that such individuals create this negative situation for themselves and those around them and, hence, should be blamed and punished (Lassiter & Spivey, 2018). It argues that addiction should be dealt with through methods that make individuals accountable for their actions, which generally translates into limiting the availability of social services or imposing some type of punishment via the criminal justice system (Richter et al., 2019). The model expresses little to no compassion for persons who exhibit addictive behaviour. Critiques condemn the model as being irrationally biased, prejudiced and judgemental (Cook, 2008).

The Psychological Model

The psychological model presents the phenomenon of addiction from a micro-level perspective, that is, the 'self'. It puts forward theories of learning in relation to addiction (ref. Blume, 2001; de Queiroz Costantino Miguel et al., 2015; Heinz et al., 2019; Köpetz et al., 2013; Sussman et al., 2011). It focuses on the fact that adverse life experiences and trauma have an impact on addictive behaviours. The literature also encapsulates cognitive psychology theories, where the

role of early maladaptive cognitions, as well as basic beliefs about oneself, other people, and the world, impact the addiction career (Brotchie et al., 2004). Furthermore, the psychological model is also concerned with mental health issues, such as depression, the constructs of self-esteem and self-worth and personality (e.g., the self-derogation theory – ref. Kaplan 1980; 1982), traits and temperament (e.g., Basiaux et al., 2001; Gierski et al., 2017). The model reflects compassion and tolerance and emphasises the fact that treatment is more effective than punishment (Richards et al., 2021).

The Sociological Model

In this model, addiction is presented through the sociological model from a macro perspective, encompassing environmental, cultural, educational, social variables (Broadus & Evans, 2014) and social structure (Moshkin & Atkins, 2007). The experience of addiction is influenced by different aspects within society among them; social norms, availability and accessibility, legislation, societal expectations and approbation, social learning and modelling (ref. Akers, 2010 & Bandura, 1979), and cultural beliefs. Sociological theories all share the understanding that addictive behaviour is influenced by external social forces and uphold divergent views on various aspects of social order and the social structure. Like the psychological model, it fosters compassion and reduces stigma. It further emphasises that underlying macro-level issues need to be resolved for an individual to recover (Richards et al., 2021).

Endorsement of the Models by the General Public

The models are co-constructed by social actors operating in their historical and cultural contexts: academics, scientists and politicians, among others. The theories within each model influence and are influenced by research, funding and policy development. An individual's perspective is generally directed by a specific model (Rasmussen, 2000). The models themselves may have been developed by scientists and theorists, but the attitudes that they reflect are held

implicitly by the general population, which means that the general population will implicitly support specific policy directions driven by the different models.

The Influence of Attitudes about Addiction on Research, Policy and Practice

An individual's ability to generate ideas and opinions about a problem, as well as the beliefs they form, is influenced by their immediate circumstances, social-environmental influences, values, and attitudes. Values and attitudes shape public opinion and vice versa. There is a multidirectional relationship between the public and public attitudes, policy, the media and research, etc. Models of addictions and attitudes are constructs developed at specific moments in time, influenced by cultural and environmental components, historical periods, and key players' agendas (Levine, 1978).

Public attitudes and opinions are very closely interrelated; the two terms are often used interchangeably. While attitude is generally described at the level of the individual, public opinion is described at the collective level (Katz, 1966). As Burstein (2003) notes, "No one believes that public opinion always determines public policy; few believe it never does" (p.29). Attitudes might indicate change in the ideological atmosphere (Stimson, 1991). Public attitudes impact policy, influencing how and whether proposals end up on the statute book, while also determining the success of current and future policies. Ideological changes in public opinion, through elections, change the government's partisan makeup, which changes public policy (Erikson et al., 2002). Furthermore, rational anticipation mechanisms allow public opinion to directly influence public policy (Erikson, 2002). Politicians, constantly considering their chances in the next election, watch and anticipate ideological changes and adjust their actions accordingly (Rudolph, 2022). When the execution of a policy is met with opposition, the trends in opinion and policy may diverge. A case in point, in Malta, is the cannabis policy reform and all the debate surrounding it in 2021.

Given the extent to which attitudes influence state-level decisions and different processes within society through the systems and mechanisms explained above, understanding public attitudes about the phenomenon is crucial. Attitudes may influence judicial sentencing (MacDonald et al.,

1999; Spohn et al., 2014) and the law (Broadus & Evans, 2014); individuals who support the nature model might be inclined to support less restrictive laws and legislation (Felson et al., 2019; Resko et al., 2019). Attitudes influence policy such as gambling advertisement (Bouguettaya et al., 2020), gambling policy (Pöysti, 2014) and criminal justice policies (Latimer & Desjardins, 2007), among them, the setting up of drug courts (Gebelein, 2000) and the use of methadone assisted treatment (Kruis et al., 2021; Matusow et al., 2013). Attitudes impact funding and care (Dhuffar & Griffiths, 2016; Singleton, 2010). Policymakers may be less ready to provide resources if they have a stigmatising attitude (Yang et al., 2017). Often, attempts to increase treatment are outpaced by funding for punitive measures (Duncan et al., 2014). A collective attitude inclined towards compassion and tolerance may help secure funding for better treatment services and research.

At a micro-level, attitudes have a profound impact on our ideas about potential addictive behaviours, choices regarding onset or otherwise (Boogar et al., 2014; Trafimow, 1996) and treatment decisions (Substance Abuse and Mental Health Services Administration, 2012). An attitude that falls under the purview of the moral model may generate feelings of anger and fear together with rejection behaviours (Nieweglowski et al., 2013; van Boekel et al., 2013) where individuals are stigmatised, ostracised and pushed to the periphery of society. This may have repercussions on treatment seeking (Frazer et al., 2019; Stringer et al., 2018; Wogen et al., 2020; Yang et al., 2017). Moreover, stigma may also result in further discrimination against individuals who have desisted from for example, substance use and who may not be able to fully reintegrate back into society as a result.

Measuring Attitudes about Addiction

Attitudes cannot be directly seen and must be deduced from the person's response to an attitude object. Responses might range from overt behaviour and direct verbal declarations to unconscious covert responses (Schwartz, 2010). Furthermore, a person's responses to various attitude measures may indicate various underlying attitudes; for instance, a person's verbal

comments may not coincide with their overt or covert behaviour (Schwartz, 2010). A variety of techniques and tools are used to measure attitude.

Attitude surveys are the most regularly used tools to measure attitudes. These surveys rely on the respondents' answers (Bordens & Horowitz, 2008; Schwartz, 2010). Although such surveys are widely used, the questions' phrasing, format, and the context in which they are being asked might affect how a respondent answers the survey (Schwartz, 1999). Other variables related to the respondent, such as their comprehension of the question, the retrieval and judgement of information processes they undergo, and the question and response order effect, all impact the outcome (Schwartz, 2010). Interviews are also used to measure attitudes (Henerson et al., 1987) and can help balance out instrument biases (Carrascoa & Lucas, 2015). Other tools used to measure attitudes include unobtrusive measures (Bordens & Horowitz, 2008) and implicit measures, psychophysiological measures and behavioural observation (ref. Schwartz, 2010).

The ability to identify public attitudes about addiction in a valid and reliable manner using standardised measures created for the purpose is essential to comprehending such attitudes. Many attitude addiction instruments do not encompass all the models of addiction (Mosher & Atkins, 2007); they tend to focus on particular models or focus on attitudes related to specific substances and not on addiction (Broadus, 2012). The fact that populations of individuals with addiction and/ or service providers have typically been involved in the development of existing tools is another issue (Luke et al., 2002). Despite the fact that the main goal of developing such instruments was to assess public attitudes, few were derived from genuine study conducted within this demographic (Broadus & Evans, 2014). The Public Attitudes About Addiction Survey (PAAAS) incorporates the five models of addiction, employs language that is commonly used and understood by the public and is based on a sample within the general population (Broadus & Evans, 2014).

Public Attitudes about Addiction Research: A Review of the Evidence

Studies focus on different aspects of this phenomenon, among them attitudes toward specific addictions (e.g., Abrahim et al., 2013; Lindsay et al., 2021; Pescosolido et al. 2010; Peretti-Watel, 2003; Schomerus et al., 2010; Yang et al., 2019). Such studies found that individuals who have an addiction are stigmatised within society. For example, the public consistently expressed a significant need for distancing from those with SUDs (Corrigan et al., 2005; Ries, 1977; Schomerus, 2006), gambling addiction (Dhillon et al., 2011; Hing et al., 2016; Peter et al., 2019) and sex addiction (Irvine, 1995; Lindsay et al., 2021). Individuals with addiction are perceived in a more negative way than individuals with other health concerns (Corrigan et al., 2009; Crisp et al., 2005; Mannarini & Buffo, 2014; Marie & Miles 2008; Ries, 1977; Schomerus et al. 2006) as they are seen as being more threatening. As Schomerus et al. (2014) note, stigmatisation attitudes did not improve over time; if anything, more blame has been assigned to individuals with addiction.

In light of proponents of the disease model postulating that the model lessens the blame placed on the individual with addiction (Racine et al., 2017), some studies have focused on how the model impacts public attitudes. Research results categorically refute the widely held belief that the disease model is effective in fostering humanitarian and altruistic attitudes (Crawford & Heather, 1987).

Key to public policy is the judicial system. Legal actors, among them, magistrates, judges, and lawyers, have a vital function in determining the course of action. Negative attitudes held by magistrates appeared as the primary indicator of potential guilt at sentencing, affecting the likelihood of sentence reduction and punishment and rehabilitation weighting (Sinclair-House et al., 2020). Negative attitudes were also endorsed by criminal defence lawyers (e.g., Avery et al., 2018; 2020). Attorneys can help people who are addicted get suitable and timely treatment through: recognised drug treatment programmes (Akanni et al., 2021), petitioning for diversion to drug

courts, summoning social workers to assist defendants, and helping defendants follow treatment orders (Rich et al., 2011; Tyuse & Linhorst, 2005).

Other researchers have compared attitudes within populations or specific settings (e.g., Abed & Neira-Munoz, 1990; Caplehorn et al., 1997; Kalebka et al., 2013) and among different populations, either in relation to a specific subject or in general (e.g., Doctor & Sieveking, 1973; Leonieke et al., 2014; Soverow, 1972; Wyler et al., 2022). Interestingly, the results extracted from the research conducted with professionals that was reviewed for the purposes of this study showed negative attitudes, with the participants assigning blame to individuals with addictions, reporting that they disliked working with them and manifesting a solid propensity to maintain social distance from them (e.g., Abed & Neira-Munoz, 1990; Gilchrist et al., 2011; Kaleba et al., 2013; van Boekel et al., 2015). In addition to functioning as a treatment barrier, negative attitudes may also reduce treatment efficacy (van Boekel et al., 2014).

Other literature amalgamates religion with attitudes about addiction. A review of the literature revealed that a substantial number of studies identified negative attitudes, especially within some religious and spiritual traditions (Geppert et al., 2007). Another review reported that higher levels of religiosity and Christian identification tended to be associated with increased support for the moral model of addiction (Grant Weinandy & Grubbs, 2021).

In the literature are also studies on attitudes about addiction policy (Hoffman et al., 2000; Kilian et al., 2019; Matheson et al., 2014; Murphy & Russell, 2021). For example, the findings suggest that mandatory treatment is only deemed appropriate for serious crimes such as murders carried out under the influence (Wild et al., 2001). Research also suggests that different countries support different policies. Northern European nations tend to support alcohol restriction legislation to a much greater degree than Eastern European nations (Kilian et al., 2019).

There have only been a few studies that have researched public attitudes about the general concept of addiction (e.g., Hasnawi, 2007; Bustos-Gamiño et al., 2022; Forer et al., 2021; Kulesza & Larimer, 2013) and the ones that did were government-related studies (e.g., Conservative Drug Policy Reform Group, 2019; Dillon, 2017; The Scottish Government, 2016; Singleton, 2010). Common to all studies is the negative attitude that the general population holds towards individuals with addiction. Intolerance, stigma, a desire for social distancing and blame prevail. Being deceitful, selfish, untrustworthy, unreliable, scary and dangerous were common perceptions held by the public of individuals with addictive behaviours. Notwithstanding this, some studies also found that the public is sympathetic towards individuals with addiction and feels that the best possible treatment should be provided (Singleton, 2010; The Scottish Government, 2016; Dillon, 2017).

Locally, the attitudes construct is not a novel research topic, but only a handful of studies have been carried out on attitudes and potentially addictive behaviours (e.g., Clark et al., 2021), some of which are unpublished dissertations (e.g., Vella, 2012; Bugeja, 2020). Furthermore, no research has been conducted on attitudes about addiction among the general population.

Conclusion

This chapter discussed attitude, the processes involved in attitude formation and structure, attitude change, and constructs related to the attitude construct itself. It, then, presented the addiction models. This was followed with a discussion on how attitudes influence public policy. Given that the study used a mixed method approach, the chapter also discussed the measurement of attitudes. Finally, a brief overview of research related to the study was presented.

Chapter 3: Methodology

Introduction

This chapter presents the research questions, rationale and the philosophical underpinnings of the study. It explains the study's parallel convergent mixed-methods design and describes the target population and the sampling, data collection and analysis strategy used. It also discusses the study's reliability, validity, credibility, rigour and ethical considerations.

Research Questions and Rationale

Public attitudes shape the settings in which people in the community engage with people who have addiction difficulties, in which professionals respond to those who seek treatment and in which public policy is developed. Whether one is met with intolerance or compassion, with discrimination or acceptance, is kept waiting for service or is treated immediately, may all be traced back to attitudes (Pescosolido et al., 2010). Misinformation and stereotyping also lead to treatment discrimination, insufficient funding for research, therapy and practice and restricted citizenship rights. Attitudes influence how law makers and scientists approach issues of parity, treatment systems and the allocation of research budgets (Pescosolido et al., 2010).

This study uses a mixed-methods approach to explore the attitudes of residents of Malta about addiction. It partially addresses a vacuum in Maltese literature by shedding light on the general population's views which influence the development of successful addiction prevention, treatment, and policy.

The research questions posed by the study are:

1. Which models of addiction best reflect the attitude/s that residents of Malta have about addiction?
2. Are any demographic differences evident in the different attitudes/models that residents of Malta have about addiction?

3. What does an in-depth exploration of the attitudes about addiction held by residents of Malta reveal about them and society?

Philosophical Underpinnings - Paradigm, Ontology, Epistemology and Axiology

Who a person is and what they bring to a research project influences what they observe, fail to notice, or take for granted. Reflecting on one's assumptions, decisions, expectations, and actions throughout the research process is therefore crucial (Finlay & Gough, 2003). All research paradigms presume certain aspects that researchers bring to the table when making decisions regarding the study design, sample size, and so on (Klenke, 2016). Knowing one's philosophical and theoretical position, values, and assumptions about the world is critical to understanding how such features have contextualised and influenced the research (Braun & Clarke, 2021).

Paradigm

The research paradigm adopted is pragmatism. Pragmatists believe that reality is dynamic and constantly changing. While pragmatists agree that there are pre-existing social structures (Bhaskar, 2009), they take an interpretivist stance in recognising people's role in constructing and evolving these systems (Toyon, 2021). Consequently, pragmatism relies heavily on actions. Beliefs develop as a result of repeated actions in similar circumstances and outcomes (Maxcy, 2003; Morgan, 2014). Pragmatism acknowledges that there may be one or more realities that are susceptible to scientific investigation (Creswell & Plano Clark, 2011) and that beliefs and habits are socially constructed and serve as the foundation for knowledge and reality (Yefimov, 2004). Furthermore, pragmatic researchers prioritise the study question over philosophical assumptions (Maarouf, 2019).

The mixed-method approach is congruent with this research paradigm which has the concept of what works at its centre (Maarouf, 2019) and which allows the combination of different assumptions, methodologies, and data collection and analysis methods (Creswell, 2014). It also accepts the notion that researchers can be both objective and subjective (Subedi, 2016).

Ontology

Ontology is an individual's understanding of reality and what knowledge can be learned about that reality (Haigh et al., 2019). This study adopts a critical realist ontological stance which states that, although a real world exists, our understanding of it is socially constructed and, as such, is subject to error (Bygstad & Munkvold, 2011). Reality is complex and dependent on social and historical factors (Archer et al., 2016). Social reality and its respective knowledge are multi-levelled and multi-layered (Baskhar, 2005; Banifatemeh et al., 2018). Critical realism distinguishes between the "observable" and the "real" worlds. The "real" cannot be seen and is independent of our knowledge and awareness. Our viewpoints and experiences are what construct the world we know and interpret. Unobservable structures lead to observable events and only when individuals are aware of the structures that underlie occurrences can the social world be fully comprehended (Zhang, 2022). This approach sits well with a study concerning attitudes.

Epistemology

Epistemology is the theory of knowledge (Audi, 2010). Questions of epistemological nature pertain to "knowledge, evidence, reasons for believing, justification, probability, [and] what one ought to believe" (Fumerton, 2006, p.1). The epistemological underpinnings of the study are those of constructivism; that is, the understanding that one's experiences and knowledge are derived through one's senses and cognitive processes and, thus, the meanings one ascribes to nature and the environment serve as the building blocks of knowledge (Ültanır, 2012).

Axiology

Life necessitates inquiry into value judgments' claims, veracity, and validity. The notion of value affects every aspect of our lives: we prefer one thing over another, we applaud one action and criticise another and, in every instance, we value. Behind our emotions, interests, and purposeful behaviours is the conviction that they are valuable (Hart, 1971). The axiology within this study is a transformative one (Mertens, 2007), based on social justice and founded on human rights. This

study is based on awareness of the pervasiveness of prejudice, discrimination and injustice and that research needs to challenge the status quo to bring about social change.

Mixed-Methods: Convergent Parallel Mixed-Method Design

This study takes a mixed-method approach. Since neither quantitative nor qualitative approaches are in themselves sufficient to capture the general tendencies and specifics of a situation (Maarouf, 2019). Combined, quantitative and qualitative research methods produce a more thorough study that capitalises on the benefits of both approaches while also providing better inferences and minimising uni-method bias (Green et al., 1989; Tashakkori & Teddlie 1998; 2009, Maarouf, 2019).

This study used a convergent parallel mixed-methods design that enables the collection of disparate data on the same subject that is complementary (Morse, 1991), providing a better understanding of the research topic (Creswell & Pablo-Clark, 2011). In a convergent parallel design, the researcher implements the quantitative and qualitative parts of the study concurrently, giving each part the same importance, analyses both sets of data and brings the two sets of findings together for interpretation (Creswell & Plano Clark, 2011). By digging deeper into the participants' perspectives using qualitative methods, a more in-depth understanding of the statistical findings obtained through quantitative methods can be obtained (Creswell, 2003).

Target Population, Eligibility Criteria, Recruitment and Sampling Procedures

The target population for both methods were adult individuals in the general population aged 18 years and over residing in Malta.

Quantitative Method

This study used convenience sampling and no limit on the number of participants was placed. This sampling technique is based on availability and accessibility (Ellison et al., 2009). It

allows participants to opt in independently, meaning that an unrestricted self-selective survey was used (Fricker, 2017).

Several aspects were kept in mind during the recruitment and sampling process to counteract limitations. For example, research suggests that women respond to surveys more than men (Becker & Glauser, 2018; Porter & Whitcomb, 2005). The survey was posted on a variety of social media groups that target different populations among them, Expats in Malta, Nostalgia Malta, The Salott, Legalize it. The survey was left open for four weeks. The final sample included 720 participants.

Qualitative Method

The individuals targeted were those individuals who responded to the survey. At the end of the survey, respondents were invited to participate in a follow-up interview. A total of 8 interviews was conducted.

Data Collection Strategy

Quantitative Data Collection Instrumentation and Procedure

The 54-item PAAAS by Broadus and Evans (2014) was used as the survey tool. The PAAAS is a validated and standardised measurement of addiction attitudes with an acceptable subscale discriminant / divergent validity and interscale correlations of 0.32 and less and strong interitem reliability with Cronbach alphas ranging from 0.703 to 0.894 (ref. Broadus & Evans, 2014). Scoring of the PAAAS uses a 7-item Likert scale ranging from 0 (strongly disagree) to 7 (strongly agree). The 54-item statements reflect five models of addiction with each model encompassing several statements relevant to that model.

Permission to use the survey was sought from and granted by the authors (Appendix B). SurveyMonkey was used to design the survey and collect responses. The first section included information about the study, anonymity and consent. The second section was designed to collect

demographic data. The third section of the survey comprised the PAAAS questions and the last section contained an invitation to participate in a follow-up interview. (ref. Appendix C).

Qualitative Data Collection Tool and Procedure

Once a potential participant contacted the researcher, the information letter (Appendix D) and consent form (Appendix E) were forwarded to the participant and an interview was scheduled. All the interviews were held online.

A semi-structured interview guide was used for the interviews (ref. Appendix F). An interview guide directs participants on what to discuss (Gill et al., 2008). It allows the interviewer to formulate impromptu follow-up questions based on the participants' replies (Rubin & Rubin, 2005) making the interview participant-led (Roulston & Choi, 2018). Based on the premise that the interviewees interpret the world in diverse subjective ways, this data collection approach facilitates the exploration of spontaneous themes and topics raised by the participant (Ryan et al., 2009). The interview guide was divided into four sections (ref. Appendix C). The first section included questions that aimed to gather demographic information. The second section included general questions about addiction. The third set of questions focused on the addiction career, that is, onset, escalation, maintenance and desistance (Ref. to Clark, 2011). The final set of questions focused on public attitudes, social interactions, and public policy.

