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Self-harm: An investigation into disclosure, help-seeking, and implicit and explicit attitudes

by

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Declaration

This thesis is submitted to The University of Warwick in support of my application for the degree of Doctor of Philosophy. It has been composed by myself and has not been submitted in any previous application for any degree. All included work has been completed by myself.

Abstract

Self-harm is defined as bodily harm caused intentionally by an individual without suicidal intent. Self-harm poses a significant threat to public health, with estimated lifetime prevalence rates between 13.3% and 19.6% among university students (Benjet et al., 2019; Sivertsen et al., 2019). Prior research has found that people who self-harm are 49 times more likely to die by suicide than the general population (Hawton et al., 2015), while most individuals who self-harm do not seek help, especially not from medical professionals (Fortune et al., 2008). A key concern when deciding whether to seek help is perceived stigma (Nearchou et al., 2018), although research has found discrepancies between experiences and measured attitudes: experienced responses can vary widely between gentle and hostile (MacDonald et al., 2020) while attitude research suggests tolerant attitudes towards people who self-harm (e.g., Gagnon & Hasking, 2012; Nielsen & Townsend; 2018). This discrepancy can be explained by how attitudes are measured. Attitudes can be measured either explicitly or implicitly, with explicit measures being more susceptible to biases and implicit measures being thought to measure underlying attitudes (Friese, Hofmann & Schmitt, 2008).

The current thesis explored the experiences of disclosure and help-seeking of students with a history of self-harm using a semi-structured interview, analysed using reflexive thematic analysis as outlined by Braun and Clarke (2006; 2021). Interviews with 19 students produced three main themes: peers who self-harm, choice, and responses. Peers who self-harm involved reciprocal disclosure, shared experience and understanding, and self-other comparison. Choice consisted of three levels, namely being found out, compelled disclosure, and seeking support. The responses theme included immediate and long-term responses, indirect responses, and self-directed responses. Interviewees perceived public stigma towards self-harm, with experiences of indirect stigma and impulsive, immediate responses suggesting negative underlying attitudes of some respondents. However, improved responses over time could be explained by either improved understanding or more measured responses. The remainder of the thesis aimed to investigate explicit and implicit attitudes towards people who self-harm.

The three quantitative chapters of the thesis used Go/No-Go Association Tasks (GNAT; Nosek & Banaji, 2001) to implicitly measure attitudes, alongside a self-harm adaptation of the Depression Stigma Scale (DSS; Griffiths et al., 2008) and attribute ratings to measure explicit attitudes towards people who self-harm. There were a total of 84 participants in Chapter 4, 101 in Chapter 5, and 115 in Chapter 6. Participants of all three quantitative studies demonstrated tolerant explicit attitudes towards people who self-harm. However, implicit measures showed largely negative associations with people who self-harm when pairing self-harm with 'Bad Person', 'Dangerous' and 'Blameworthy'. These findings suggested negative underlying attitudes towards people who self-harm. However, in the final study, self-harming behaviours, not people who self-harm, were associated with 'Dangerous' attributes. This finding is discussed with regards to ambiguity within the measure, such that the GNAT could have been interpreted as danger to the self or others, along with the possibility that the learning procedure implemented was not sufficient to establish a mental association between non-word names and self-harm.

The conclusion of this thesis discussed the practical and theoretical implications of the research conducted within. It was concluded that the current research supports a distinction between affective and cognitive components of attitude, and has supplied potential methods to implicitly measure attitudes towards a social group rather than the qualities which make them 'other'. The studies within this thesis found high rates of historic self-harm, highlighting the importance of investigating self-harm among the student population. By implicitly measuring attitudes among this population, the present research can explain discrepancies between help-seeking experiences and explicit attitudes. Limitations and proposed future directions are discussed.

Abbreviations

AMP	Affect Misattribution Procedure
CASE	Child and Adolescent Self-harm in Europe
DBT	Dialectical Behaviour Therapy
DSS	Depression Stigma Scale
EVM	Expectancy-Value Model
GNAT	Go/No-Go Association Task
HBM	Health Belief Model
IAT	Implicit Association Test
IIT	Information Integration Theory
ISAS	Inventory of Statements About Self-harm
NICE	National Institute for Health and Clinical Excellence
NSSI	Non-Suicidal Self-Injury
SDS-17	Social Desirability Scale-17
SH-aDSS	Self-Harm adapted Depression Stigma Scale
ST-IAT	Single-Target Implicit Association Test
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action

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Chapter 1: Attitudes

The following chapter will outline and discuss the attitude literature as it currently stands. To begin the discussion of attitude theory, various definitions of attitudes will be compared and the chosen definition for the remainder of the thesis will be outlined. This chapter will then discuss how attitudes are formed and how they can change. The link between attitudes and behaviour will be presented, along with possible explanations for discrepancies between the two. Finally, the use of explicit and implicit measures in attitude research will be discussed. This section will include theory of attitude structure, along with empirical research assessing how the two types of measures are related and how each can predict behaviour.