Participants were asked to sign the consent form and send it to the researcher prior to the interview. The interviews were recorded to ensure accurate reporting of the data and allowed the researcher to focus on what was being said at the interview. Each interview lasted between 30 - 90 minutes.

Data Analytic Strategy

Quantitative Data Analytic Strategy

The data was exported into IBM SPSS version 28. A total of 826 participants responded to the survey. Of these, 106 were removed as the surveys were incomplete. The final sample of 720 participants selected from a population of approximately 500,000 individuals guaranteed a maximum margin of error of 3.65%, assuming a 95% confidence level (CI). To determine which attitude/s the residents of Malta have about addiction (RQ1), the responses pertaining to attitudes reflective of each model were grouped and each participant's mean subscale scores were calculated. The Friedman test was then used to compare mean scores of the five addiction models scales. A p-value of less than 0.05 meant significant difference.

To answer the second research question, the One-Way ANOVA test was used to determine whether there was any significant difference in subscales' mean scores between different demographic data. Since the One-Way ANOVA test only shows whether there is a significant difference between groups, but does not specify which group is producing the significant difference (if any), error bar graphs with a 95% CI were also used to identify significant results within groups.

The major limitation of the One-Way ANOVA test is that it investigates solely the relationship between a dependent variable and a single categorical predictor. A single predictor may be a significant contributor to response variance, but it would be rendered insignificant in the presence of other predictors. The appropriateness of a predictor in a model is frequently determined by other predictors that are included with it. To address this issue, a general linear regression model was used to relate each scale to a number of explanatory demographic variables. SPSS computes a p-value for each predictor and the ones with the smallest p-values (less than 0.05 level of significance) are the stronger predictors. Moreover, SPSS provides a regression coefficient for each category of every predictor, where the last category is aliased (set to 0). The regression coefficient

is the expected difference in the mean subscale scores between the category of interest and the last category.

Qualitative Data Analytic Strategy

Thematic Analysis (TA) was used to analyse the data. This strategy identifies, analyses, and interprets patterns of meaning, that is, themes (Clark & Braun, 2017). It is an accessible and flexible method that provides rich information about the data (Braun & Clarke, 2006). This means that the focus is on patterns and the literature could inform that theme. Furthermore, TA fits well with a constructivist epistemology (Braun & Clarke, 2006).

The analysis was a deductive and latent analysis (Braun & Clarke, 2006). TA is a six-phase analytical process: phase one is where the researcher familiarises themselves with the data; phase two involves the generation of data codes; phase three involves a search for themes; phase four involves developing and reviewing themes; phase five is about defining and naming themes; and, the last phase is that of producing the report (Braun & Clarke, 2006). Data analysis generally requires a continual back-and-forth between the phases (Braun & Clarke, 2006). The findings were used to answer the third research question.

Reliability, Validity, Credibility and Rigour

Although perfect reliability and validity are nearly impossible to obtain, researchers still attempt to achieve them. Reliability refers to replicability, consistency and dependability of the research findings (Zohrabi, 2013). Validity is concerned with trustworthiness and whether the research actually measures or evaluates what it sets out to measure or evaluate (Zohrabi, 2013). As discussed above, the PAAAS is a reliable and validated standardised tool which measures attitudes about addiction. Credibility and rigour of the qualitative method was achieved by recording and transcribing the interviews (Coleman, 2021) and providing a detailed description of the data collection and analysis processes. Furthermore, truthful accounts of the participant interviews were

provided (Cypress, 2017) and regular reviews were held with the research supervisors (Simon & Goes, 2011).

Ethical Considerations

Throughout the research process, various ethical principles and standards were considered. Prior to embarking on the study, approval was obtained from the University of Malta Research Ethics Committee (Appendix A).

Autonomy, Privacy and Confidentiality

The concept of autonomy implies the right of individuals to choose whether or not to participate in a study. An opt-in strategy was, therefore, implemented. Anonymity was ensured by not asking any identifiable questions and ensuring that ip addresses were not collected. Furthermore, consent to participate was obtained by including a proceed button following a declaration that the respondent consents to participate in the study. Alongside the right of autonomy is the right to privacy. An information letter and a consent form to participate in the interviews was sent to all interviewees. Participants were provided with all the pertinent information on the study's objectives and procedures. In addition, the consent form set out consent for recording and the participants' rights, among them, the right to confidentiality, the right to withdraw participation at any point, and the right not to answer a question . Written consent was sought before the interview, while verbal consent was also sought at the very start of the interview. Pseudonymous were used in the report. Also, all data was stored in password-protected files.

Non-malfeasance

The principles of non-malfeasance and responsibility to the participants are crucial in the qualitative method. A list of support services was kept in case of participants experiencing any distress (Appendix G). Throughout the interviews, the researcher made sure that participants felt safe and at ease (Ryan et al., 2009). As the survey targeted the general population, anyone could contact the researcher, including individuals who were experiencing addiction issues. The

participants were asked no questions on their personal lives and were left free to disclose information of their own accord. A non-judgemental attitude, unconditional positive regard empathy and active listening skills were adopted at all times with all participants. This was done to ensure that no psychological harm would be done to the participants.

Language

Language was another ethical principle that was taken into account. As a sign of respect and to put the participants at ease, the researcher used the language the participants used. This also helped them express themselves more easily.

Conclusion

This chapter provided a description of the researcher's philosophical assumptions and gave an overview of the study's research design and methods. The data collection strategy and analysis processes were meticulously described and the relevant ethical issues were highlighted.

Chapter 4: Findings

Introduction

This chapter commences with the socio-demographic characteristics of the sample. It then presents the findings obtained through the survey, weaving them with the findings obtained through the interviews in an attempt to answer the research questions. The findings are presented in tables and figures with brief explanations to clarify the key aspects behind the results. These findings are discussed in the following chapter.

Findings: Quantitative Method

Demographic characteristics of the sample

The final number of participants in the sample was 720 (66% female and 34% male). Table 1 presents the socio-demographic characteristics of the sample.

Table 1

Participants' demographics

		N	%
Gender	Male	245	34%
	Female	475	66%
Age	18-25	53	7%
	26-50	443	62%
	51+	224	31%
Relationship status	Single	236	33%
	Married/cohabiting/registered partnership	427	59%
	In a relationship - living apart	57	8%
Religion	Practising	325	45%
	Non-practising	304	42%
	Atheist	91	13%
Education level	Secondary	116	16%
	Post-secondary	164	23%
	Tertiary	275	38%
	Post-tertiary	165	23%
	Full-time employment	478	66%
Had difficulties with addiction in the past.	Yes	157	22%
	No	563	78%

Having addiction difficulties at present	Yes	89	12%
	No	631	88%
Knowing someone who has/had difficulties with addiction.	Yes	546	76%
	No	174	24%

Attitudes about Addiction and Addiction Models

The Friedman Test was used to compare the mean scores of each participant on each scale in the questionnaire, that is, the psychological, sociological, moral, nature and disease attitude scales.

Table 2

Participants' Grouped Mean Rating Scores

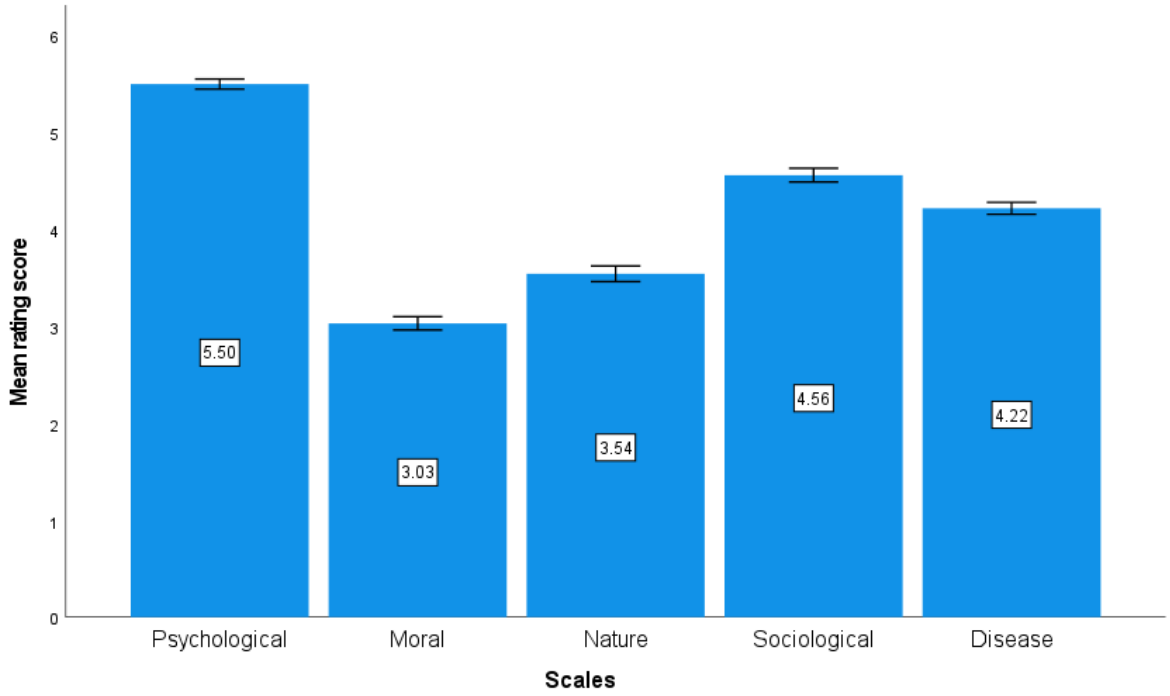
Latent Variable	Sample size	Mean	Std. Deviation	Minimum	Maximum
Psychological	720	5.50	.711	2.53	7.00
Moral	720	3.03	.947	1.00	6.13
Nature	720	3.54	1.103	1.00	6.80
Sociological	720	4.56	.966	1.29	7.00
Disease	720	4.22	.847	1.17	7.00

$X^2(4) = 1487.858$, $p < 0.001$

As Table 2 shows, the mean rating score of the psychological scale (M=5.50) is the highest, indicating that most of the participants hold attitudes related to or reflective of this model. The remaining models ranked as follows: sociological (M = 4.56), disease (M = 4.22), nature (M = 3.54) and the moral scale (M = 3.03). The p-value is less than 0.05 (p = 0.001), indicating that the mean scores vary significantly. This means that, if the study were to be carried out with the whole population, the same results would almost certainly be generated as the probability of error, that is, the uncertainty of the mean value, is minimal. Furthermore, there is no overlap between the scales. This can be clearly seen in Figure 1.

Figure 1

Error Bar Showing the Mean Rating Score for the Psychological, Moral, Nature, Sociological and Disease Scales at 95% CI



When the seven Likert score categories are collapsed into three (1 - 3 to 1: Agree, 4 to 2: Neutral, and 5 - 7 to 3: Disagree), the results show that less than 25% of individuals do not, to some extent, agree with and/or feel neutral about any of the statements, meaning that more than 75% agree with different statement from different scales. (ref. Table 2)

Table 3

Number of individuals (out of 720) who did not endorse any of the items on the scales

Scale	Psychological	Moral	Nature	Sociological	Disease
No of Individuals	2	118	162	32	52

Demographic Differences in Attitudes Reflective of the Different Addiction Models

The second research question posed in this study entailed analysing the mean scores from the survey against the demographic characteristics of the sample. First, the One-Way ANOVA test

and 95% confidence interval error bars were used to analyse each demographic. Then a general linear regression model was used to look at predictors based on the participants within the sample.

Gender. As per Table 4, the mean score for females for the disease (M = 4.27) and psychological (M = 5.54) scales were significantly higher than that for males (M = 4.12, M = 5.43 respectively). The mean scores for males for the moral (M = 3.20) and nature (M = 3.71) scales were significantly higher than that for females (Moral: M = 3.20; Nature: M = 3.46). Figure 2, illustrates minimal or no overlap between the error bars for the four mentioned scales. The p-value (p = 0.593) for the sociological scale exceeds the 0.05 level of significance indicating that the difference between the genders is insignificant.

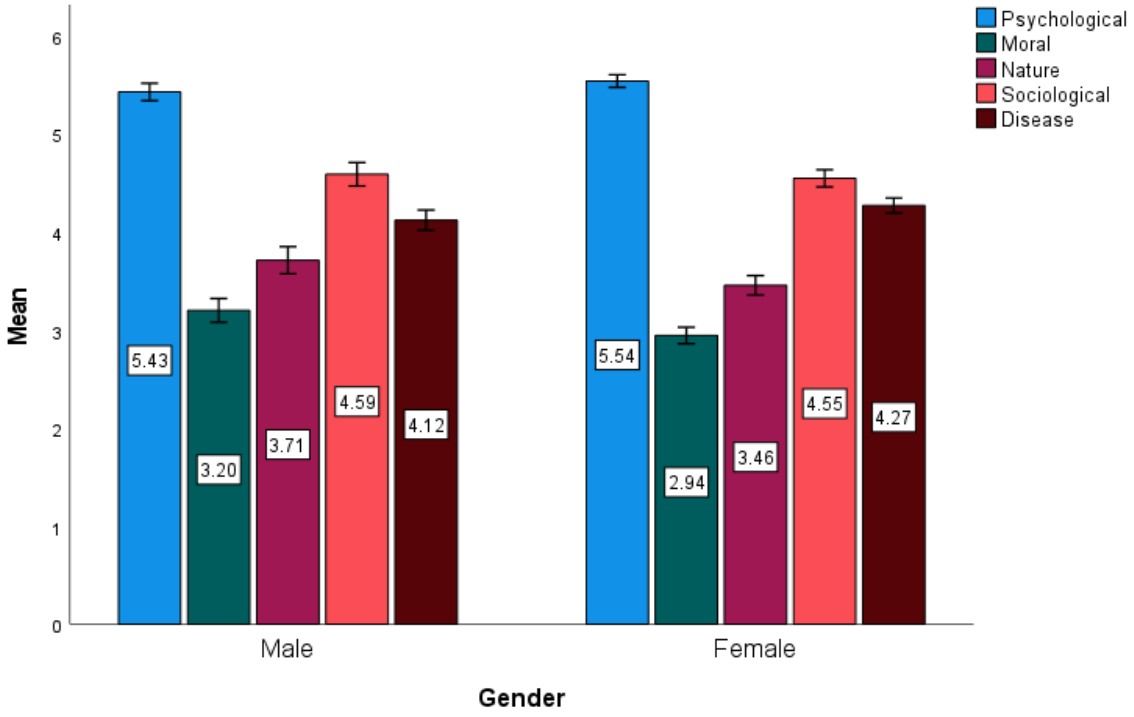
Table 4

One-Way ANOVA Test clustered by gender

		N	Mean	Std. Deviation	p-value
Psychological	Male	245	5.43	.704	.047
	Female	475	5.54	.713	
Moral	Male	245	3.20	.961	<.001
	Female	475	2.94	.928	
Nature	Male	245	3.71	1.098	.003
	Female	475	3.46	1.097	
Sociological	Male	245	4.59	.948	.593
	Female	475	4.55	.976	
Disease	Male	245	4.12	.825	.025
	Female	475	4.27	.854	

Figure 2

Error Bars Showing Mean Scores Clustered by Gender



Age. The results given in Table 5 and Figure 3 indicate different patterns. The participants' mean scores for the psychological, nature and sociological scales decrease as age increases. Holding attitudes which endorse addiction from a psychological model, the youngest age group (M = 5.72) scored marginally higher than the middle age group (M = 5.59), but scored significantly higher than the oldest age group (M = 5.27). The mean score for each group for the nature scale was significant across all groups; the 18-to-25-year group (M = 4.32) scored significantly higher than the 26-to-50-year group (M = 3.66), who in turn scored significantly higher than the 51+ age group (M = 3.14). The same pattern and level of significance is noted for the sociological scale. The youngest age group (M = 5.31) scored significantly higher than the middle aged grouped (M = 4.63) who, in turn, scored significantly higher than the oldest age group (M = 4.25). On the other hand, the mean scores for the moral and disease scales increase as age increases. With regard to the moral scale, individuals who are 51 years and above (M = 3.27) scored significantly higher than individuals who are 26 - 50 years of age (M = 2.91), who in turn scored marginally lower than individuals aged 18 -

25 years of age (M =3.03). Furthermore, adults aged 51+ also endorse the disease scales more than the other groups. The oldest age group (M = 4.45) scored significantly higher than the 18 - 25 age group (M = 3.98) and the 26 - 50 age group (M = 4.13). The results from the latter two groups illustrate that, despite the youngest age group scoring lower than the middle age group, the difference is insignificant.

Table 5

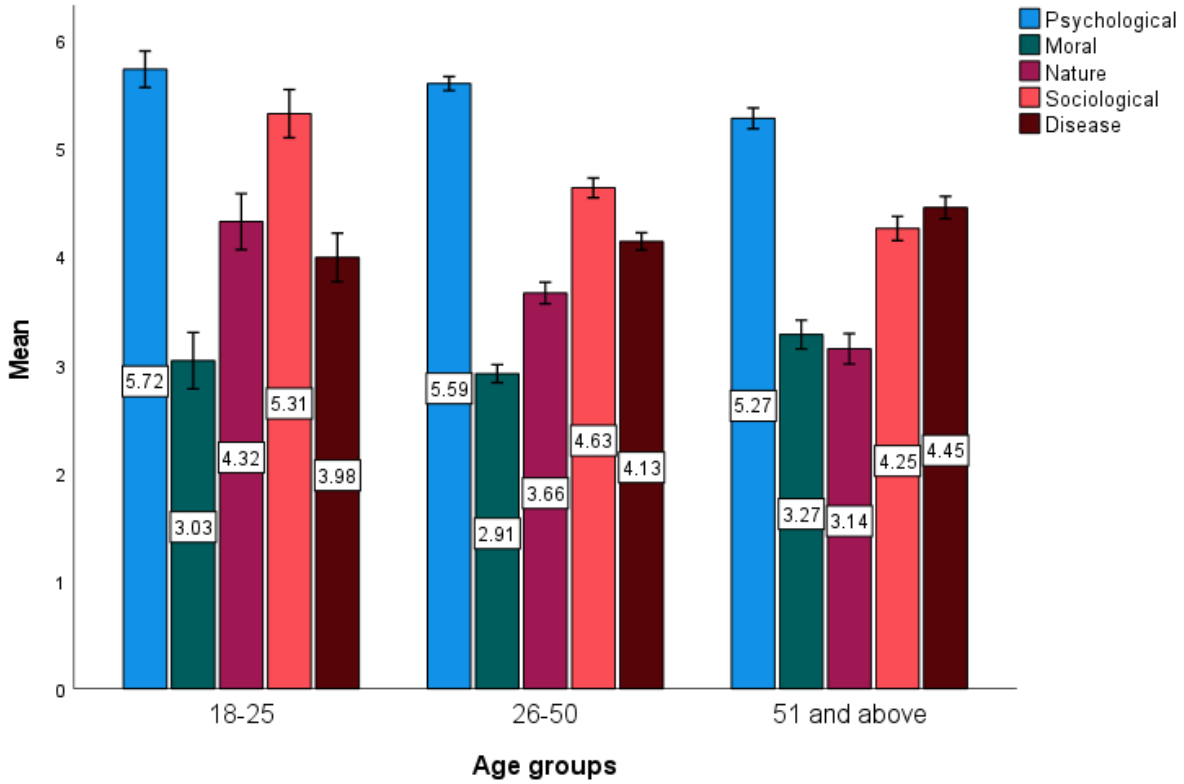
One-Way ANOVA Test Clustered by Age Categories

		N	Mean	Std. Deviation	p-value
Psychological	18-25	53	5.72	.609	<.001
	26-50	443	5.59	.687	
	51 and above	224	5.27	.726	
Moral	18-25	53	3.03	.945	<.001
	26-50	443	2.91	.891	
	51 and above	224	3.27	1.010	
Nature	18-25	53	4.32	.940	<.001
	26-50	443	3.66	1.065	
	51 and above	224	3.14	1.069	
Sociological	18-25	53	5.31	.809	<.001
	26-50	443	4.63	.978	
	51 and above	224	4.25	.850	
Disease	18-25	53	3.98	.812	<.001
	26-50	443	4.13	.859	
	51 and above	224	4.45	.784	

The error bar graph (Figure 3) displays the 95% confidence intervals of the actual mean scores for the psychological, moral, nature sociological and disease scales when the participants are clustered by age-groups (18-25, 26-50, 51+). Two mean scores differ significantly when their confidence intervals are disjoint (do not overlap).

Figure 3

Error Bars Clustered by Age Groups



Religiousness. Table 7 describes the mean scores of each scale with religiousness as the variable while Figure 4 displays 95% confidence level error bars for the different groups. The p-value ($p = 0.06$) for the psychological scale exceeds the 0.05 level of significance, indicating that the mean scores vary marginally and the difference is not significant. Individuals identifying as atheist are least likely to hold attitudes reflective of the moral model The said group ($M = 2.62$) scored significantly lower than practising individuals ($M = 3.17$) and non-practising ones ($M = 3.01$). There was no significant difference between the latter two groups. The mean score for items of the nature scale was significantly higher for "atheists" ($M = 4.12$) than those for non-practising individuals ($M = 3.75$), who in turn also scored significantly higher than those practising religion ($M = 3.19$). For items on the sociological scale, those identifying as atheist ($M = 4.86$) scored significantly higher than those identifying as non-practising ($M = 4.60$), who in turn scored

marginally higher than those who practise religion (M = 4.43). Practising individuals' (M = 4.31) endorsement of addiction as a disease was significantly higher than the endorsement by those identifying as atheists (M = 3.96) and was marginally higher than the endorsement by the non-practising group (M = 4.19).

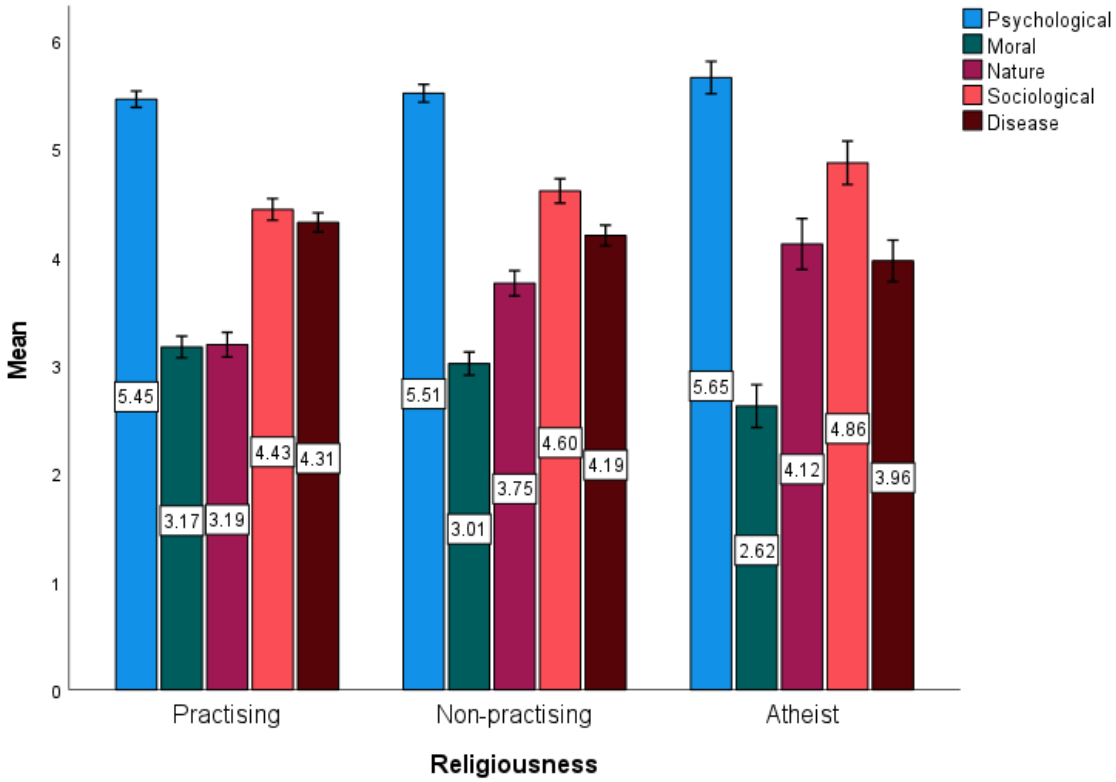
Table 6

One-Way ANOVA Test Clustered by Religiousness

		N	Mean	Std. Deviation	p-value
Psychological	Practising	325	5.45	.686	.060
	Non-practising	304	5.51	.731	
	Atheist	91	5.65	.719	
Moral	Practising	325	3.17	.912	<.001
	Non-practising	304	3.01	.948	
	Atheist	91	2.62	.947	
Nature	Practising	325	3.19	1.045	<.001
	Non-practising	304	3.75	1.032	
	Atheist	91	4.12	1.129	
Sociological	Practising	325	4.43	.916	<.001
	Non-practising	304	4.60	.998	
	Atheist	91	4.86	.963	
Disease	Practising	325	4.31	.814	.002
	Non-practising	304	4.19	.843	
	Atheist	91	3.96	.920	

Figure 4

Error Bar Clustered by Religousness



Relationship Status. The p-value for the psychological (p = 0.148), moral (p = 0.310) and disease (p = 0.358) scales exceeds the 0.05 level of significance, indicating that results only marginally differ (ref. Table 8 & Figure 5). The results of the nature and sociological scale indicate that there is a significant difference between the individuals who are married, cohabiting or in a registered partnership and the other two groups. The mean score (M = 3.41) of individuals who are married, cohabiting or in a registered partnership for the nature model is significantly lower than the mean score of single individuals (M = 3.68) and individuals who are in a relationship but living apart (M = 3.98). There is no significant difference between the two latter mentioned groups. The same pattern emerged for the sociological scale; those who are married, cohabiting or in a registered partnership (M = 4.45) scored significantly lower than those who are single (M = 4.69) or in a relationship but living apart (M = 4.85); the latter two groups' mean scores differ marginally.

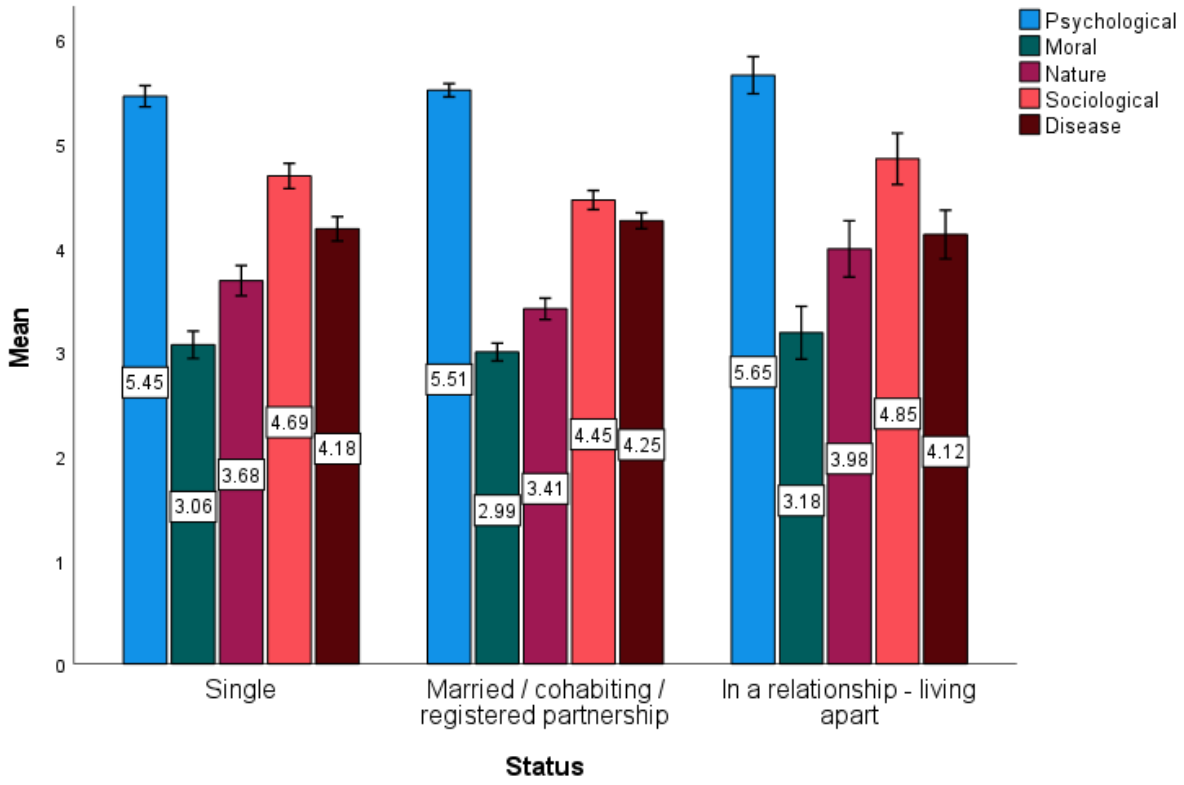
Table 7

One-Way ANOVA Test Clustered by Relationship Status

		N	Mean	Std. Deviation	p-value
Psychological	Single	236	5.45	.794	.148
	Married/cohabiting/registered partnership	427	5.51	.665	
	In a relationship - living apart	57	5.65	.673	
Moral	Single	236	3.06	1.022	.310
	Married/cohabiting/registered partnership	427	2.99	.901	
	In a relationship - living apart	57	3.18	.955	
Nature	Single	236	3.68	1.133	<.001
	Married/cohabiting/registered partnership	427	3.41	1.075	
	In a relationship - living apart	57	3.98	1.019	
Sociological	Single	236	4.69	.948	<.001
	Married/cohabiting/registered partnership	427	4.45	.967	
	In a relationship - living apart	57	4.85	.926	
Disease	Single	236	4.18	.912	.358
	Married/cohabiting/registered partnership	427	4.25	.803	
	In a relationship - living apart	57	4.12	.879	

Figure 5

Error Bars Clustered by Relationship Status



Education Level. As per Table 9 and Figure 6, the secondary level of education group (M = 5.25) scored significantly lower than the post-secondary (M = 5.59), tertiary (M = 5.57) and post-tertiary (M = 5.47) level of education groups; the mean scores for the latter three groups differed marginally. Both secondary (M = 3.38) and post-secondary (M = 3.22) level of education groups scored significantly higher than the tertiary (M = 2.92) and post-tertiary (M = 2.79) groups when it came to endorsing addiction as a moral issue. There was only a marginal insignificant difference between the two former groups and the latter two groups. On the other hand, the results of the sociological scales illustrate that tertiary (M = 4.77) and post-tertiary (M = 4.72) groups scored significantly higher than the secondary (M = 4.12) and post-secondary (M = 4.36) groups. Again, there was no significant difference between individuals who attained tertiary or post-tertiary education or between those who attained only a secondary or post-secondary level of education.

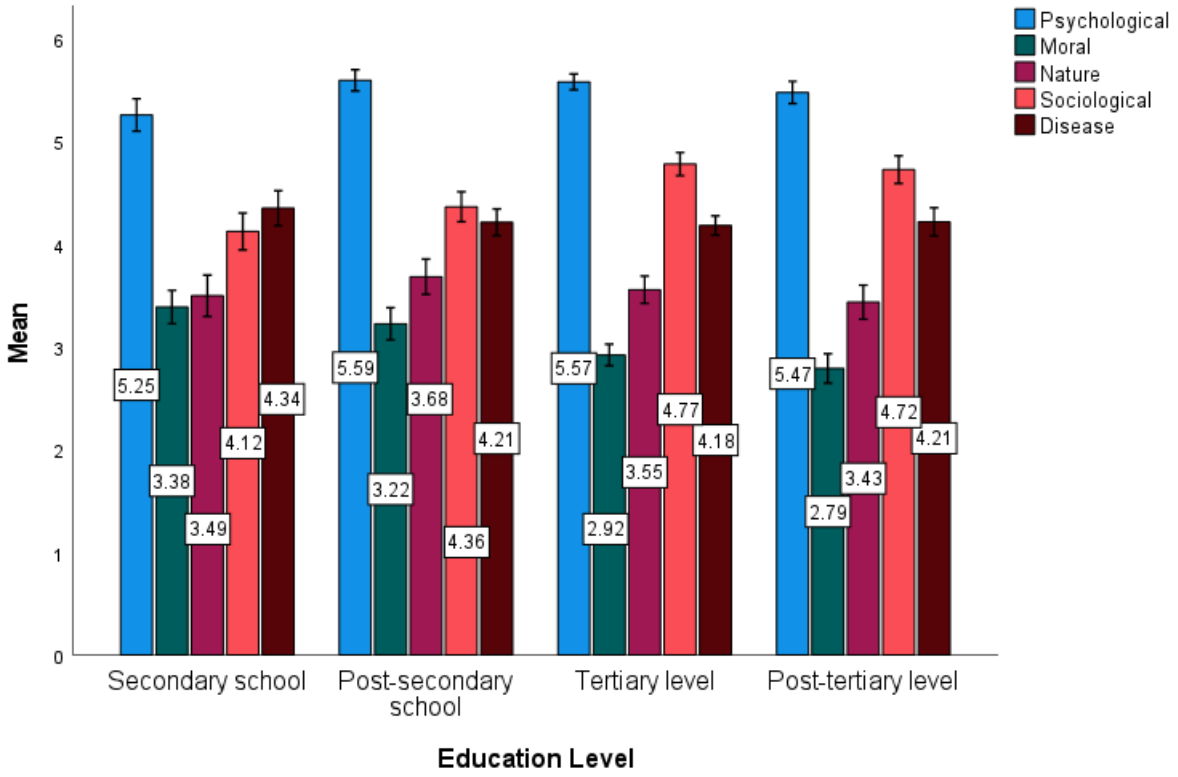
Table 8

One-Way ANOVA Test Clustered by Education Level

		N	Mean	Std. Deviation	p-value
Psychological	Secondary school	116	5.25	.855	<.001
	Post-secondary school	164	5.59	.672	
	Tertiary level	275	5.57	.648	
	Post-tertiary level	165	5.47	.703	
Moral	Secondary school	116	3.38	.878	<.001
	Post-secondary school	164	3.22	1.015	
	Tertiary level	275	2.92	.879	
	Post-tertiary level	165	2.79	.930	
Nature	Secondary school	116	3.49	1.092	.220
	Post-secondary school	164	3.68	1.112	
	Tertiary level	275	3.55	1.115	
	Post-tertiary level	165	3.43	1.077	
Sociological	Secondary school	116	4.12	.976	<.001
	Post-secondary school	164	4.36	.945	
	Tertiary level	275	4.77	.946	
	Post-tertiary level	165	4.72	.873	
Disease	Secondary school	116	4.34	.924	.348
	Post-secondary school	164	4.21	.839	
	Tertiary level	275	4.18	.788	
	Post-tertiary level	165	4.21	.890	

Figure 6

Error Bar Clustered by Education Level



Addiction Difficulties. The p-value for sociological and disease scales exceeds the 0.05 level of significance, indicating that the difference among the groups is insignificant (ref. Table 9 & Figure 7). Items on the research tool indicating attitudes reflective of the psychological model are highly endorsed by individuals who have experienced addiction difficulties in the past; they (M = 5.69) scored significantly higher than individuals who have never had addiction difficulties (M = 5.45). Conversely, those who have never experienced addiction (M = 3.13) scored significantly higher than those who have (M = 2.68) on the moral scale. Furthermore, individuals who had had an addiction (M = 3.71) held attitudes endorsing addiction as a nature issue, with a significantly higher mean score than the group who had never had an addiction (M = 3.50).

Table 9

One-Way ANOVA Test Clustered by Past Addiction Difficulties

		N	Mean	Std. Deviation	p-value
Psychological	Yes	157	5.69	0.717	<.001
	No	563	5.45	0.702	
Moral	Yes	157	2.68	0.921	<.001
	No	563	3.13	0.931	
Nature	Yes	157	3.71	1.059	0.030
	No	563	3.50	1.112	
Sociological	Yes	157	4.58	1.030	0.836
	No	563	4.56	0.948	
Disease	Yes	157	4.23	0.875	0.070
	No	563	4.22	0.839	

Figure 7

Error Bars Clustered by Having Experienced Past Addiction Difficulties

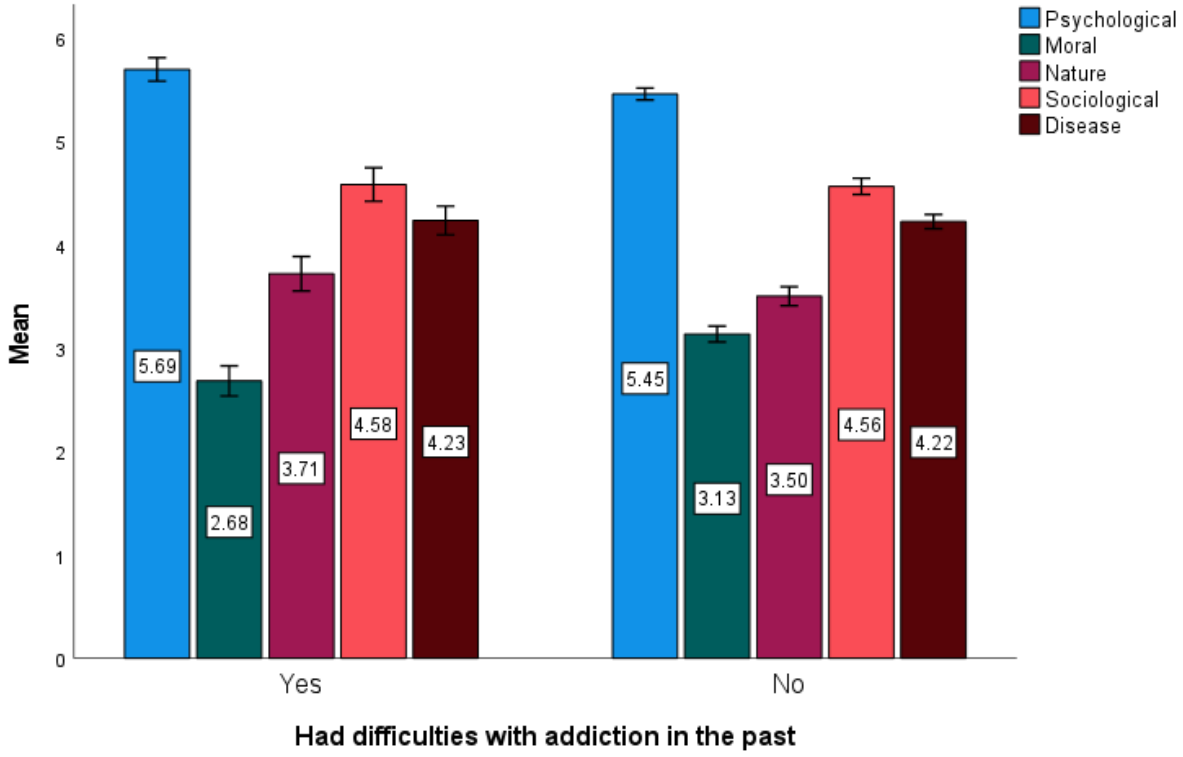


Table 10 presents the results from the One-Way ANOVA test for the item 'I currently have difficulties with addiction'. The p-value for all the scales exceeds the 0.05 level of significance, hence, the differences between groups was insignificant (ref. Figure 8 for error bars overlapping).

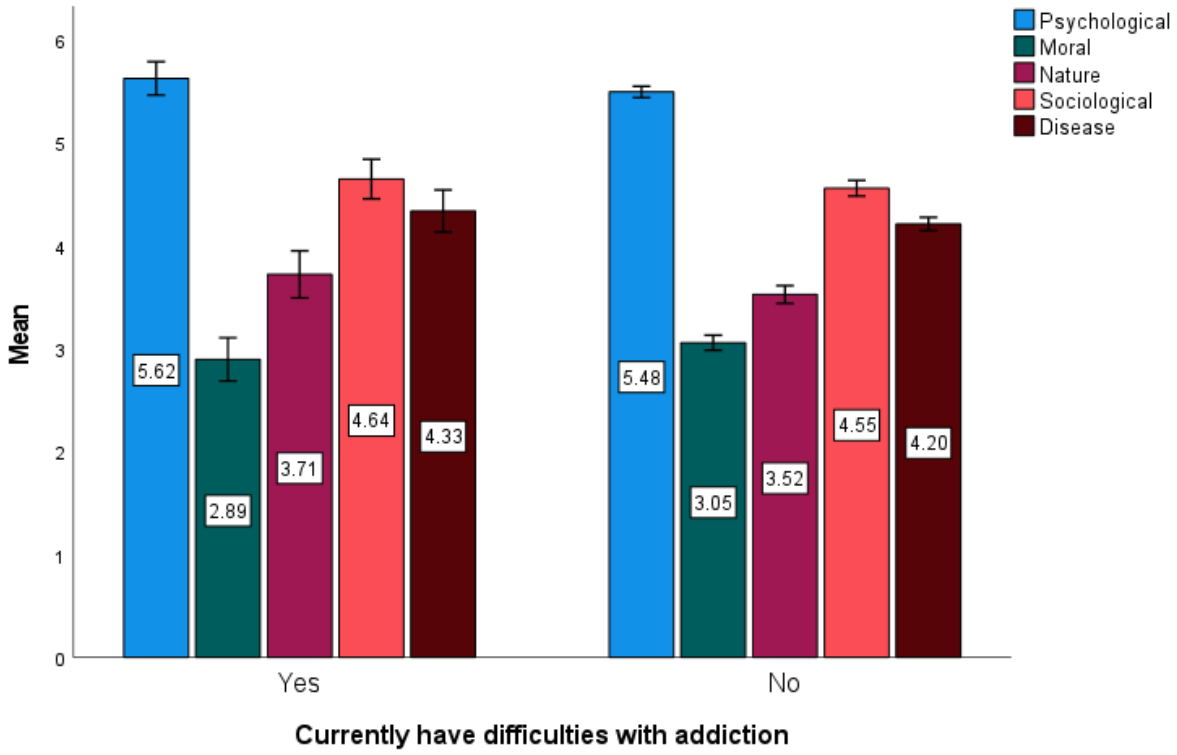
Table 10

One Way-ANOVA Test Clustered by Present Addiction Difficulties

		N	Mean	Std. Deviation	p-value
Psychological	Yes	89	5.62	.770	.103
	No	631	5.48	.702	
Moral	Yes	89	2.89	.995	.132
	No	631	3.05	.939	
Nature	Yes	89	3.71	1.084	.118
	No	631	3.52	1.105	
Sociological	Yes	89	4.64	.911	.417
	No	631	4.55	.974	
Disease	Yes	89	4.33	.970	.187
	No	631	4.20	.827	

Figure 8

Error Bars Clustered by Present Addiction Difficulties



The finding for the moral scale is the only finding that was significant for the item ‘knowing someone who had or has addiction difficulties’ (ref. Table 11 & Figure 9). Participants who responded ‘yes’ (M = 2.95) scored significantly lower than those who responded ‘no’ (M = 3.30) on the moral scale.