1.1 Attitude theory

1.1.1 Defining 'attitudes'

An initial part of defining attitudes is to define attitude concepts. These concepts are entities, commonly labelled the attitude object, to which individuals attach beliefs and preferences. Attitude objects can be any entity distinguished by the individual, whether a concrete object such as firearms; a social group such as students; or an abstract concept such as religion. These concepts can be seen as the object towards which an individual holds an attitude.

Attitudes have been defined in numerous ways throughout the long history of psychological study of beliefs and preferences. As stated by Chaiken and Stangor (1987), attitudes can be defined as unitary or multidimensional constructs. Within unitary definitions, an attitude is construed as an affective evaluation of the attitude object. One of the earliest proponents of a unitary theory of attitudes was Thurstone (1931), who created a measure to evaluate affective preferences towards various attitude objects, including individuals of varying race or nationality, and different types of crime. Thurstone defined attitude as 'the affect for or against a psychological object', where the affect would indicate whether potential future actions regarding the object would 'be favorable or unfavorable toward the object' (p. 261). In this definition, the attitude lies on a continuum of intensity between strongly negative and strongly positive affect toward the attitude object.

Similarly to Thurstone, Doob (1947) defined attitude as 'an implicit, drive-producing response' (p. 136). Doob specifies that attitudes are internal processes which can be either conscious or

unconscious. The attitude itself is unobservable by another person, although observable behaviours towards the attitude object are often influenced by the evoked attitude. Doob's definition focuses primarily on attitudes as learned, reward-seeking and punishment-avoiding motivations. For example, prior exposure to a particular food (e.g., apples) leads to a learned attitude either positive or negative in nature. A positive attitude toward apples will most often result in the individual being more likely to eat apples in the future, allowing them to enjoy a pleasant experience, whereas a negative attitude would lead the individual to avoid apples and an unpleasant experience.

One criticism of unitary definitions of attitude is that measured affect toward the attitude object does not accurately predict behaviour (e.g., Conner et al., 2007). The tripartite classification of attitudes attempts to improve on the predictive power of attitudes by introducing affective, cognitive and behavioural components. Ostrom (1969) explored the relationship between these three components when exploring attitudes towards the church and found high levels of correlation between all three. However, when exploring this in the context of consumer attitudes, the predictive validity for actual and intended behaviours was mixed (Bagozzi et al., 1979). Additionally, while affective, cognitive and behavioural components were related to one another, there was some evidence that the inclusion of all of these components was unnecessary, as they did not add anything unique when modelling attitudes.

Alternatively, it can be argued that an inclusion of cognition and behavioural components in defining attitudes may not be appropriate if these are not correlated with affective responses to the attitude object (Fishbein & Ajzen, 1972). If the reason for including such components is to explain seemingly incongruent affective and behavioural responses toward the concept, these should not be considered as parts of a single attitude. For this reason, a dual definition of attitude excludes the behavioural component, reasoning that attitude is "a function of the affect associated with the beliefs a person holds about the object" (Fishbein & Ajzen, 1972, p. 507). For example, an individual would feel positively towards a group of individuals they believed to be hard-working, reliable and considerate, while beliefs that the members of a group are lazy, unreliable and selfish would elicit a negative affective response. It is this dual definition, which claims that attitudes are composites of affective and cognitive elements, that will be used in the remainder of this thesis.