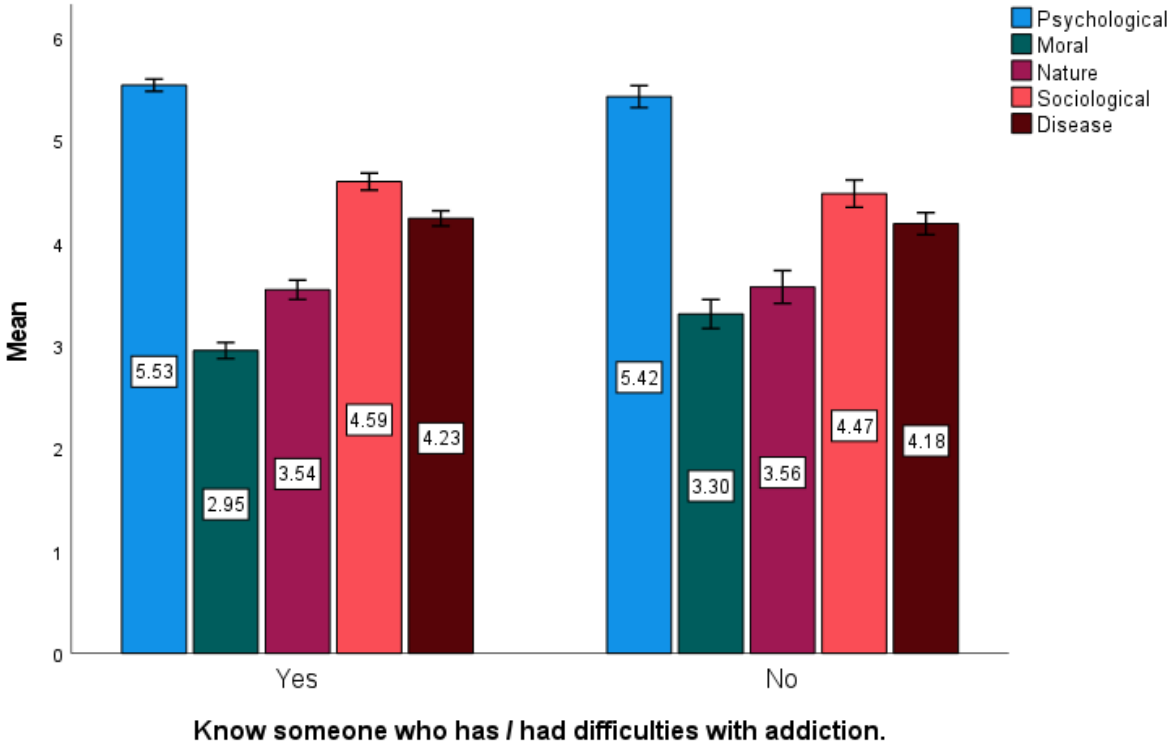
Table 11

One-way ANOVA Test Clustered by Knowing Someone with Addiction or Otherwise

		N	Mean	Std. Deviation	p-value
Psychological	Yes	546	5.53	.709	.072
	No	174	5.42	.713	
Moral	Yes	546	2.95	.933	<.001
	No	174	3.30	.942	
Nature	Yes	546	3.54	1.115	.779
	No	174	3.56	1.068	
Sociological	Yes	546	4.59	.989	.164
	No	174	4.47	.887	
Disease	Yes	546	4.23	.884	.489
	No	174	4.18	.719	

Figure 9

Error Bars Clustered by Knowing Someone with Addiction Difficulties



Scale Predictors

A general linear regression model was used to identify demographic predictors for the scales. The results in Table 12 illustrate the findings.

Table 12

Demographic Predictors of Endorsement of attitudes pertaining to the Different Addiction Models

Variable Estimates

Variables		Psychology model		Moral model		Nature model		Sociology model		Disease model	
		B	*p*	B	*p*	B	*p*	B	*p*	B	*p*
	Intercept	5.34	0.00	3.00	0.00	3.85	0.00	4.77	0.00	4.13	0.00
Age	18 - 25 years	0.40	<0.001	-0.14	0.33	0.95	<0.001	0.82	<0.001	-0.38	0.01
	26 - 50 years	0.28	<0.001	-0.24	<0.001	0.44	<0.001	0.25	<0.001	-0.29	<0.001
	51+	0[a]		0[a]		0[a]		0[a]		0[a]	
Gender	Male	-0.15	0.04	0.31	<0.001	0.17	0.03	0.02	0.73	-0.12	0.06
	Female	0[a]		0[a]		0[a]		0[a]		0[a]	
Status	Single	-0.10	0.31	-0.17	0.18	-0.16	0.30	-0.07	0.61	0.01	0.96
	Married / cohabiting / in a registered partnership	-0.01	0.91	-0.25	0.05	-0.29	0.05	-0.17	0.19	0.03	0.78
	In a relationship - living apart	0[a]		0[a]		0[a]		0[a]		0[a]	
Religion	Practising	-0.09	0.28	0.42	<0.001	-0.82	<0.001	-0.26	0.02	0.32	<0.001
	Non-practising	-0.11	0.19	0.37	<0.001	-0.32	0.01	-0.18	0.10	0.23	0.03
	Atheist	0[a]		0[a]		0[a]		0[a]		0[a]	
Education Level	Secondary	-0.14	0.10	0.51	<0.001	0.29	0.02	-0.49	<0.001	0.02	0.87
	Post-secondary	0.14	0.06	0.40	<0.001	0.27	0.02	-0.37	<0.001	-0.02	0.80
	Tertiary level	0.09	0.17	0.12	0.18	0.06	0.52	0.00	0.98	-0.02	0.82
	Post-tertiary	0[a]		0[a]		0[a]		0[a]		0[a]	
Past addiction difficulties	Yes	0.21	<0.001	-0.49	<0.001	0.04	0.73	-0.07	0.51	0.00	0.98
	No	0[a]		0[a]		0[a]		0[a]		0[a]	
Current addiction difficulties	Yes	-0.02	0.84	0.21	0.07	-0.01	0.93	0.09	0.48	0.20	0.07
	No	0[a]		0[a]		0[a]		0[a]		0[a]	
I know someone who had/has addiction difficulties	Yes	0.06	0.37	-0.25	<0.001	-0.16	0.08	0.06	0.43	0.08	0.28
	No	0[a]		0[a]		0[a]		0[a]		0[a]	

a This parameter is set to zero because it is redundant.

Significant predictors of the psychological attitude scale included gender, age, and having had addiction difficulties in the past. Males were significantly less likely than females to hold attitudes reflective of the psychological model (B = -0.15, p = 0.04). The younger the individual, the more likely they were to agree with the psychological items on the scale (18 to 25 years: B = 0.40, p = <0.001; 26 to 50 years 0.28 p = <0.001). The same goes for those who experienced addiction issues in the past (B = 0.21, p = <0.001).

Significant predictors of the moral attitude scale include gender, religion, education level and having experienced addiction issues in the past. Males are more likely to endorse the moral attitude scale than females (B = 0.31, p = < 0.001). Religion also strongly predicts the moral attitude with both practising and non-practising groups; they are more likely to agree with items on the scale than atheists (B = 0.42, p = <0.001 & B = 0.37, p = <0.001 respectively). While secondary and post-secondary education participants are more likely to endorse addiction as a moral issue (B = 0.51, p = <0.001 & B = 0.4, p = <0.001 respectively).

Age, gender, status, religion and education level are the significant predictors of the nature attitude scale. The younger the individual, the more likely they are to agree with the items of the scale (18-to-25-years: B = 0.95, p = <0.001 & 26 to 50 years: B = 0.44, p = <0.001). Males are more likely to endorse the scale than females (B = 0.17, p = 0.03). Religious individuals are less likely to agree with items on the scale than individuals who identified as atheists (practising: B = -0.82, p = <0.001; non-practising: B = -0.32, p = 0 .01). Those who responded that they had attained only secondary or post-secondary education level are more likely to hold attitudes reflective of the nature model (B = 0.29, p = 0.02 & B = 0.27, p = 0.02 respectively).

With regard to the sociological attitude scale, age, religion and education level are the only significant demographic predictors. The younger the individual, the more likely they seem to endorse attitudes reflective of the sociological scale (18 to 25 years: B = 0.82, p = <0.001; 26 to 50 years: B = 0.25, p = <0.001). Practising religious individuals are less likely to endorse the model (B

= -0.26, p = 0.02). Having attained only a secondary or post-secondary level of education seems to imply lower scores, (B = -0.49, p = <0.001, B = -0.37, p = 0.03).

Significant predictors of the disease attitude scale are age and religion. As age increases, so does the endorsement of attitudes congruent with the disease model (18-to-25-years: B = 0.38, p = 0.01; 26-to-50-years: B = 0.29, p = <0 .001). In addition, the more religious the participants, the more likely they were to agree with items on the scale (practising: B = 0.32, p = 0; non-practising: B = 0.23, p = 0.02).

Findings: Qualitative Method

Demographic Characteristics of the Qualitative Sample

The research sample comprised eight participants, four identifying as female and four as male, aged between 23 and 79 years. All the participants were Maltese. Two disclosed that they have addiction difficulties, four have or have had someone close who is or was addicted to substances, and the remaining two have only heard others' addiction stories but have never experienced addiction at close quarters. The lowest level of education attained within the participant group was post-secondary and the highest level was post-tertiary. Seven of the eight participants were engaged in full-time employment, and one was a pensioner.

An In-Depth Exploration of the Attitudes Held by Residents of Malta

Table 13 presents the most prominent themes that emerged from the thematic data analysis. Following Braun and Clarke (2006), themes were categorised into different overarching themes relating to the different addiction models and relevant survey attitude items. The qualitative analysis provided a deeper level of understanding on attitudes about addiction.

Table 13

Qualitative Data Analysis Themes

	Name of theme
Overarching Theme:	Disease perspectives
Theme 1	To some extent, a disease
Subtheme 1.1	Loss of control; from want to need and the preoccupation about it
Overarching theme:	Psychological perspectives
Theme 2	The beginning: Curiosity, exposure and feeling invincible
Theme 3	The relationship between trauma, escapism and self-medication
Theme 4	Reinforcement, instant gratification and pleasure
Overarching theme:	Sociological perspectives
Theme 5	An enabling society
Theme 6	"The screwed-up family" - Upbringing
Overarching Theme:	Moral perspectives
Theme 7	Stigma, blame and judgement prevail
Theme 8	The tolerance and compassion dimension
Overarching Theme:	Nature perspectives
Theme 9	Each to their own

The themes, backed up by direct quotes from the participants, are presented below.

Overarching Theme: Disease Perspectives.

Theme 1: To Some Extent, A Disease. All the participants used words or descriptions that connote the disease model when talking about addiction, indicating that they all, to some extent, hold attitudes in line with this model. For example, Sharon stated that, when one is addicted, "one does not think straight" *["Il-mohh mhux qed jahseb tajjeb"]*. Talking about withdrawal symptoms, George said, "maybe even physically … they can't imagine being without it and … [it] generally hurts if they are without it". Grace fully endorsed the disease model, stating, "All this addiction journey, it is mental illness".

Subtheme 1.1: Loss of Control; From Want To Need and the Preoccupation About It. In their definitions of addiction, all the interviewees made reference to loss of control indicating compulsion which is the hallmark of the disease model.

> When you feel the necessity to do it all the time and, you know, like, if you have to choose between buying food and buying whatever drug of choice and you always choose the drug, then you know what I mean, that's when you don't have control over it. That is an addiction. (Steve)

Most of the participants believe that while an individual who has an addiction can still function, they remain preoccupied with the subject of their addiction. Sharon explained that her friend tells her "but I am always thinking about it [alcohol]!"

A recurring point made by the interviewees is that for people who have an addiction the "want" becomes a need, a compulsion. As Jake put it, "Addiction is... something you need to have at all cost" *["Addiction ... xi haga li bilfors trid tohodha"].* Clint corroborated this by stating, "It becomes a compulsion…when I am not indulging an addiction or I am making an effort to fight it, I would be thinking about it all the time, be it porn or having a cigarette!" [*it becomes a compulsion ... Jiena meta jiena I don't actualise an addiction jew qed naghmel effort biex niggieldilha, inkun qed nahseb fuq dik l-addiction il-hin kollu, jekk hux porn jew sigarett!]*.

Overarching Theme: Psychological Perspectives

Theme 2: The Beginning: Curiosity and Feeling Invincible. A consistent comment that was made throughout the interviews is that curiosity (and exposure – discussed below) is how addiction starts, showing that participants hold beliefs and attitudes about addiction that are in line with the psychological understanding of addiction. The construct of personality plays a part in the addiction career. As the participants noted, some individuals may be more curious and more inclined to experience and try new things than others. As Eve put it, "There are people who relish

staying in and not doing anything much; there are others who love going out and experiencing all there is to experience in life!" *["Hawn min ihobb joqghod id-dar u ma jaghmel xejn; hawn min ihobb johrog u jipprova kollox fil-hajja!"].*

During the early stages, people believe that they will not become addicted; they feel invincible! Participants believed that addiction if a result of personality or cognitions and consequently it is not the individual's fault or choice. For example, the notion of superoptimism was repeatedly mentioned by the participants. Clint spoke about how he used to reason when he was younger: "I had the notion that I was still young and that anything I did at a young age I could phase out in time and I would be in control. I guess there was a bit of a God complex. I believed, for whatever reason, that I was better able than others to control my addiction. However, over time, it just became more constant" *[The notion illi bhalissa ghadni zghir anything li qed naghmel issa, meta nkun zghir over time I can phase it out and be fully in control. Kien hemm I guess daqsxejn ta' God complex illi jien kont nemmen li, for whatever reason, illi jiena iktar kapaci min forsi haddiehor li nikkontrolla dik l-addiction. Pero' over time it just became more constant].* (Clint)

Theme 3: The Relationship Between Trauma, Escapism and Self-Medication.

Throughout the interviews, trauma was cited as one of the main things contributing to addiction reflecting attitudes that there is some psychological deficit in persons who become addicted:

> The way his life and my life worked out is due to luck. He lost his family [death] and I didn't. The reason he is addicted to drugs and alcohol today has nothing to do with me being more intelligent than him or better at school than him, it is just the way our lives turned out. *[Kif dderigiet hajtu personali ghal hajti, hija through luck ghax persuna tilef l-familja (death) u jiena ma tlift lil hadd. Jigifieri dan jekk illum il-gurnata ghandu addiction ghad-drogi u alcohol u jien m' ghandix mhux ghax jien kont iktar intelligenti l- iskola jew xi haga, ghax kif hadet il-way ta' hajjitna].* (Jake)

> I don't know maybe there wasn't enough love coming into the family, maybe the parents were abusive, aggressive, maybe disconnected from the kids, maybe [they had] parents who got divorced and having to live with a single parent and stuff like that. I think that, it's not always the case, but I believe that most of the time, [addiction] is coming from the upbringing, coming from things one has been through, throughout their life. (Steve)

Emotional pain, escapism and self- medication following trauma were cited as reasons that might explain escalation. Steve explained that "some people want to escape that kind of reality with drug use". Speaking about her friend, Sharon stated, "when he drinks, he forgets things that happened to him in the past. He uses alcohol to make him forget, to self-medicate or whatever!" *["Meta qed jixrob ikun qed jinsa hafna affarijiet li jkunu grawlu fil-passat. Allura juza ix-xorb biex jinsa, jfejjaq lilu inifsu speci ta jew whatever!"].* This notion was also brought up by those who had an addiction themselves, such as Grace, who stated "I was getting these tablets to make me feel better and they got me better in the wrong way".

Theme 4: Positive Reinforcement, Pleasure and Gratification. The participants spoke about the reinforcing mechanisms, gratification and pleasure. Referring to mood modification, Grace divulged that, "it does something to your mood, it's more than a mood spring. Better. Capable and potent and you can do it. Then half an hour later you're as miserable as you were before, or worse". According to Clint, "There is also the element of conditioning … it enables instant gratification…. This is how addictions form, through constant reinforcement of certain beliefs and actions that give you certain stimulation." *["Ukoll hemm element ta' conditioning ... it enables instant gratification, ... Hekk jigu fformolati l-addiction, this constant reinforcement ta' certu beliefs certu actions li jtuk certu stimulations."]* Miriam referred to pleasure, stating, "obviously whoever is being addicted to something is doing it because it gives him some sort of pleasure, you know?"

Overarching Theme: Sociological Perspectives

Theme 5: An Enabling Society. One emergent theme is that participants believed that Maltese society enables addiction evidencing attitudes that place the onus of responsibility away from the addicted person onto the social structure. Participants explained that exposure is the catalyst and that one may be exposed to addictive substances or behaviour through friends or family members (and, sometimes, the media). Other views on how society enables addictions were put forward. For George:

> Lack of greenery, heavy traffic, very noisy sound, very noisy atmosphere are not doing any good to our mental health and our physical health … and addiction gives us a break from reality, gives us a break through alcohol, through drugs, escaping it in a different world and even other types of addiction, even benign addiction. It's like we can't find the pleasant here and now so we have to find an alternate way of doing it and that may come for some people, answered with an addiction.

Clint backed this: "The stressors have increased exponentially and there are fewer relievers, the healthier relievers." *[L-stressors zdiedu hafna u r-relievers vera naqsu, the healthier relievers".]*

The lack of collective values, the importance of status and power were other emergent themes.

> The situation, I think, politically that we're in is also creating a ton of addicts, especially drug addicts, because it's giving a false security and a false sense of power ... I think this island needs to go back to values, as in, values of respecting other people, respecting our island … And, I think, when you have these addictions and these drug problems, it is showing you that society is not there, it's not going in the right direction. (Miriam)

Culture influences attitudes about addiction and is one of the main features responsible for the phenomenon. Two patterns emerged: that of culture normalising some addictions, and that repressing certain behaviours which remain taboo, such as drugs, sex and porn, pushes people to them even more.

> I see it as a very Mediterranean trait. When you travel across the Mediterranean, you will see many people smoking. If you go to the Netherlands, say, or some country in Europe that is not in the Mediterranean, you will not see people smoking. On the contrary, they will look at you askance. *[U naraha xi haga vera Meditereanean jien. E.z. anki issiefer fil-Mediterran tara hafna nies ipejpu, dik li nista nara fit-toroq jien. Morna sqallija xi hmistax ilu hekk ghidtlu kemm hawn nies ipejpu. Imma mbaghad jekk tmur xi Netherlands, jew fl-Ewropa imma mhux Mediterrenean ma tara l-hadd ipejjep anzi iktar jitkerhulek.]* (Eve)

> I think … Malta's been rather sexually repressive, for many. I can understand why people will get addicted to porn … it's something that they look at and I know, statistically, the amount of people who are going through porn websites in Malta is very, very, high per capita. At least this is what some research has indicated, I mean real research! (George)

The findings suggest that participants believe it is not only the culture per se that drives addiction but also the fact that locally addiction is such a hidden phenomenon. Endorsing addiction from a sociological model, Steve said, “addiction is a bit more hush hush in Malta and I don't think it should be. These people should not be looked down upon, then people would be more comfortable to speak about it and maybe, you know, ultimately stop”.

Theme 6: “A Screwed-Up Family” – Upbringing and Family. References to the fact that coming from a “screwed up family” can lead to addiction shows that the participants endorse a sociological position towards addiction, subscribing to the belief that social institutions, such as the family may increase the risk for addictive behaviours. the person is influenced in their choices by

their upbringing and education. In Steve's opinion, "most of it actually comes from the upbringing, either because their family had addiction issues or maybe simply because they had a bad upbringing." Sharon proffered her friend's experience as an example:

> When he was 16, his father needed a drinking buddy and he would turn to him. He was not his real father, but his stepfather! It might have started out as an experiment but it was probably due to bad upbringing. I mean, parents should not act like that with their children!! There's the background too! *[Meta kellu 16, missieru kellu bzonn drinking buddy u kien juza lilu, mhux missieru propja, stepfather! igifieri orajt forsi beda bhala experiment imma mbaghad forsi hija anki parti min bad upbringing. I mean l-parents m'ghandhomx ikunu hekk anqas mat-tfal!]*

Overarching Theme: Moral Perspectives.

Theme 7: Stigma, Blame and Judgement Prevail. The analysis suggests that, although the participants show different levels of compassion and tolerance (discussed below), a few did hint that, to a certain extent, they held moralistic attitudes. For example, Clint used the word "junkies" several times to distinguish between functional "addicted" individuals and individuals who lead a more chaotic lifestyle. While Miriam said:

> It might sound bad but, I think, they are of a weaker character because, I think, if you are of a stronger character, and I know a lot of people of a strong character who maybe do occasional drugs or did, and that's it, you know so you can't really say they're addicts, because it's a social thing. (Miriam)

Some participants also admitted that, although they sympathise with individuals who are addicted to substances, they still fear them and would distance themselves from them reflecting a judgemental attitude.

> My first instinct is to pity them, to say poor thing he or she needs help. However, that being said, someone in particular comes to mind and, the truth is, and I am embarrassed to say this but it is the truth, that I am wary of this person and I would rather stay away from them because I am scared of contracting AIDS. I hope they are OK but I do not want them eating at my table. I keep my distance and stay away! [*Ara kieku kelli nitfaha fuqi l-ewwel instinct li jigini nghid jahasra, jahasra ghandu jew ghandha bzonn l-ghajnuna. Pero, that being said, qed tigini persuna partikolari f'mohhi, u nghid l-verita, nisthi nghid, imma l-verita, fl-istess hin qisni nibza u nitqazziza ghax nibza mill-AIDS u hekk imbaghad jien. J'Alla tkun ok u hekk, imma I don't want you eating at my table fl-istess hin. I keep my distance! Ma nithallatx!]* (Eve)

Furthermore, all the participants feel that the moral model prevails in society. Speaking about her experience with the police Sharon narrated how a police officer told her, "I am not going to keep such scum here!" *[" U tghid mhux ser inzomm zibel hawn gew!"]* Adjectives used to describe how the public views them include, "low-life", "demonised", "crazy", "unpredictable", "junkies" and "born bad", "perverts" and "irresponsible". All the participants feel that there is stigma attached to addiction and that people want to distance themselves from individuals who have an addiction. Sharon explained that people tell her "Make sure he does not come anywhere near here." *["Zommu hemm, Ara ma jersaqx l'hawn".]* Grace spoke about how, often, such individuals are ostracised by society.

> I would say, Christmas, I'd wonder who has been invited by my family, why am I not there? And the same thought would come on the village feast *[festa]*. And Easter. And the patron saint feast *[U l-festa tal-patrun tal-knisja]* and you know normally with a big house and a large family, everybody would have friends coming, doesn't anybody stop and say, what happened to 'G'' Where on earth is she? No, nobody. I was gone, nothing to do any more.

Individuals with an addiction are blamed and judged by the public without them realising that they may have gone through life experiences that led them to the situation they were in.

> You look bad in their eyes, us Maltese have a very bad attitude when it comes to these things. I have no doubt that everyone thinks badly of you … few will reason that you must have gone through certain life experiences to end up with such an addiction, they will judge you on the spot. They will not give you any leeway if, say, you are an alcoholic, they will not believe it is because you have been through something, they think that your addiction is just a choice. *[You look bad in their eyes, speci ahna l-Maltin ghandna attitudni hazina f' hafna affarijiet. M' ghandix dubju li kulhadd jibda jarak hazin jigifieri … l-opinjoni nahseb ftit huma n-nies li jifhmu isma' dak ghadda minn certu affarijiet ghalhekk ghandu din l-addiction, le anzi mill-ewwel they judge you. Jekk issir alcoholic mhux ser jemmnu ghax inti per ezempju inti gralek xi haga, iktar bi ksuhat ghandek l-addiction.]* (Jake)

The general opinion is if someone is drunk and, for example, he hurts himself, “It is his fault!... He can stop!” *[ahjar ghalih, mhux hu xorob!… Jieqaf!!" It's not that simple!]* (Sharon)

Theme 8: The Tolerance and Compassion Dimensions. The data analysis findings suggest that attitudes of compassion and tolerance vary from person to person.

> You know, the hopelessness, but to be fair, there are a lot who do these programmes and that they fall back into it, you know? I don't know I am a person who, you make a mistake once it's a mistake, you make it second time you're a bit silly, the third time no, you know. It's downright ridiculous. (Miriam)

Participants believe that the judiciary system should better assess offenders with addiction difficulties before making judgements. Steve stated “Like yeah, where is the problem coming from? Why is this person drinking? You do need to look at that, … I don't think it's fair you know to just

issue judgement *[taqta' l-kundanna]* or how they say it. You kind of need to really look at the issue as to why this is happening."

Furthermore, as Eve said, "Pardon my ignorance but I do not think that the victim is treated like a victim … *[Mill-injuranza tieghi again, ma nahsibx li il-victim huwa treated bhala victim…].* Such attitudes reflect compassion and tolerance. Having said this, compassionate and tolerant attitudes are not limitless and excessive offending behaviour should be punished.

> Yeah, I mean, then you have to, I would say, you have to keep trying, basically, and trying and, you know, explaining … of course maybe they should repay everything that they stole, fine, maybe do community work, … but not prison. I mean not really, but community work would work. (George)

> I think a person who robbed somewhere because of an addiction or robbed somewhere because he's trying to feed his child like I'm saying he could at least be given community service. Now, if I gave you community service once, and you did it again I gave it to you twice, you did it again I gave it to you three times, then hey, listen, I'm trying to help you out here, but now you're pushing it. So, then, ok I can understand a prison sentence for example, maybe a smaller prison sentence and then it would grow if you continue, but yeah, I believe that especially for people going with, dealing with addiction issues, that's how they need to deal with it. (Steve)

Attitudes towards addiction are influenced by media representations. George said, "I was reading a book about [a] young woman a year or two years ago. It was really, you know, terrible and I think if she hadn't been in jail she would be alive and maybe clean as well." Jake referred to a recent news story: "this woman's case, they gave him a chance, addiction, I don't know what issues he didn't have! They gave him a chance, another chance, and it ended in tragedy. So, I think they need to be harsher on certain cases!" *[Case in point issa li kien hawn dk il-kaz ta' din it-tfajla, dan*

tah cans addiction ma nafx x' ma kellux insomma tawh cans, tawh cans u spicca ghamel tragedja jigifieri nahseb iridu jihraxu f'certu kazijiet!"]

Participants have mixed attitudes on different policy measures. Translating into compassionate and tolerant attitudes, they felt that it was exceptionally unjust that locally homeless residential homes do not accept individuals with SUDs. Eve stated that, "There should be another homeless shelter that accepts addicts"*["Ghandu jkun hemm homeless shelter iehor li jacetta addicts"]*. George backed this:

> These centres have to be more user friendly, there have to be more because they don't keep up with the demand and it's also I think unfair to go out, I mean they should wonder [allowed to leave] but they should be kind of a home where they have basically 24-hour care and things are provided for them inside so they don't feel that they have to go. I feel that's very important that they're there and there are places for them, being forced outside only creates more problems, not only addiction problems but other problems!

On the other hand, attitudes regarding social security measures were not so positive. Participants believe that individuals with addiction should be provided with basic needs, but some believed that that they should not be given any benefits while others stated that they should be provided with some kind of safety net, but not the full amount. For example, Eve stated, "I would not give an addict benefits! I do not think that it is money that they need!" *["Jien ma nahsibx li I would give an addict relief!... Ma nahsibx li l-flus huma l-ghajnuna li ghandhom bzonn!".]* While, Miriam elaborated:

> I mean the state should be the safety net for weak people, so if you, if you are not going to give him anything, *[jekk inti dan mhux ser ittih xejn]*… you're going to have an escalation of the problem because they're going to go and steal, … they need to eat, you know, so the

problem is going to escalate even more. if you give him maybe a hundred euro *[Jekk ittih forsi mitt euro]* I'm not saying give him maybe the full.

The participants do realise that not providing benefits or providing a minimal amount might have a ripple effect, resulting in repercussions such as more criminal offences.

Compassion and tolerance were also evident in some of the stories that participants shared relating to the close friends with addiction who they hung out with and helped.

> Like, one of my friends who I was mentioning who is still struggling with it today, I love him like a brother and I have literally tried everything in my power to help him. I got him work with me, you know, whenever I could, and I would tell him, hey listen I'm going to come and pick you up we go do something and whatnot. (Steve)

> I used to spend a lot of time with him. For example, after work I would prepare a meal for him or whatever and stay with him until 10.30 or 11.00. So that when he goes home he will be tired and go straight to bed! So that he does not have to stay with them! … I used to pay for the hostels. … I used to take his clothes to the laundry and pay to clean them. Eur10 every time because my mum did not want me to take any of his clothes home *[U jien kont inqatta hafna hin mieghu. Ezempju wara ix-xoghol, nlestijlu l-ikel u whatever, imbaghad nibqa mieghu sa l-10.30, l-11.00. Halli kif imur id-dar ikun ghajjien u kemm jorqod! M'ghandux ghalfejn joqghod maghhom!... Kont inhallaslu l-hostels… Anke qabel biex nahsillu l-hwejjeg per ezempju kont nohodhom il-laundry literally inhallas l-flus 10 Euros kull darba ghax il-mummy ma riditx iddahhal hwejjeg tieghu.]* (Sharon)

Although all of the participants within the participant group had a compassionate and tolerant attitude, it was evident that those who experienced addiction either directly or indirectly through someone else felt that the general public does not have a tolerant attitude, and is the very opposite of compassionate. Their responses indicate that the general public is intolerant,

unaccepting and lacks compassion. One of the participants also stated that she feels that hatred was common among the general population.

> The family members and the convent were the worst, they acted against me…they still saw me as a sick person and the week after that, we met again, she said, “Look, I'm very sorry but these are their words, they don't want you back”. (Grace)

> I understand that he makes a lot of noise and his behaviour leaves less to be desired but when I started helping him there were some who told me, “Leave him be, why are you worrying about him?!” and they were even angry at me!! I think there is a lot of hatred*! [Nifhem l-punt li jaghmel hafna storbju u dawn l-affarijiet u his behaviour u hekk. Imma anki meta bdejt nghinu u hekk kien hemm min qalli “U hallih, ghalxiex qed thabbel rasek?!” u anki rabja ghalija kien hemm!!… Nahseb anki hatred hemm hafna!]* (Sharon)

Overarching Theme: Nature Perspectives.

Theme 9: Each to Their Own? Endorsing the nature model, some of the participants have liberal attitudes and see nothing wrong in engaging in potentially addictive behaviours now and then. As Miriam said, “Everything in life you have to have sort of have, you know, in moderation”. The underlying notion is that of control. “But some people again, maybe they're not that capable of understanding you know where the stop sign has to be”. (Miriam).

While some had conservative attitudes and were adamant that they are against the legalisation of substances, others felt that everything should be decriminalised or legalised and regulated, believing that this will not increase use.

> In reality, even if they were to legalise everything, it is not like they are forcing you to take it, right? Everyone does what they want to do. If there are legal trips and you want to trip, this does not mean I am going to go for it myself, you understand? [*Fil-verita' kieku jaghmlu kollox legali mhux qed igeghlek bilfors tohodha lanqas, qed tifhem? Jaghmel li jrid,*

> *ezempju jekk persuna hemm it-trips legali u jrid jittripja ma jfissirx li ser mmur naghmilha jien ukoll, qed tifhem?*] (Jake)

> My point is, so rather than saying, hey listen this drug is illegal, this alcohol is illegal yada, yada, rather than make them illegal, don't make them illegal, make them legal but make them regulated. That is my opinion on the matter because the matter is illegal or not, if a person wants to get it, he's going to get it, from somewhere he'll get it, right? That's just the way it is. (Steve)

Elaborating on this matter, the participants, endorsing harm reduction principles put forward by the nature model, suggested that Malta introduce supervised consumption sites and testing centres at parties and festivals. Whether or not they had liberal or more conservative attitudes, there was a consensus among participants that the intake of substances should be done in a safe environment. Speaking about his past, when his mother found out about his cannabis use, Steve stated "my mum's solution to that was "Oh ok, that's what you're doing, then I'll tell you what, do it only at home". While Miriam elaborated:

> I always told him, as well, that if you have to do these things, you have to be relaxed with people you know, and you're comfortable with, because otherwise people won't give a toss about you and if something goes wrong, they'll leave you there and, you know, and you can die. (Miriam)

Again, endorsing addiction from a nature perspective, it was noted that some participants distinguished between positive (healthy) and negative (harmful) addictions. For example, Sharon said, "Sports can be an addiction, but a non-harmful one" *["Sports jista jkun addiction imma ma taghmilekx hsara"].* The fact that "it is possible for people to indulge in substances (and I'm sure there are lots of people who do this), fairly regularly without being addicted" (George), was also pointed out by a number of the interviewees.

Conclusion

This chapter presented the survey results of the quantitative analysis and the findings of the qualitative analysis. It also answered the research questions posed by the study. The next chapter will discuss the results and findings in light of existent literature.

Chapter 5: Discussion

Introduction

This chapter discusses the findings in light of the literature review and other research studies, and attempts to provide different theoretical explanations for the findings of the study.

Attitudes in Relation to Different Demographic Variables

This study's findings shed light on the attitudes held by the residents of Malta about addiction. This study has documented how attitudes reflecting various models of addiction are implicitly held by the general population that then translate into support for particular policy directions and not others. At a micro level, public attitudes about addiction impact how individuals with an addiction are viewed and shape personal decisions of persons who have an addiction. On a macro level, through mechanisms such as elections, public attitudes influence judiciary systems and legislation, research funding, and prevention and treatment measures. The results of this study therefore have practical significance.

Among the survey participants for the majority of the group, attitudes about addiction were formed through direct experience, 22% had experienced addiction difficulties, 12% were currently experiencing addiction difficulties and 76% know someone who has or had addiction difficulties. The study also points to the predominance of attitudes aligned with the psychological model of addiction followed by the sociological, disease, nature and moral models respectively.

Attitudes Reflective of the Psychological Model

Attitudes reflective of the psychological model of addiction were most likely to be endorsed in this study. One factor which might account for the public endorsing addiction from a psychological model is that psychology has become part of every aspect within society (Madson, 2018). This notion is referred to as 'the therapeutic' and is defined as the psychological manner in which individuals speak about themselves and the world surrounding them (Madson, 2018). This

may also explain why the model is less likely to be endorsed as age increases, a finding similar to the findings of other research (Broadus & Evans, 2014). Older individuals are less likely to be versed in psychological constructs.

The findings indicate that females were more likely to hold attitudes endorsing this model. These findings tally with Broadus and Evans's (2014) findings. According to the literature, the psychological model fosters compassion. Compassion is the emotion that surfaces when one witnesses another individual's suffering and is moved to help (Goetz et al., 2010) and works at both the personal and collective levels. This reduces stigma and prejudice and prompts the belief that people who have an addiction should not be punished (Richards et al., 2021). Research suggests that females are more compassionate than males (e.g., Lennon & Eisenberg, 1987; Stellar et al., 2012; Park et al., 2016; Treichler et al., 2022). One might argue that gender roles may explain the significant difference between the gender variables. The socially constructed roles of men and women and the cultural beliefs that women are more nurturing and caring for others still dominates most societies (Ridgeway, 2011).

Individuals who have had addiction difficulties were also more likely to hold attitudes reflective of the model. Having passed through addiction themselves, these individuals may relate to some of the psychological constructs, such as trauma, as one of the causes of their addiction. In fact, this result was also noted in other studies (e.g., Mintz et al., 1979).

Attitudes Reflective of the Sociological Model

Attitudes reflective of the sociological model were the second most endorsed. The model suggests that sociocultural norms, economic and social structures, familial and societal conflict are all significant contributors to addiction (Mosher & Akins, 2007). As with the psychological model, the attitudes reflected by people who endorse this model are those of compassion and reduced stigma (Richards et al., 2021). This model also postulates that people with addictive behaviours

should not be punished and that resolution of underlying macro-level issues, such as economic ones, is essential for recovery (Richard et al., 2021).

Age, religiousness and education level are significant predictors of attitudes reflective of endorsement of this model. Younger adults hold such attitudes more than older ones. This could be because younger adults are more exposed to potentially addictive behaviours through the media, for example (Jackson et al., 2018; Smith & Foxcraft, 2009; Cabrera-Nguyen et al., 2016) and/or because older persons are more likely to endorse addiction as a moral issue and have judgemental attitudes towards people with addiction disorders (discussed below). This might also account for the religiousness difference. Lower levels of education predict less adherence to attitudes reflective of this model. The link between lower education and lower civic and social engagement has long been established (Campbell, 2006), implying that individuals with lower educational levels are less aware/knowledgeable about the sociological aspects of addiction.

The qualitative analysis findings reveal that there are multiple sociological aspects which participants feel influence addiction, including upbringing (Kenyhercz et al., 2022; Zimic & Jukic, 2012), the dichotomy between restrictive and permissive countries (Kilian et al., 2019) and how cultural stigma increases addictive behaviours (Volkow, 2020). The shared common understanding is that addictive behaviours are caused by external forces and, thus, the individual is not to blame.

Attitudes Reflective of the Disease Model

Attitudes reflective of the disease model were the third most endorsed in the study. These attitudes are more likely to be held by older adults and religious individuals. These findings are consistent with those of other studies (e.g., Schaler, 1997; Lawrence et al., 2013; Meurk et al., 2014; Russell & Davies, 2011; Hshieh & Srebalus, 1997; Bugle et al., 2003). Age-related differences might be partially explained by historical influences, such as the opening of the Substance Misuse Out-Patient Unit in Malta in 1987, which might imply that adults connote methadone with a disease.

Although viewed as two separate models, the disease and the moral model (discussed below), have historically existed alongside each other (ref. Levine, 1978). Evidence suggests that religion has influenced attitudes about treatment, indeed, for example the Temperance Movement is rooted in Protestant church, with most treatment providers having religious affiliations (Grant Weinandy & Grubbs, 2021; Levine, 1978). Locally, two of the three organisations offering rehabilitation programmes have religious influences: OASI endorses the 12-step programme which is based on the disease model (Muerk et al., 2014; Sandoz, 2014) and religiosity/spirituality, while Caritas has religious affiliations. The beliefs of the said organisations could influence public attitudes in Malta. In addition, the literature also indicates that there might be an interrelationship between two or more of the variables: as age increases, so does religiosity (Bengston et al., 2015 Levin et al., 1994; Sari, 2017).

The interviewees all mentioned loss of control as the marker of addictive behaviours. Some also referred to chemicals in the brain, preoccupation and incentive salience (ref. Robinson et al., 2013). The literature suggests that people who support this model tend to view addiction as a disease which can be controlled but not cured (Richard et al., 2021). Proponents of this model argue that the model reduces stigma and blame (Volkow, 2018; Racine et al., 2017). If it is presumed that addiction is either a brain disease or a moral shortcoming (ref. Volkow et al., 2016), rejecting the disease model is tantamount to declaring that addiction is a moral failing (Heather, 2017). Some academics refute the belief that the disease model cultivates humanitarian and altruistic attitudes (Crawford & Heather, 1987). Proponents of the model overlook the fact that many diseases are stigmatised (Llyod, 2010). The notions of lack of control and chronicity contribute to stigma by implying that afflicted individuals lack agency over their addiction and that it would persist over time (Volker & Kobo, 2015; Russel et al., 2020). Congruent with this is Grace's statement that she was still viewed as a sick person.

Attitudes Reflective of the Nature Model

Attitudes reflective of the nature model were least likely to be endorsed. The quantitative results suggest that the younger the individual, the more likely they are to hold attitudes reflective of this model. Being non-religious, male and having a lower level of education are other predictors of endorsement of the nature model. The nature model postulates that people are autonomous and have an inner drive to alter their consciousness and seek sensation. Normalisation of addictive behaviours reduces stigma (Richards et al., 2021). The model emphasises the notion that individuals should be free to do what they want, that addiction occurs when this normal behaviour is dysregulated and that harm-reduction principles should be employed to manage such occurrences (Richards et al., 2021). Harm-reduction and controlled-use were often-mentioned concepts by the interviewees and are in line with attitudes supportive of this model.

People who endorse this model have more liberal views about addiction; they are more permissive and tolerant towards potential addictive behaviour. The literature indicates that younger generations have grown more tolerant and liberal toward several, formerly unaccepted, behaviours (Inglehart & Baker, 2000) and substances (Schmidt et al., 2016; Degenhardt et al., 2008). This is consistent with emerging attitudes to certain substances even locally (Azzopardi et al., 2021). In Malta, younger generations are becoming less religious (V. Marmara, personal communication, April 13, 2021) and being non-religious is closely related to being more liberal (Kosmin et al, 2009; Ramadhani & Anshori, 2023; Baker & Smith, 2009). Furthermore, men tend to be less religious and less influenced by religion than females (Davies; 2017; Moon et al., 2022). Socialisation processes might play a role in this regard. For example, Thompson (1991) found that people with more masculine traits were significantly less religious than people with feminine traits, regardless of gender. Males engage in more risk-taking behaviours (Hugill et al., 2011; Jenkins et al., 2006) and discount the value of consequences (Griskevicius et al., 2011; Yankelevitz et al., 2012). This might partially explain why males endorse this model more than females. The finding that a lower

education level is a predictor of support for the nature model is consistent with Gong et al.'s (2021) finding that individuals with lower levels of education are more tolerant of deviant behaviour. However, these findings are inconsistent with other research findings (e.g., Gallassi et al., 2021; Richards et al., 2021).

Attitudes Reflective of the Moral Model

Attitudes reflective of the moral model was the least endorsed. Despite this, the analysis shows that 552 individuals agreed to one or more statements on the scale, meaning that more than 75% of the sample did hold attitudes reflective of the moral model, to some extent. The qualitative findings illustrate that individuals endorse the model on different levels. The model asserts that people who have an addiction (or use substances) lack values and moral standards, are irresponsible and sinful and should be blamed and punished (Lassiter & Spivey, 2018; Schaler, 2000). People who endorse addiction as a moral issue tend to blame and judge the 'addicted' individual (Cook et al., 2008). The model is associated with stigmatising and discriminant attitudes, is supportive of punishment and rejects scientific theory and research (Russaman, 2000; Schaler, 2000; Richter et al., 2019).