There are numerous different models of attitude formation and change, many of which assume that attitudes are composites of the individual's judgements of the object's attributes. A prominent example of this is the expectancy-value model (EVM). The EVM of attitudes claims that a person's overall attitude toward a target is the sum of multiple evaluations of beliefs about the target (Hewstone & Young, 1988). This model assumes that attitudes have both cognitive and affective components: expectancy refers to the probability that an attribute applies to the attitude object, while value refers to whether the attribute is positive or negative. Within the EVM, attitudes are formed when an individual first obtains beliefs about an attitude object and makes evaluations of said beliefs. This process can be in response to encountering an exemplar of the attitude object or by being exposed to the beliefs of another person. Similarly, attitudes change when the individual's beliefs or evaluations of those beliefs are altered. For instance, EVMs have been used to predict changing attitudes towards forms of contraception (Cohen et al., 1978), high-fat foods (Towler & Shepherd, 1992) and STEM fields (Ball et al., 2019).

The EVM assumes that all beliefs are equal when forming or changing an attitude. Alternatively, information integration theories (IITs), such as Anderson (1971), claim that attitudes are formed by taking attribute valence times weight (importance of said attribute), and summing this value for all relevant attributes. Novel attributes are integrated in this same manner, whether they are consistent or inconsistent with prior attitude. However, the weight an attribute is given can be affected by many factors. An important coupling of biases is that of primacy and recency effects: attributes are seen as more important when they are presented either recently in time or at the start of attitude formation (Crano, 1977). Additionally, more weight is given to an attribute when the source of information is deemed credible (Smith, 1973) and when the individual has low confidence in their initial attitude (Cui et al., 2017). As such, these models can explain how attitudes are formed and changed, including why some factors will be integrated into the attitude while others will not.

While the EVM and IIT can be used to demonstrate how beliefs about a topic can combine to form an attitude, there are problems with measurement when using these mathematical models. Sjöberg and Montgomery (1999) provided evidence of a phenomena they term 'double denial', in which individuals holding a negative attitude will rate the same attribute as low probability and negative in value. For instance, the authors use an example from Sjoberg (1982) in which a participant with a negative attitude toward alcohol use proclaims that: 1) alcohol use is unlikely to produce happiness,

and 2) happiness (resulting from alcohol use) is undesirable. Such cases of double denial are incompatible with the mathematical equation proposed by expectancy-value models, since low likelihood negative attributes should equate to a positive attitude. Fishbein & Ajzen (1981, p. 310; in Hewstone & Young, 1988) themselves claim that "a disbelief that an object has a negative attribute [should] contribute positively to the overall attitude". Sjöberg and Montgomery (1999) argue that such evaluations are the consequence of individuals being forced to evaluate unlikely attributes as though they are likely, thus resulting in a value judgement which defends their overall attitude. Such instances, where measured beliefs are affected by the overall attitude and not vice versa, are demonstrative of measurement issues with EVMs and ITTs. These models allow only for cases where beliefs form attitudes, and not for when attitudes themselves affect beliefs.

In addition to measurement problems, EVM and IIT only allow for attitudes to be formed or changed by beliefs and associated affective judgements, and not affective reactions to or evaluations of attitude objects in isolation. Zajonc (1980) argues that affect is an integral part of the human experience, and questions theorists who claim that preferences are formed after, and only as a consequence of, developing beliefs about an attitude object. Instead, Zajonc posits that early judgements of an attitude object are actually affective in nature, and that more developed attitudes are formed by the interaction between affective and cognitive judgements. In support of immediate responses being affective in nature, Rozin and Schiller (1980) found that initial negative affective responses to chili is gradually changed to enjoyment of the burning sensation and flavour after further exposure involving cognitive judgements. This fast development of initial preferences may be evidence of the "How Do I Feel About It" heuristic (Schwarz, 2001), where less important attitudes formed under cognitive constraints use reliance on affect over cognition. Furthermore, attitudes can be changed by affect. The contact theory , where interactions with out-group members can change attitude, particularly when positive feelings are caused, such as through successful cooperation between the self and out-group members (Schwartz, 2001). Affect can also impact how persuasive messages are processed, and thus how effective strategies to change attitude are (Forgas, 2008).

Both the expectancy-value model and information integration theories claim that attitudes are formed through affective evaluations of beliefs, although valence judgements are the primary form of attitude within memory. Connectionist models, however, speculate that attitude objects are associated with positively and negatively valenced attributes within memory (Monroe & Read, 2008; Van Overwalle & Siebler, 2005). Attitudes exist in a linked network of cognition and affective judgements, such that activation of one belief will spread that activation to related beliefs and

judgements. Within connectionist models, attitudes are formed when associations are made in memory and changed when links are strengthened or weakened. For instance, attitudes directly altered by media and real-world events also alter related attitudes: news about the Persian Gulf War changed attitudes related to the war itself and also attitudes toward pacifism (Spellman et al., 1993). Connectionist models also explain how individuals can activate attitudes automatically, without having to use cognitive resources, and how attitudes can be measured implicitly (Petty et al., 2007), as will be discussed below.