Predictors of endorsing addiction as a moral issue include being male, religious and having a low level of education. Individuals who have had addiction difficulties are less likely to endorse the moral model. Consistent with other research, males are more inclined towards seeing addiction as a moral issue (Lawrence et al., 2013; Richards et al., 2021). Evidence suggests that the more religious one is, the more likely one is to hold conservative attitudes. For example, the strongest predicting factor for alcohol restrictions among 3000 counties in the US was religion (Fredreis & Tatalovich, 2010). Religion and morality have long been the subject of debate (McKay & Whitehouse, 2015) and have historically been intertwined (Iwuagwu, 2018). In society, religion is committed to articulating and upholding its moral worldviews while validating rightful and wrongful actions (Cornelio & Lasco, 2020). Religion influences how individuals comprehend potential addictive

behaviours, their beliefs on how such issues should be handled, and personal choices on whether to engage in such behaviours (Courtwright, 1997). This could explain why religious individuals are more likely to endorse a moral model of addiction. Individuals with lower levels of education are more likely to have a moralising view of addiction (e.g., Askoy & Mercan, 2022; Sattler et al., 2017). More tolerant and acceptant attitudes have been positively correlated with educational attainment (Kingston et al., 2003). Having said this, interestingly, the finding that lower educational levels predict endorsement of the moral model is to some extent contradictory with the finding that individuals who attain lower levels of addiction are also more likely to endorse the nature model. In that, while the nature model posits normalisation and tolerance and, thus, reduces stigma, the moral model apportions blame and judgement and, thus, increases stigma. One plausible explanation, put forward by Sarineen et al. (2022), is that it is cognitive styles that influence social intolerance and not level of education. Furthermore, education might be a proxy of other variables (Simon, 2022). Having had addiction difficulties is a strong opposing predictor of the model. This aligns with the findings of other research (e.g., Broadus & Evans, 2014) and is quite intuitive, in that individuals who have experienced addiction might have also have experienced stigma (Conner & Rosen, 2008).

The interviewees all commented that stigma still prevails, with some having experienced it first-hand. Furthermore, in line with the literature, they also mentioned that prejudice, stigma and blame are not just held by the general public but also by the caring professionals (Kalebka et al., 2013; Richards et al., 2021; Gilchrist et al., 2011). Some participants also commented that social distancing is a common behaviour which persists despite the prevalence of compassionate attitudes (van Boekel et al., 2015).

Conclusion

This chapter discussed the findings derived from the quantitative and qualitative data analysis in light of the literature findings. It proposed different explanations substantiated with evidence in an attempt to explain such findings. Furthermore, it provided a thorough presentation of

how the endorsement of different models might be reflected in attitudes, which ultimately impacts decisions and behaviour.

Chapter 6: Conclusion

Introduction

This chapter concludes the dissertation with a summary of the main findings and a discussion of their significance. It also identifies the limitations of the study and makes recommendations for further research and policy.

Summary of Main Findings

Different attitudes are reflected in the endorsement of the five models of addiction examined in this study. The models were endorsed in the following order of frequency: the psychological, sociological, disease, nature and, finally, the moral model. The psychological and sociological models reflect compassionate and tolerant attitudes. Proponents of the disease model vouch that this model also fosters compassion and reduces blame. However, medicalising addiction as a disease has implications for stigma resulting from having a chronic relapsing condition (Frank et al., 2017). The nature model encompasses permissive attitudes and normalises the addictive behaviour, while the moral model blames the 'addict'. Attitudes reflected through this model are judgemental, discriminatory and stigmatising. People who endorse this model believe that individuals with an addiction should be punished, highlighting how attitudes influence behavioural dispositions

Significant predictors of endorsing attitudes reflective of the psychological model are younger age, female gender and having experienced addiction difficulties. Attitudes reflective of the sociological model are more likely to be held by younger people and people who have attained a higher level of education. Attitudes reflective of the disease model are more likely to be held by people who are older and /or more religious. Attitudes reflective of the nature model, on the other hand, are more likely to be held by males and people who are younger and / or identify as atheist. Finally, attitudes reflective of the moral model is likely to be endorsed by males, people who are older and/ or more religious and /or who have attained lower levels of education.

The findings show that models are endorsed implicitly by the general public. Although the participants did not refer to theoretical aspects or the models by name, they did refer to different theoretical concepts and constructs that are implicit in the models, such as, superoptimism, upbringing, the legalisation of substances, incentive salience and harm reduction. The analysis revealed that the majority of individuals are likely to hold attitudes reflective of more than one addiction model, meaning that for example an individual might have a compassionate and tolerant attitude on some addiction aspects, liberal views on others, and also judgemental, discriminant or stigmatising ones on others. The study highlights the complexity of attitudes towards addiction and the factors influencing them.

Significance of Findings

Attitudes operate as catalysts for action and have a significant influence on behaviour and decision-making (Sanbotmatsu et al., 2014). Attitudes about addiction matter because they significantly influence the formulation of political ideas and public policy (Mason et al., 2007; Reid & Amanat, 2020). They impact personal engagement choices, the perception of individuals with addiction, social systems, public discourse, collective consensus, social interactions and the direction of research and funding (Broadus & Evans, 2014; Voas, 2013). These influences are multidirectional and dynamic (Mason, et al., 2007).

This research indicates that the sample of the general public in Malta, hold attitudes reflective of addiction as a psychological issue, has a compassionate and tolerant attitude and believes that individuals who have an addiction should be treated and not punished. Despite this being a very positive feature, societal agents, such as politicians, seek to influence public policy and decision making by aligning their stance with public attitudes which means that, to some extent, public attitudes may become the norm and are no longer challenged or discussed and other crucial aspects of addiction may be ignored (Lloyd, 2010) such as the role played by genetic/biological and social variables in the development of addiction (Graham, 2008; Skewes & Gonzales, 2013; Becoa,

2018). All of these elements should be considered in preventive and treatment decisions. Furthermore, the principle of social justice requires that all harm reduction measures, that is, policies, initiatives, and practices that try to lessen the negative physical, social, and economic repercussions of addiction, should be applied (Harm Reduction International, 2022).

Although the endorsement of addiction as a psychological issue translates into mostly positive attitudes, the findings revealed that the majority of people also hold other attitudes towards addiction, some of which are negative. Blame, the precursor of judgement, intolerance, and responsibility, surfaced in the research findings. In fact, blame appears to be the root cause of negative attitudes (Lloyd, 2010), the unifying factor underlying stigmatisation and discrimination in the media and interactions with professionals and the public. The results indicate that there is still need for improvement.

Implications for Further Research

The study is the first one of its kind to be held in Malta and provides a baseline against which to measure attitude change in coming years. Such research should be done regularly to monitor attitudes and how they change. Research should also focus on the impact of media agenda setting, the language used and other public spheres that shape attitudes about addiction. The findings also revealed that society and culture enable addiction and that the younger generation hold more liberal attitudes about addiction. These are topics that require further research to pave the way for the implementation of preventive and harm-reduction measures.

Implication for Policy and Practice

The findings suggest that there is lack of public knowledge and understanding regarding the fact that any behaviour can become a potential addiction. There is also a lack of awareness regarding the construct of addiction in general; lack of knowledge impacts attitudes. Education is key to correcting misconceptions about addiction. It should focus on the reality of addiction without fear appeals which, it has been shown, do not work as a preventive measure with everyone. It

should be targeted towards the general population. Training should also be provided to people who only come across such individuals indirectly through their line of work, such as police, lawyers, magistrates and judges. Such training should be on-going and up-to-date and in line with the biopsychosocial model.

Guidelines should also be issued to media outlets to ensure a just and balanced portrayal of individuals who have an addiction. The media should be monitored and the guidelines should be enforced. For example, there should no longer be headlines such as: “Probation for drug addicts who punched elderly man and stole wallet” (Agius, 2021) which reinforce stereotypes of individuals who make use of drugs (Maiorano et al., 2017). Such language perpetuates labels, stigma and can lead to discrimination.

Considering the more liberal attitudes, held by the younger generations, Malta should start thinking about implementing more harm reduction principles. Liberal attitudes about addiction reflective of the nature model imply liberal attitudes about personal use choices (Azzopardi et al., 2021. The provision of methadone, which is one of the main harm reduction interventions that has been implemented in Malta, is not sufficient, given that it only provides for individuals who have an opioid addiction, which addiction is on the decline (Gellel et al., 2022). As a country, Malta should introduce further measures, such as testing shelters in parties and festivals (ref. Ivers et al., 2021; Maesham, 2019; 2020).

Limitations of the Study

The use of the mixed-methods approach counteracts a number of limitations that would have been present if only one approach had been used in the study. Nonetheless, a few limitations exist. One is connected with the use of online non-probability sampling, that is, online convenience sampling, in the quantitative approach. This sampling technique increases the risk of bias as those who opt-in are unlikely to be representative of the whole population and leads to results that may not be generalised. Having said this, the sample of 720 participants was sufficient to produce a 3.65

margin of error with a 95% confidence interval. Notwithstanding this, this sampling approach restricts participation to individuals who have access to a device with an internet connection and the appropriate skills and competence to fill out a survey (Roberts, 2014).

Another limitation is that the survey was in English. Although, the PAAAS uses simple and clear wording and despite the fact that English is recognised as an official language in Malta, some participants may have limited English proficiency (Kleiner et al., 2015; Wenz et al., 2021) that might have led to inaccurate results.

Final Note

Attitudes impact our everyday lives in a myriad of ways. If Maltese society truly believes in upholding human rights and social justice, it should challenge the status quo and improve current practices regarding the treatment of addictive behaviours. The fact that there were no lack of people wishing to participate in the survey and the interviews shows that the residents of Malta are willing to speak about the topic. Furthermore, the findings suggest that having addiction difficulties is more common than what we might want to admit! This research is the first step towards understanding and prioritising the rights of individuals and significant others affected by addiction within society in the hope of facilitating the life of those affected and improving the personal and public attitudes which impact every sphere within society!

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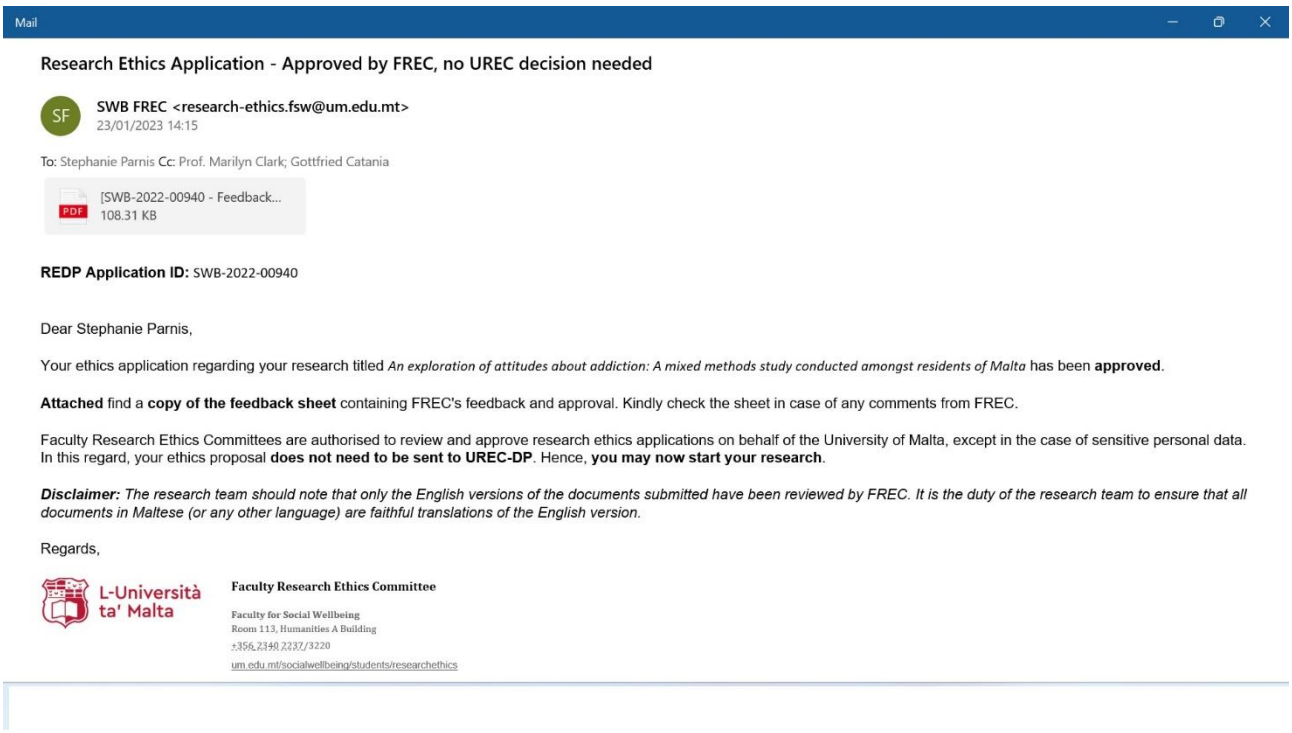
Appendices

Appendix A

Evidence of ethical clearance from the University of Malta Social Wellbeing Faculty Research Ethics Committee



Mail

Research Ethics Application - Approved by FREC, no UREC decision needed

SF **SWB FREC <research-ethics.fsw@um.edu.mt>**
23/01/2023 14:15

To: Stephanie Parnis Cc: Prof. Marilyn Clark; Gottfried Catania

PDF [SWB-2022-00940 - Feedback...
108.31 KB

REDP Application ID: SWB-2022-00940

Dear Stephanie Parnis,

Your ethics application regarding your research titled *An exploration of attitudes about addiction: A mixed methods study conducted amongst residents of Malta* has been **approved**.

Attached find a **copy of the feedback sheet** containing FREC's feedback and approval. Kindly check the sheet in case of any comments from FREC.

Faculty Research Ethics Committees are authorised to review and approve research ethics applications on behalf of the University of Malta, except in the case of sensitive personal data. In this regard, your ethics proposal **does not need to be sent to UREC-DP**. Hence, **you may now start your research**.

Disclaimer: *The research team should note that only the English versions of the documents submitted have been reviewed by FREC. It is the duty of the research team to ensure that all documents in Maltese (or any other language) are faithful translations of the English version.*

Regards,

L-Università ta' Malta

Faculty Research Ethics Committee

Faculty for Social Wellbeing
Room 113, Humanities A Building
+356 2340 2237/3220
um.edu.mt/socialwellbeing/students/researchethics

Appendix B

Permission to use the PAAAS

L-Università ta' Malta

Stephanie Parnis <stephanie.parnis.09@um.edu.mt>

Public Attitudes and Addiction Instrument

5 messages

Stephanie Parnis <stephanie.parnis.09@um.edu.mt> 1 October 2022 at 13:42
To: wevans@unr.edu
Cc: Marilyn Clark <marilyn.clark@um.edu.mt>

Dear Prof Evans,

I trust this email finds you well.

I am currently reading a Master of Science in Addiction Studies, at the University of Malta. A few months ago, Prof Marilyn Clark contacted you to use the Public Attitudes and Addiction Instrument. We have decided to research the public attitudes among individuals residing in Malta for my dissertation. Professor Clark will be my supervisor. Hence, I am seeking permission to use the instrument please.

Looking forward to hearing from you.

Thanks & regards,

Stephanie Parnis

Bill Evans <wevans@unr.edu> 1 October 2022 at 15:03
To: Stephanie Parnis <stephanie.parnis.09@um.edu.mt>
Cc: Marilyn Clark <marilyn.clark@um.edu.mt>

Hello Stephanie, yes, please do use the Public Attitudes and Addiction Instrument. You have my permission to conduct and publish research with it.

All the best,
Professor William Evans

Get Outlook for iOS

Appendix C

Survey Instrument

Section 1

My name is Stephanie Parnis and I am currently reading for a Master of Science in Addiction Studies at the University of Malta.

I am currently conducting research that aims to explore the public attitudes about addiction amongst the residents of Malta titled 'An exploration of attitudes about addiction: A mixed methods study conducted amongst residents of Malta'. Professor Marilyn Clark will be supervising this research, while Dr Anna Grech will act as co-supervisor. The survey that you have been invited to complete forms part of this study. This will take you approximately 20 minutes to complete. Any data collected from this survey will be used solely for the purposes of this study. There are no direct benefits or anticipated risks in taking part. Participation is entirely voluntary, i.e., you are free to accept or refuse to participate.

At no point will you be asked to provide your name or any other personal data that may lead to you being identified. Furthermore, you may skip over any questions that you do not wish to answer.

If you wish to participate in this study, please click the button that says "I agree to participate". If not, please close the browser window (or click "I do not wish to participate").

Should you have any questions or concerns, you may contact me, my supervisor or my co-supervisor on the details provided below.

Stephanie Parnis - stephanie.parnis.09@um.edu.mt

Professor Marilyn Clark – marilyn.clark@um.edu.mt

Dr Anna Grech – anna.m.grech@um.edu.mt

Section 2

1. Demographics

    a. Age:
        i. 18 – 25
        ii. 26 – 30
        iii. 31 – 40
        iv. 41 – 50
        v. 51 – 60
        vi. 61 – 70

vii. 71 and above

b. Gender:
   i. Male
   ii. Female
   iii. Other – please specify

c. Nationality
   i. Maltese
   ii. Other – please specify

d. Ethnicity
   i. White/Caucasian
   ii. Black/African American
   iii. Asian
   iv. Latin/ Hispanic
   v. Other – please specify

e. Status
   i. Single
   ii. Married or in a registered partnership
   iii. An informal relationship – living together
   iv. An informal relationship – living apart
   v. Widowed (or persons whose registered partnership ended in the death of the partner)
   vi. Divorced (or persons whose registered partnership ended up legally dissolved)
   vii. Legally separated
   viii. Not legally seperated

f. Religiousness
   i. Practising
   ii. Non-practising
   iii. Atheist

g. Education Level:
   i. Primary School
   ii. Secondary School
   iii. Post-secondary school (MCAST, Junior college, church post-secondary school etc)
   iv. Tertiary level
   v. Post-Tertiary level

h. Employment level
   i. Engaged in full time employment
   ii. Engaged in reduced/part-time employment
   iii. Homemaker (take care of the home/house)
   iii. Unemployed
   iv. Pensioner
   v. Pensioner & Homemaker
   vi. Student

i. Dependents
   i. Parent
   ii. Non-parent

j. Income
   i. €0 – €10,000
   ii. €10,001 – €20,000
   iii. €20,001 – € 30,000
   iv. €30,001 – €40,000
   v. €40,001 – €50,000
   vi. €50,001 – €60,000
   vi. €60,001 and above

k. Occupation _____

l. I have had difficulties with addiction in the past.

Yes No

m. I currently have difficulties with addiction.

Yes No

n. I know someone who has/had difficulties with addiction.

Yes No

Public attitudes about addiction survey (PAAAS) - Broadus & Evans, 2014.

7-item scale:

1 (Strongly Disagree), 2 (Disagree), 3 (Somewhat Disagree), 4 (Neither Disagree nor Agree), 5 (Somewhat Agree), 6 (Agree) and 7 (Strongly Agree).

Subscales:

P = Psychology Model; M = Moral Model; N = Nature Model; S = Sociology Model; D = Disease Model.

P1. Traumatic events may lead to addiction.

P2. An inability to gain pleasure from life may lead to addiction.

P3. Individuals engage in risky behaviours that might lead to addiction,

because they are depressed.

P4. Addicts use drugs/alcohol to escape from bad family situations.

P5. Individuals engage in risky behaviours that might lead to addiction,

because they are avoiding personal problems.

P6. An addict continues to use even when they know the cost of their

behaviour.

P7. A person can be addicted to anything from drugs to video games.

P8. Individuals engage in risky behaviours that might lead to addiction,

because they lack self-confidence.

P9. Individuals engage in risky behaviours that might lead to addiction,

in order to feel better about themselves.

P10. What causes addiction? Children who lack emotional support may choose to use drugs as an adult.

P11. Even in religious communities, there are addicts.

P12. Anyone can become an addict.

P13. What causes addiction? Pain can cause addiction.

P14. What causes addiction? Addiction is caused by unhappiness in a person's life, marriage, or job.

P15. What causes addiction? The instant reward a person feels from certain behaviours leads to addiction.

M16. Addicts lack moral standards.

M17. Addicts are low life people.

M18. Addicts are failures.

M19. Addicts are immature people.

M20. Addicts have a carefree attitude towards life.

M21. If an addict fails to recover in treatment, it is because they are not motivated to quit.

M22. You can tell a person is an addict by their appearance.

M23. It is easy to tell if someone has an addiction.

M24. Addiction is best seen as a habit, not as a disease.

M25. Saying that addiction is a disease implies a lack of personal responsibility.

M26. Addiction is a choice

M27. It is their own fault if an addict relapse.

M28. Individuals engage in risky behaviours that might lead to addiction, because they do not respect authority.

M29. Addiction is a form of wrongdoing.

M30. Poor people are less motivated to obey laws about risky behaviours like drug use.

M31. Although addictive behaviour is a choice, the person is influenced in that choice by their moral values.

N32. Daily use of small amounts of substances like marijuana is not necessarily harmful.

N33. Marijuana is accepted in some communities, so there is nothing wrong with using it while there.

N34. Personal use of drugs should be legal in the confines of one's own home.

N35. As long as no one else is harmed, people should have the right to engage in whatever behaviours they want.

N36. Some people use drugs, but never become addicted.

N37. Addiction does not always result in a negative outcome.

N38. People fail to consider that some addictive behaviours may be positive.

N39. People often outgrow drug and alcohol addiction.

N40. There are people who have significant problems with alcohol, but who are not alcoholics.

N41. Addicts can learn to control their use.

S42. What factors influence attitudes about addiction? Beliefs about addiction

S43. What factors influence attitudes about addiction? Religious beliefs

S44. A person's culture influences their attitudes toward addiction.

S45. What causes addiction? If a person's neighbourhood supports drug use, a person is more likely to use drugs.

S46. What factors influence attitudes about addiction? A person's environment

S47. What factors influence attitudes about addiction? The media (e.g. news, television, movies, etc.)

S48. Although risky behaviour is a choice, the person is influenced in that choice by their upbringing and education.

D49. Addicts cannot control their addictive behaviour.

D50. Addicts cannot use pain medicine. They would become addicted to it.

D51. Addicts are not capable of solving their addiction on their own.

D52. What causes addiction? Genetics not psychology, determines whether one drinker will become addicted to alcohol and another

will not.

D53. Drug use changes the brain after a few exposures and causes

addiction

D54. ‘‘Once an addict, always an addict’’ is a true statement.

Section 3

Interview invitation

If you would like to discuss this further, please contact me on stephanie.parnis.09@um.edu.mt or on 79364337 to sit for an interview. I will forward the information letter to you once you contact me so that you have all the information about the interview and what your involvement entails. Looking forward to hearing your thoughts and opinions. Thanks for your time.

Appendix D

Information Letter - English Version

18th December 2022

Information letter

Dear Sir/Madam,

My name is Stephanie Parnis and I am a student at the University of Malta, presently reading for a Master of Science in Addiction Studies. I am conducting a research study for my dissertation titled 'An exploration of attitudes about addiction: A mixed methods study conducted amongst residents of Malta'. Professor Marilyn Clark will be supervising this research, while Dr Anna Grech will act as co-supervisor. This letter is an invitation to participate in this study. Below you will find information about the study and about what your involvement would entail should you decide to take part.

The aim of this research study is to explore the attitudes of residents of the Maltese Islands about addiction using a mixed methods approach. Your participation in this study would help contribute to a better understanding of the public attitudes about addiction which is crucial in developing prevention and treatment programmes, and substance use/addiction policy. Any data collected from this research will be used solely for the purposes of this study.

Should you choose to participate, you will be asked to take part in a one-to-one interview that should last approximately 45 minutes. The interview will be held at any public place of your choice and at a time convenient for you. If permission by the participant is granted, the interview will be audio recorded for the purposes of the research.

Throughout the research process your identity will be protected as I will be using pseudonyms (fictitious names). The interviews will be transcribed and no access will be given to anyone other than my supervisors and only if required. In exceptional circumstances access may also be given to examiners for verification purposes. So as to safeguard your identity consent forms will be kept in a locked cupboard at the researcher's residence who resides on their own and which no one else has access too. On the consent form which needs to be signed by the participants, the title of the research study will be omitted and only the UREC-DP reference number will be visible. Any pseudonymised printed data will be kept under lock and key in a different place and it will be destroyed within 6 months from the publishing of results. Publishing of results will occur approximately in July 2023 unless an extension is required.

Participation in this study is entirely voluntary; in other words, you are free to accept or refuse to participate without needing to give a reason. If you accept to participate, you are still free to withdraw from the study at any time without needing to provide an explanation and without any negative repercussions for you. Should you choose to withdraw, any data collected from your interview will be deleted. You are also free not to answer any questions you do not wish to answer

and also to stop the interview at any point. You can also request a copy of the transcript and request changes for a period of no more than one month from the date of your interview.

If you choose to participate, please note that there are no direct benefits to you. Your participation does not put you in any known or anticipated risks. In the event that you feel distressed, please let me know so that I can refer you for further professional support by giving you a list of services and their contact numbers.

As a participant, you have the right under the General Data Protection Regulation (GDPR) and national legislation to access, rectify and, where applicable, ask for the data concerning you to be erased. All data collected will be erased after 6 months from the publication of results.

A copy of this information sheet is being provided for you to keep for future reference.

If you are willing to participate, kindly contact me on the below contact number/email.

Thank you for your time and consideration. Should you have any questions or concerns please do not hesitate to contact me on 79 866 939; by e-mail: stephanie.parnis.09@um.edu.mt. You can also contact my supervisor over the phone: 2340 2741 or via email: marilyn.clark@um.edu.mt or my co-supervisor via email: anna.m.grech@um.edu.mt.

Sincerely,

_____ _____

Stephanie Parnis
stephanie.parnis.09@um.edu.mt

Professor Marilyn Clark
marilyn.clark@um.edu.mt

_____

Dr Anna Grech
anna.m.grech@um.edu.mt

Information Letter - Maltese Version

18 ta’ Diċembru, 2022

Ittra ta’ Informazzjoni

Għażiża Sinjur/Sinjura,

Jisimni Stephanie Parnis u jiena studenta fl-Università ta’ Malta, bħalissa qed nistudja għal *Master of Science in Addiction Studies*. Qed immexxi studju ta’ riċerka għad-dissertazzjoni tiegħi intitolata *‘An exploration of attitudes about addiction: A mixed methods study conducted amongst residents of Malta’* ‘. Il-Professur Marilyn Clark se tkun qed tissorvelja din ir-riċerka, filwaqt li Dr Anna Grech se taġixxi bħala ko-superviżur. Din l-ittra hija stedina biex tipparteċipa f'dan l-istudju. Hawn taħt għandek issib informazzjoni dwar l-istudju u dwar dak li jinvolvi l-involviment tiegħek jekk tiddeċiedi li tieħu sehem.

L-għan tal-istudju huwa li jesplora l-attitudni ta’ residenti ġewwa Malta rigward l-vizzju.Il-parteċipazzjoni tiegħek f'dan l-istudju tgħin biex tikkontribwixxi għal fehim aħjar tal-attitudni tal-publiku li hija kruċjali ghall-iżvilupp ta’ programmi ta’ prevenzjoni u trattament, kif ukoll għal politika soċjali rigward użu ta’ sustanzi u l-vizzju. Kwalunkwe data miġbura minn din ir-riċerka se tintuża biss għal skopijiet ta’ dan l-istudju.

Jekk tagħżel li tipparteċipa, tkun mitlub tieħu sehem f'intervista individwali li għandha ddum madwar 45 minuta. L-intervista ssir fi kwalunkwe post pubbliku u fi żmien konvenjenti għalik. Jekk jingħata permess, l-intervista tkun irreġistrata bl-awdjo għall-iskopijiet tar-riċerka.

Matul il-proċess ta’ riċerka l-identità tiegħek se tkun protetta billi jien se nuża psewdonimi (ismijiet fittizji). L-intervisti jiġu traskritti u l-ebda aċċess ma jingħata lil ħadd għajr is-superviżuri tiegħi u biss jekk meħtieġ. F’ċirkustanzi eċċezzjonali jista’ jingħata aċċess anki lil eżaminaturi minħabba verifikazzjoni. Biex tiġi salvagwardjata l-identita’ tiegħek, formoli ta’ kunsens ser jinżammu f’armarju fir-residenza tar-riċerkatur ġewwa ir-residenza tagħha u fejn ħadd iktar ma jirrisjedi u ħadd iktar ma għandu aċċess. Fuq l-formula ta’ kunsens li tirrikjedi il-firma tal-parteċipanti it-titlu tar-riċerka ser jiġi ommess u in-numru ta’ referenza tal-UREC-DP biss ser ikun viżibli. Kwalunkwe data stampata psewdonimizzata tinżamm f'post sigur u tinqered fi żmien 6 xhur mill-pubblikazzjoni tar-riżultati. Il-pubblikazzjoni tar-riżżultati isir bejn wieħed u ieħor Lulju 2023 sakemm ma jkunx hemm bżonn ta’ estenzzjoni.

Il-parteċipazzjoni f'dan l-istudju hija kompletament volontarja; fi kliem ieħor, inti liberu li taċċetta jew tirrifjuta li tipparteċipa mingħajr il-bżonn li tagħti raġuni. Jekk taċċetta li tipparteċipa, xorta tkun liberu li tirtira mill-istudju fi kwalunkwe ħin mingħajr ma jkollok bżonn tipprovdi spjegazzjoni u mingħajr ebda riperkussjonijiet negattivi għalik. Jekk tagħżel li tirtira, kwalunkwe data miġbura mill-intervista tiegħek titħassar. Int liberu ukoll li ma twieġeb l-ebda mistoqsija li ma tixtieqx twieġeb u li twaqqaf l-intervista fi kwalunkwe punt. Tista' ukoll titlob kopja tat-traskrizzjoni.

Jekk tagħżel li tipparteċipa, jekk jogħġbok innota li m'hemm l-ebda benefiċċju dirett għalik. Il-parteċipazzjoni tiegħek ma tpoġġikx f'xi riskji magħrufa jew antiċipati. Fil-każ li tħoss xi diffikulta , jekk jogħġbok għarrafni sabiex inkun nista' nirreferik għal aktar appoġġ professjonali billi nagħtik lista ta' servizzi u n-numri ta' kuntatt tagħhom
Bħala parteċipant, għandek id-dritt taħt ir-Regolament Ġenerali dwar il-Protezzjoni tad-Data (GDPR) u l-leġiżlazzjoni nazzjonali li taċċessa, tirrettifika u, fejn applikabbli, titlob li d-data li

tikkonċerna lilek titħassar. Id-data kollha miġbura titħassar wara 6 xhur mill-pubblikazzjoni tar-riżultati.

Kopja ta’ din l-ittra ta' informazzjoni qed tiġi pprovduta għalik biex iżżommha għal referenza futura.

Jekk inti lesta li tipparteċipa ġentilment ikkuntattjani fuq in-numru ta’ kuntatt/emejl hawn taħt. Jekk m'għandekx aċċess għal xi waħda minn dawn t'hawnfuq jekk jogħġbok kellem lil wieħed mill-membri tal-persunal sabiex ikunu jistgħu jikkuntattjawni direttament.

Grazzi tal-ħin u l-konsiderazzjoni tiegħek. Jekk għandek xi mistoqsijiet jew tħassib jekk jogħġbok, toqgħodx lura milli tikkuntattjani fuq 79 434 856; permezz tal-emejl: stephanie.parnis.09@um.edu.mt. Tista’ ukoll tikkuntattja lis-superviżur tiegħi permezz tat-telefown: 2340 2741 jew permezz tal-emejl: marilyn.clark@um.edu.mt jew il-ko-superviżur tiegħi permezz tal-emejl: anna.m.grechvella@um.edu.mt.

Dejjem tiegħek,

_____

Stephanie Parnis
stephanie.parnis.09@um.edu.mt

_____

Professor Marilyn Clark
marilyn.clark@um.edu.mt

_____

Dr Anna Grech
anna.m.grech@um.edu.mt

Appendix E

Participant's Consent Form – English Version

Participant's consent form

An exploration of attitudes about addiction: A mixed methods study conducted amongst residents of Malta.

UREC-DP Reference Number:

I, the undersigned, give my consent to take part in the study conducted by Stephanie Parnis. This consent form specifies the terms of my participation in this research study.

1. I have been given written and/or verbal information about the purpose of the study; I have had the opportunity to ask questions and any questions that I had were answered fully and to my satisfaction.

2. I also understand that I am free to accept to participate, or to refuse or stop participation, at any time without giving any reason and without any penalty. Should I choose to participate, I may choose to decline to answer any questions asked. In the event that I choose to withdraw from the study, any data collected from me will be erased.

3. I understand that I have been invited to participate in an interview to speak about my attitude to addiction. I am aware that the interview will take approximately one hour. I understand that the interview is to be conducted in a place and at a time that is convenient for me.

4. I understand that my participation in this study does not benefit me directly but I understand that this research may help impact policy and practices in this area.

5. I understand that, under the General Data Protection Regulation (GDPR) and national legislation, I have the right to access, rectify and, where applicable, ask for the data concerning me to be erased.

6. I understand that all data collected will be erased within six months from publication of results.

7. I have been provided with a copy of the information letter and understand that I will also be given a copy of this consent form.

8. I am aware that, if I give my consent, my interview will be audio recorded and transcribed (converted to text as recorded). If I do not give my consent the researcher will be taking notes.

9. I understand that no access will be given to anyone other than my supervisors and only if required. In exceptional circumstances access may also be given to examiners for verification purposes.

10. I am aware that, if I give my consent, extracts from my interview may be reproduced but will be attributed to a pseudonym (made-up name). Any identifiable details pertaining to the participant's story will be changed so as to ensure anyone reading the study will not identify the individual.

11. I am aware that my data will be pseudonymised; i.e. my identity will not be revealed or noted on transcripts or notes from my interview. Instead, a made-up name will be used. Data will be pseudonymised at the very start of the interview. The codes that link my data to my identity will be stored securely and separately from the data, in an encrypted file on the researcher's password protected computer, and only the researcher will have access to this information. The file will be deleted within 6 months from when the results are published, approximately in December 2023.

12. I am aware that I may ask to be given the opportunity to review relevant extracts of the transcript of my interview before the results of the study are published. I am also aware that I may ask for changes to be made for a period of no more than a month from the date of my interview, if I consider this to be necessary.

13. If I feel that the interview has distressed me in any way, a list of support services will be given to me to avail of any service of my choice and receive support accordingly.

I have read and understood the above statements and agree to participate in this study.

The above statements have been read to me and I have understood them and agree to participate in the study.

I hereby, give my permission for the interview to be audio recorded (or recorded if online).

Name of participant: _____

Signature: _____

Signature of reader (if applicable): _____

Date: _____

Stephanie Parnis

stephanie.parnis.09@um.edu.mt

Professor Marilyn Clark

marilyn.clark@um.edu.mt

Dr Anna Grech

anna.m.grech@um.edu.mt

Participant's consent form – Maltese version

Formola ta' Kunsens tal-Parteċipant

An exploration of attitudes about addiction: A mixed methods study conducted amongst residents of Malta.

Jiena, hawn taħt iffirmat, nagħti l-kunsens tiegħi biex nieħu sehem fl-istudju mwettaq minn Stephanie Parnis. Din il-formola ta' kunsens tispeċifika t-termini tal-parteċipazzjoni tiegħi f'dan l-istudju ta' riċerka.

1. Ingħatajt informazzjoni verbali dwar l-iskop tal-istudju; Kelli l-opportunità li nistaqsi mistoqsijiet u kwalunkwe mistoqsija li kelli tweġibiet bis-sħiħ u għas-sodisfazzjon tiegħi.

2. Nifhem ukoll li jien liberu li naċċetta li nipparteċipa, jew li nirrifjuta jew inwaqqaf il-parteċipazzjoni, fi kwalunkwe ħin mingħajr ma nagħti raġuni u mingħajr ebda penali. Jekk nagħżel li nipparteċipa, nista' nagħżel li nirrifjuta li nwieġeb kwalunkwe mistoqsija. Fil-każ li nagħżel li nirtira mill-istudju, kwalunkwe data miġbura mingħandi titħassar.

3. Nifhem li ġejt mistieden biex nipparteċipa f'intervista biex nitkellem dwar l-attitudni tiegħi fuq l-vizzju. Jiena konxju li l-intervista tieħu madwar siegħa. Nifhem li l-intervista għandha ssir f'post u f'ħin li jkun konvenjenti għalija.

4. Nifhem li l-parteċipazzjoni tiegħi f'dan l-istudju ma nibbenefikax jien direttament imma nifhem li din ir-riċerka tista' tgħin biex tħalli impatt fuq il-politika u l-prattiċi f'dan il-qasam.

5. Nifhem li, skont ir-Regolament Ġenerali dwar il-Protezzjoni tad-Data (GDPR) u l-leġiżlazzjoni nazzjonali, għandi d-dritt li jkolli aċċess, nirrettifika u, fejn applikabbli, nitlob li d-data li tikkonċernani titħassar.

6. Nifhem li d-data kollha miġbura mill-intervista' titħassar fi żmien sitt xhur mill-pubblikazzjoni tar-riżultati.

7. Ġejt ipprovdut b'kopja tal-ittra ta' informazzjoni u nifhem li se ningħata ukoll kopja ta' din il-formola ta' kunsens.

8. Jiena konxju li, jekk nagħti l-kunsens tiegħi, l-intervista tiegħi tkun irreġistrata u traskritta bl-awdjo (konvertita għal test kif irreġistrata). Jekk ma nagħtix il-kunsens tiegħi r-riċerkatur ikun qed jieħu n-noti.

9. Nifhem li l-ebda aċċess ma ser jingħata lil ħadd ħlied lis- superviżuri u dan biss jekk meħtieġ. F'ċirkustanzi eċċezzjonali jista' jingħata aċċess lil eżaminaturi minħabba verifikazjoni.

10. Jiena konxju li, jekk nagħti l-kunsens tiegħi, siltiet mill-intervista tiegħi jistgħu jiġu riprodotti imma jiġu attribwiti għal psewdonimu (isem magħmul).

11. Jiena konxju li d-data tiegħi se tkun psewdonimizzata; jiġifieri l-identità tiegħi ma tkunx żvelata jew innotata fuq traskrizzjonijiet jew noti mill-intervista tiegħi. Minflok, jintuża isem magħmul. Id-data tiġi psewdonimizzata fil-bidu nett tal-intervista. Il-kodiċi li jgħaqqdu d-data tiegħi mal-identità tiegħi se jinħażnu b'mod sigur u separat mid-data, f'fajl kriptat fuq il-kompjuter protett bil-password tar-riċerkatur, u r-riċerkatur biss ikollu aċċess għal din l-informazzjoni. Il-fajl jitħassar ladarba r-riżultati jiġu ppubblikati.

12. Jiena konxju li nista' nitlob li ningħata l-opportunità li nirrevedi siltiet rilevanti tat-traskrizzjoni tal-intervista tiegħi qabel ma jiġu ppubblikati r-riżultati tal-istudju. Jiena konxju ukoll li nista' nitlob li jsiru bidliet, jekk inqis li dan huwa meħtieġ.

13. Jekk inħoss li l-intervista b'xi mod poġġietni f'diffikultà, issir referenza għal professjonist rilevanti, billi tinghatali lista ta' servizzi ta' sapport li nista' naghmel użu minnhom.

Qrajt u fhimt id-dikjarazzjonijiet ta' hawnfuq u naqbel li nipparteċipa f'dan l-istudju.

Id-dikjarazzjonijiet ta' hawnfuq inqrawli u jien fhimthom u naqbel li nipparteċipa fl-istudju.

Isem il-parteċipant: _____

Firma: _____

Firma tal-qarrej (jekk tapplika): _____

Data: _____

Stephanie Parnis

stephanie.parnis.09@um.edu.mt

Professor Marilyn Clark

marilyn.clark@um.edu.mt

Dr Anna Grech

anna.m.grech@um.edu.mt

Appendix F

Interview Guide

The interview Guide

Before we start the interview, I would like to thank you for accepting to participate in this research. As you are aware the topic is on the attitudes about addiction. Please do not hesitate to stop me, ask me for clarification or to stop if you are uncomfortable at any point during the interview. I will totally understand. We've got as much time as you need for this. I may take a couple of notes. Please take the time you need. Whenever you are ready and comfortable, we can start the interview.

Participants will be asked different open-ended questions.

(Note: Throughout the interview, take notice of any indirect mention of the five models – Prompt further by asking can you please elaborate? You mentioned… Can you tell me more about this? Etc.)

1. General on addiction

How would you define addiction? What are its core components?

On a scale of 1 to 10, 1 being the least and 10 being the most, how complex is the phenomenon? Can you please elaborate?

What brings about/causes addiction?

2. The addiction career

Can you explain how it starts, is maintained and ends? (Use prompts to explore the addiction career. Break each phase and explore each one).

Can you tell me your thoughts about whether addiction has any repercussions? What are they, if any?

3. Public Practices & Policy

What is your opinion on the public attitude about addiction? Is there a public consensus? Does public attitude influence individuals who have an addiction? How?

Where does addiction stand on Malta's political agenda? Would you change that? If yes, what would you change?

What are your thoughts about Malta's current policies and practices? Can they be improved? If yes, how? (Discuss different aspects; prevention, treatment, benefits, policies laws - Prompt the topics if they do not mention them).

Appendix G

List of support services

This support services list is related to psycho-social or mental health and well-being services. The last two services are generic support services which can be accessed 24/7

Name of student researcher: Stephanie Parnis

Course: Master of Science in Addiction Studies

Name of research supervisor: Professor Marilyn Clark

Name of research co-supervisor: Dr Anna Grech

Title of Research Study: An exploration of attitudes about addiction: A mixed methods study conducted amongst residents of Malta

Dear Participant,

I would like to take this opportunity to thank you for your participation in this study. I appreciate your involvement and cooperation throughout this entire process.

I would like to remind you that the aim of the study was explore the attitudes of residents of the Maltese Islands about addiction using a mixed methods approach.

This study was not anticipated to cause distress and the interview questions were formatted in a generic and as sensitive a manner as possible; however, if your participation has led you to experience any distress or discomfort for whatever reason, then below I have included some information about services that offer free professional support that you might find helpful.

If you require any additional information or wish to report any concerns about this study, please do not hesitate to contact myself, on stephanie.parnis.09@um.edu.mt or +356 79364337, my research supervisor on Marilyn.clark@um.edu.mt or +356 79824704 or my research co-supervisor on anna.m.grech@um.edu.mt or +35699822564

Kind regards,

Stephanie Parnis

stephanie.parnis09@um.edu.mt

Richmond Foundation
info@richmond.org.mt
+356 21 224580/ 21 482336/ 21 480045
Supports both individuals who are experiencing mental health problems as well as those around them. Apart from supporting individuals by offering therapeutic help, Richmond Foundation also guides individuals by teaching the necessary skills to live and work independently. Their services include support groups, assisted living solutions, educational programmes, as well as counselling services.

Supportline 179
This is Malta's national helpline acting to provide support, information about local social welfare and other agencies, as well as a referral service to individuals who require support. It is also a national service to individuals facing difficult times or a crisis. Their primary mission is to provide immediate and unbiased help to whoever requires it.

Kellimni .com
http://kellimni.com/
21244123/21335097
kellimni.com is an online support service in which trained staff and volunteers are available for support 24/7 via email, chat and smart messaging. This service is managed by SOS Malta.

Summary of Dissertation

An Exploration of Attitudes About Addiction: A Mixed-Methods Study Conducted Amongst Residents of Malta

Attitudes about addiction influence all systems within a society: the self, through beliefs and personal use choices; the public perception of individuals with addiction issues and of their significant others; public discourse, social interaction; public policy; and, the law (Broadus & Evans, 2014). Understanding society's attitude about addiction is crucial to creating targeted, well-researched and effective interventions and initiatives (Duffy et al., 2016).

This research study explores the attitudes of residents of the Maltese Islands about addiction using a mixed-methods approach. Its objective is to partly fill a gap in the Maltese evidence base on addiction studies.

This research agenda lends itself to the following specific research questions (RQs):

1. Which models of addiction best reflect the attitude/s that residents of Malta have about addiction?
2. Are any demographic differences evident in the different attitudes/models that residents of Malta have about addiction?
3. What does an in-depth exploration of the attitudes about addiction held by residents of Malta reveal about them and society?

This study's theoretical framework is sociopsychological, that is, it rejects the assumptions that human behaviour can be comprehended in a vacuum independently of social influence and/or interactions. A biopsychosocial theoretical framework of addiction also serves as a guide for the research.

Attitudes

Allport (1935) defines attitude as a "mental and neural state of readiness, organised through experience, exerting a directive or dynamic influence upon the individual's response to all objects and situations with which it is related" (p.810). All the definitions of attitude share the common understanding that attitudes are an individual's general evaluations about objects, issues, places, other individuals and the self (Petty & Briñol, 2010; Eagly & Chaiken, 1993; Ostrom, 1969). The general evaluative synthesis of the information gathered from an attitude is derived from three different correlates: cognitive, affective and behavioural information (Eagly & Chaiken, 1993; 1992; Zanna & Rempel, 1988). The three components are measured on an evaluative dimension of meaning continuum that ranges from extremely positive to extremely negative (Eagly & Chaiken, 1993). Attitudes are acquired through mere exposure (Bornstein & D'Agostino, 1992), direct personal experience (Borden & Horowitz, 2008; Pickens, 2005), learning processes (Bandura, 1978; Branscombe & Baron, 2023; Krosnick et al., 1992; Stats & Stats, 1958), the media (Becker, 1963; Ginty et al., 2019), and group settings and social networks (Cohen, 2003). Attitude change occurs when an individual's evaluation is altered from one value to another. Persuasion is the key to attitude change.

Addiction Models

Addiction models are co-constructed by social actors that include academics, scientists and politicians, operating in their historical and cultural contexts. The theories within each model influence and are, in turn, influenced by research, funding and policy development. Addiction models are also implicitly held by the general population and are reflective of the attitudes they hold about addiction which in turn influence the support (or lack of) for specific policy directions that are implied by the models (Levine, 1978).

There are five key models that have been proposed to explain addiction: the nature model, the disease model, the moral model, the psychological model, and the social model (Broadus & Evans, 2014; Mosher & Atkins, 2007). The principle underlying the nature model is that individuals have an innate drive to use substances that is analogous to the drive they have for food and sex (Weil, 1986). Weil and Rosen (1998) argue that addiction does not depend solely on the type of substance imbued but, also, on the relationship formed with the substance. The disease model medicalises addiction (Mosher & Atkins, 2007; NIDA, 2016). Key to this model is compulsion and consequent loss of control (Bellum, 2013). Proponents of this model argue that it reduces stigma (Dackis and O'Brien, 2005), blame and personal responsibility (Racine et al., 2015) and increases social acceptance (Hyman, 2007). The moral model sees individuals with addiction as being morally feeble, refusing to adhere to societal ethical and moral standards. The assumption is that they create this negative situation for themselves and should, therefore, be blamed and punished for it (Lassiter & Spivey, 2018). This assumption expresses little to no compassion (Rusammen, 2000). The psychological model presents the phenomenon of addiction from a micro-level perspective, that is, the 'self'. It is concerned with personal issues such as trauma, mental health and personality (e.g., Basiaux et al., 2001; Gierski et al., 2017). This model reflects compassion and tolerance and holds that treatment is more effective than punishment (Richards et al., 2021). The sociological model presents addiction from a macro perspective, encompassing environmental, cultural, educational and social variables (Broadus & Evans, 2014) and the social structure (Moshkin & Atkins, 2007). It postulates that external social forces influence addictive behaviours. This model fosters compassion, reduces stigma, and emphasises that underlying macro-level issues must be resolved for an individual to recover (Richards et al., 2021).

The Influence of Attitudes About Addiction on Research, Policy and Practice

Through elections and rational anticipation processes, public attitudes influence state-level decisions, legislation and policy (ref. Erikson, 2002), funding and care (Dhuffar & Griffiths, 2016; Singleton, 2010). If policymakers stigmatise addiction, they may be less willing to provide resources to address the phenomenon (Yang et al., 2017). At a micro-level, attitudes profoundly impact ideas about potential addictive behaviours, choices regarding onset (Boogar et al., 2014; Trafimow, 1996) and treatment decisions (SAMHSA, 2012).

A review of the literature suggests that negative addiction attitudes still prevail amongst different research populations (e.g., Corrigan et al., 2005; Ries, 1977; Schomerus, 2006; Dhillon et al., 2011; Hing et al., 2016; Peter et al., 2019; Lindsay et al., 2021). Negative attitudes can impact judiciary decisions (e.g., Sinclair-House et al., 2020), policy implementation, such as the introduction of drug courts (Gebelein, 2000), the use of Methadone Assisted Therapy (Kruis et al., 2021; Matusow et al., 2013) and treatment efficacy (e.g., van Boekel et al., 2014).

Methodology

The research adopted a pragmatist paradigm (ref. Maarouf, 2019). It assumes a critical realist ontological stance (Baskhar, 2005) and a constructivist epistemology (Ültanır, 2012) with transformative axiological underpinnings (ref. Mertens, 2007). It applied a convergent parallel mixed-methods design that enabled the collection of disparate but complementary data on the same subject (Morse, 1991). The target population was adults residing in Malta.

The tool used to collect quantitative data was the Public Attitudes About Addiction Survey (PAAAS). The PAAAS is a validated and standardised measurement of addiction attitudes with an acceptable subscale discriminant / divergent validity, interscale correlations of 0.32 and less and strong interitem reliability, with Cronbach alphas ranging from 0.703 to 0.894

(ref. Broadus & Evans, 2014). The data was analysed using the IBM SPSS 28 package. At a 95% confidence level, the final sample of 720 participants from a population of approximately 500,000 guaranteed a maximum margin of error of 3.65%. To determine which attitude/s the residents of Malta have about addiction the responses pertaining to attitudes reflective of each model were grouped and each participant's mean subscale scores were calculated. The Friedman test compared the mean scores of the attitudes reflective of the five addiction model scales (RQ1). To answer RQ2, a general linear regression model was used to relate each attitude scale to a number of explanatory demographic variables.

At the end of the survey, participants were invited for an interview. Eight interviews were held. A semi structured interview guide was used to collect the qualitative data was semi-structured interview. The data was analysed using thematic analysis (ref. Braun & Clarke, 2006). Ethical clearance was granted by the University of Malta and ethical guidelines were adhered to.

Findings

Table 1 presents the socio-demographic characteristics of the sample.

Participants' demographics

		N	%
Gender	Male	245	34%
	Female	475	66%
Age	18-25	53	7%
	26-50	443	62%
	51+	224	31%
Relationship status	Single	236	33%
	Married/cohabiting/registered partnership	427	59%
	In a relationship - living apart	57	8%
Religion	Practising	325	45%
	Non-practising	304	42%

	Atheist	91	13%
Education level	Secondary	116	16%
	Post-secondary	164	23%
	Tertiary	275	38%
	Post-tertiary	165	23%
	Full-time employment	478	66%
Had difficulties with addiction in the past.	Yes	157	22%
	No	563	78%
Having addiction difficulties at present	Yes	89	12%
	No	631	88%
Knowing someone who has/had difficulties with addiction.	Yes	546	76%
	No	174	24%

RQ1

The mean rating score of the psychology attitude scale (M=5.50) was the highest. The remaining attitudes ranked as follows: attitudes reflective of the sociological (M = 4.56), disease (M = 4.22), nature (M = 3.54) and moral models (M = 3.03) respectively. The p - value of 0.001) indicates that the mean scores vary significantly.

RQ2 Predictors

Variable Estimates

Variables		Psychology model		Moral model		Nature model		Sociology model		Disease model	
		B	*p*	B	*p*	B	*p*	B	*p*	B	*p*
	Intercept	5.34	0.00	3.00	0.00	3.85	0.00	4.77	0.00	4.13	0.00
Age	18 - 25 years	0.40	<0.001	-0.14	0.33	0.95	<0.001	0.82	<0.001	-0.38	0.01
	26 - 50 years	0.28	<0.001	-0.24	<0.001	0.44	<0.001	0.25	<0.001	-0.29	<0.001
	51+	0[a]		0[a]		0[a]		0[a]		0[a]	
Gender	Male	-0.15	0.04	0.31	<0.001	0.17	0.03	0.02	0.73	-0.12	0.06
	Female	0[a]		0[a]		0[a]		0[a]		0[a]	
Status	Single	-0.10	0.31	-0.17	0.18	-0.16	0.30	-0.07	0.61	0.01	0.96
	Married / cohabiting / in a registered partnership	-0.01	0.91	-0.25	0.05	-0.29	0.05	-0.17	0.19	0.03	0.78
	In a relationship - living apart	0[a]		0[a]		0[a]		0[a]		0[a]	
Religion	Practising	-0.09	0.28	0.42	<0.001	-0.82	<0.001	-0.26	0.02	0.32	<0.001
	Non-practising	-0.11	0.19	0.37	<0.001	-0.32	0.01	-0.18	0.10	0.23	0.03
	Atheist	0[a]		0[a]		0[a]		0[a]		0[a]	
Education Level	Secondary	-0.14	0.10	0.51	<0.001	0.29	0.02	-0.49	<0.001	0.02	0.87
	Post-secondary	0.14	0.06	0.40	<0.001	0.27	0.02	-0.37	<0.001	-0.02	0.80
	Tertiary level	0.09	0.17	0.12	0.18	0.06	0.52	0.00	0.98	-0.02	0.82
	Post-tertiary	0[a]		0[a]		0[a]		0[a]		0[a]	
Past addiction difficulties	Yes	0.21	<0.001	-0.49	<0.001	0.04	0.73	-0.07	0.51	0.00	0.98
	No	0[a]		0[a]		0[a]		0[a]		0[a]	
Current addiction difficulties	Yes	-0.02	0.84	0.21	0.07	-0.01	0.93	0.09	0.48	0.20	0.07
	No	0[a]		0[a]		0[a]		0[a]		0[a]	
I know someone who had/has addiction difficulties	Yes	0.06	0.37	-0.25	<0.001	-0.16	0.08	0.06	0.43	0.08	0.28
	No	0[a]		0[a]		0[a]		0[a]		0[a]	

a This parameter is set to zero because it is redundant.

Significant predictors of attitudes congruent with the psychological model included gender, age, and having had addiction difficulties in the past. Males were significantly less likely than females to endorse addiction from a psychological perspective (B = -0.15, p =

0.04). The younger the individual, the more likely they were to agree with the psychological items on the scale (18 to 25 years, B = 0.40, p = <0.001; 26 to 50 years, 0.28 p = <0.001). The same goes for individuals who have experienced addiction issues (B = 0.21, p = <0.001).

Significant predictors of attitudes congruent with the moral scale include gender, religion, education level and having experienced addiction issues. Males are more likely to endorse the moral attitude scale than females (B = 0.31, p = < 0.001). Religion also strongly predicts the moral attitude with both practising and non-practising groups being more likely to agree with items on the scale than atheists (B = 0.42, p = <0.001 & B = 0.37, p = <0.001 respectively). Secondary and post-secondary education level participants are more likely to endorse addiction as a moral issue (B = 0.51, p = <0.001 & B = 0.4, p = <0.001 respectively).

Age, gender, status, religion and education level are the significant predictors of the nature attitude scale. The younger the individual, the more likely they are to agree with the items of the scale (18-to-25-years: B = 0.95, p = <0.001 & 26 to 50 years: B = 0.44, p = <0.001). Males are more likely to endorse the scale than females (B = 0.17, p = 0.03). Religious individuals are less likely to agree with items on the scale than individuals who identified as atheists (practising: B = -0.82, p = <0.001; non-practising: B = -0.32, p = 0 .01). Individuals who responded that they had only attained a secondary or post-secondary education level are more likely to endorse addiction from a nature perspective (B = 0.29, p = 0.02 & B = 0.27, p = 0.02 respectively).

With regard to the sociological attitude scale, age, religion and education level are the only significant demographic predictors. The younger the individual, the more likely they seem to be to endorse the sociological scale (18 to 25 years: B = 0.82, p = <0.001; 26 to 50 years: B = 0.25, p = <0.001). Practising religious individuals are less likely to endorse the

model (B = -0.26, p = 0.02). Having attained only a secondary or post-secondary level of education seems to imply lower scores (B = -0.49, p = <0.001, B = -0.37, p = 0.03).

Significant predictors of the disease attitude scale are age and religion. As age increases, so does the endorsement of addiction as a disease (18-to-25-years: B = 0.38, p = 0.01; 26-to-50-years: B = 0.29, p = <0 .001). In addition, the more religious the participants, the more likely they are to agree with items on the scale (practising: B = 0.32, p = 0; non-practising: B = 0.23, p = 0.02).

RQ3

Table 3 presents the most prominent themes that emerged from the thematic data analysis. Following Braun and Clarke (2006), themes were categorised into different overarching themes relating to the different addiction models and relevant survey items. The qualitative analysis of the PAAAS results provided a deeper level of understanding about addiction.

Table 3

Qualitative data analysis themes

	Name of theme
Overarching Theme:	Disease perspectives
Theme 1	To some extent, a disease
Subtheme 1.1	Loss of control; from want to need and the preoccupation about it
Overarching theme:	Psychological perspectives
Theme 2	The beginning: Curiosity, exposure and feeling invincible
Theme 3	The relationship between trauma, escapism and self-medication
Theme 4	Reinforcement, instant gratification and pleasure
Overarching theme:	Sociological perspectives
Theme 5	An enabling society
Theme 6	“The screwed-up family” - Upbringing

Overarching Theme:	Moral perspectives
Theme 7	Stigma, blame and judgement prevail
Theme 8	The tolerance and compassion dimension
Overarching Theme:	Nature perspectives
Theme 9	Each to their own

The thematic analysis indicated that all participants used words or descriptions reflecting attitudes connoted the disease model when talking about addiction, indicating that they all hold attitudes reflecting this model to some extent. For example, George states (with reference to addictions in general) that, “maybe even physically … they can't imagine being without it and … [it] generally hurts if they are without it” and Sharon’s friend tells her that she is “always thinking about it!” (with reference to alcohol).

Participants referred to psychological constructs, such as trauma, personality, and maladaptive cognitions as main things contributing to addiction reflecting attitudes that there is some psychological deficit in the persons who become addicted. For example, Eve stated that, “There are people who relish staying in and not doing anything much; there are others who love going out and experiencing all there is to experience in life!” and Steve explained that, “some people want to escape that kind of reality with drug use”.

Participants feel that Maltese society enables addiction through processes such as dysfunctional upbringing, the lack of stress relievers and culture, especially the fact that many addictions are considered to be taboo. Clint states that, “stressors have increased exponentially and there are fewer relievers, the healthier relievers.”

The analysis suggests that, although the participants showed different levels of compassion and tolerance (discussed below), a few did hint that they held moralistic attitudes along with attitudes reflective of other models. For example, Clint used the word “junkies”

several times to distinguish between functional “addicted” individuals and individuals who lead a more chaotic lifestyle. Miriam refers to individuals with addiction as persons who may be “of a weaker character”. The participants stated that individuals who have an addiction are often looked down upon, ostracised and blamed by society.

The participants who endorsed the nature model tend to have liberal attitudes and see nothing wrong in engaging in potentially addictive behaviours now and again. Jake said, “Everyone does what they want to do. If there are legal trips and you want to trip, this does not mean I am going to go for it myself, you understand?” They feel that safe practices should be employed and harm reduction principles should be on the political agenda. Steve expounded on this, saying: “Don't make them illegal, make them legal but make them regulated…my mum's solution to that [smoking cannabis] was ‘Oh ok, that's what you're doing, then I'll tell you what, do it only at home’”.

Discussion

The most highly endorsed attitudes by the participants of this study, are those reflective of the psychological model The fact that psychology has permeated society (Madson, 2018) might account for this result. As found by other studies (e.g., Broadus & Evans, 2014), attitudes reflective of this model are less likely to be held as age increases. Older individuals are less likely to be versed in psychological constructs. Females are more likely to hold attitudes connotated with the psychological model. Gender roles might explain the significant gender variable differences, with females being more compassionate than men (Lennon & Eisenberg, 1987; Stellar, 2012; Park, 2016; Treichler, 2022). The belief that women should be more nurturing and caring than males still dominates societies (Ridgeway, 2011).

Age, religiosity, and education predict endorsement of attitudes reflective of the sociological model. Younger adults are more likely to endorse the model. A plausible explanation might be that younger adults are more exposed to potentially addictive behaviours through for example, the media (Jackson et al., 2018; Smith & Foxcraft, 2009; Cabrera-Nguyen et al., 2016). Furthermore, older people are more likely to view addiction as a moral issue and judge people with addiction disorders. The latter might account for the religiousness difference (discussed below). Lower education levels are linked to lower civic and social engagement (Campbell, 2006), suggesting that this group is less aware of the sociological aspects of addiction.

Religiousness and increased age are predictors of endorsement of the disease model. This finding is supported by other research (e.g., Schaler, 1997; Lawrence et al., 2013; Meurk et al., 2014; Russell & Davies, 2011; Hshieh & Srebalus, 1997; Bugle et al., 2003). Adults may associate the methadone that used to be made available to individuals with addiction by Malta's Substance Misuse Out-Patient Unit (opened in 1987) with the treatment of a disease and this may partly explain age-related differences in attitude. Furthermore, most treatment providers have religious affiliations (Grant Weinandy & Grubbs, 2021). Locally, OASI and Caritas promote the 12-step programme based on the disease model (Muerk et al., 2014; Sandoz, 2014) and Caritas has religious affiliations. The organisations' views may influence Maltese public attitudes and religiosity is known to increase with age (Bengston et al., 2015; Levin et al., 1994; Sari, 2017).

Liberal and permissive attitudes were less likely to be held with the nature model being one of the least endorsed models. Younger generations are more accepting of formerly unacceptable behaviours (Inglehart & Baker, 2000; Schmidt et al., 2016; Degenhardt, 2008; Azzopardi et al., 2021). They are also becoming less religious (State of the Nation Survey, 2021) and non-religion is linked to liberalism (Kosmin et al., 2009; Ramadhani & Anshori,

2023; Baker & Smith, 2009). Men are less religious and religiously influenced than women (Davies; 2017; Moon et al., 2022). Socialisation may contribute to this (Thompson, 1991). Furthermore, males take more risks and are less worried about consequences than females (Griskevicius et al., 2011; Yankelevitz, 2012). Individuals with lower education levels are more tolerant of deviant behaviour (Gong et al., 2021).

Research shows that males are more likely to view addiction as a moral issue (Lawrence et al., 2013; Richards et al., 2021). Religious people tend to be conservative. Religion influences how individuals comprehend potential addictive behaviours, their beliefs on how such issues should be handled, and their personal choice of whether or not to engage in such behaviours (Courtwright, 1997). Research also suggests that higher education is linked to more tolerance and compassion (Kingston et al., 2003) and that having had addiction difficulties is a strong opposing predictor of the model. This aligns with other research findings (e.g., Broadus & Evans, 2014) and is quite intuitive, in that individuals who have experienced addiction might also have experienced stigma (Conner & Rosen, 2008).

Conclusion

This study's participants endorsed attitudes reflective of the five addiction models in the following order of frequency: psychological, sociological, disease, nature and, finally, moral model. The analysis found that most people endorse multiple addiction models, meaning they may be compassionate, tolerant and liberal on some addiction issues, and judgmental, discriminatory, or stigmatising on others. Attitudes drive behaviour and decision-making (Sanbotmatsu et al., 2014). Addiction attitudes shape political ideas and policy (Mason et al., 2007; Reid & Amanat, 2020). They affect personal engagement, addiction perception, social systems, public discourse, collective consensus, social interactions, and research and funding (Broadus & Evans, 2014; Voas, 2013). model leads to compassion and

reduced stigma. Albeit having a compassionate attitude being a good thing, societal agents, such as politicians, try to influence public policy by aligning their stance with public attitudes. This institutionalises public attitudes and may sideline other important aspects of addiction (Lloyd, 2010) such as the role played by genetic/biological and social variables (Graham, 2008; Skewes & Gonzales, 2013; Becoa, 2018). These factors should be considered in treatment and prevention decisions. Harm reduction measures that reduce the physical, social, and economic effects of addiction must also be implemented under the principle of social justice (Harm Reduction International, 2022). Furthermore, although the least endorsed, the analysis suggests that people still endorse the moral model and educational measures should be implemented to target this issue.

Implications for future research

The study is the first of its kind to be carried out locally and provides a baseline to measure attitude changes in the future. Research should examine the effects of media agenda-setting, language, and other public spheres on addiction attitudes. The findings also showed that society and culture enable addiction and that younger people have more liberal views. To implement effective measures, these topics need to be researched more thoroughly.

Limitations of the study

The online convenience sampling technique increases bias because opt-in strategies may not represent the population as it limits participation to people with internet access and survey-taking skills (Roberts, 2014). This means that the results may not be generalised. Furthermore, although the PAAAS uses simple and clear wording and English is an official language in Malta, some of the participants may have had limited English proficiency (Kleiner et al., 2015; Wenz et al., 2021) and this may have led to inaccurate results.