1.1.3 Predicting behaviour

A primary aim of attitude research has been to predict behaviour. Research has attempted to correlate attitude measures with both intended and actual behaviour with mixed results: a meta-analysis of the relationship between attitudes and behaviour found that correlation ranged from an r-value of .02 to .84 (Kim & Hunter, 1993). The researchers argue that low correlations are artefacts of methodological issues, one of which is whether studies measured single acts or patterns of behaviour. Research has shown that attitudes are more accurate when predicting a general pattern of behaviour rather than individual acts: correlations between attitude and behaviour measures increased from low ($.121 < r < .202$) to moderate ($.604 < r < .749$) when using multiple-act criterion as opposed to single-act criterion (Fishbein & Ajzen, 1974). For example, Weigel and Newman (1976) found that a composite behavioural measure of environmental behaviours correlated with attitude measures at an r-value of .62, while correlations for petitioning behaviour, recycling behaviour and litter picking were .50, .39 and .36, respectively. Such findings suggest that individual behaviours are often influenced by factors other than the person's attitudes and may be better predicted by taking these additional influences into account.

One such attempt to model the relationship between attitudes and behaviour was made by Fazio (1990; see figure 1.1) in what is termed the MODE model. Fazio proposed that the key to understanding the link between attitude and behaviour was the activation speed of the attitude. Within this model, attitude activation speed equates to the strength of the attitude, with faster activation indicating a stronger link between the attitude object and remembered evaluations of that object. The attitude acts as a filter through which the individual perceives the current situation, meaning that the individual selectively perceives positive or negative aspects of the situation which are consistent with their attitude valence. These processes are spontaneous and not under the individual's conscious control, and contribute to the understanding of the situation. Alongside

activated attitudes, normative guidelines also contribute to the individual's perception of the situation. When norms are consistent with their perceptions of the situation, consequent behaviour will also be consistent with the individual's attitude. However, norms which conflict with how the individuals perceives the situation may lead to behaviour which is not consistent with their activated attitudes. Whether conflicting norms will change the individual's behaviour is thought to be moderated by the accessibility of the attitude, where stronger and more easily activated attitudes override opposing norms.

Figure 1.1

Fazio's (1990) model of the relationship between attitudes and behaviour (recreated from Fazio, 1990, p. 84)
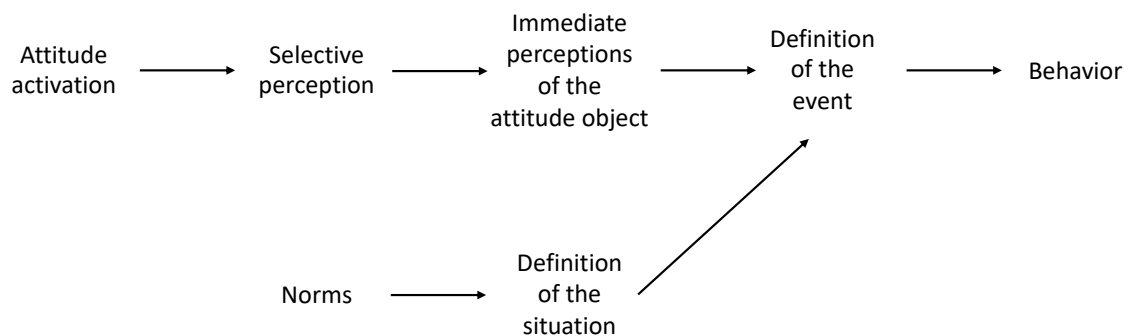
Research has been conducted to assess the correlation between attitude accessibility and subsequent behaviours. Fazio and Williams (1986) measured attitude accessibility as response latencies for participants' appraisals of presidential candidates, as well as measuring evaluations of debate performance and voting behaviour. It was found that accessibility correlated significantly with both judgement of debate performance and self-reported voting behaviour. Furthermore, Fazio et al., (1989) found that accessibility of attitude toward products predicted which items participants would select to take as a reward for participation. At the product selection portion of the study, 10 products were arranged on a table in two equal rows. It was found that, when accessibility was low, participants were more likely to choose the product which was more salient (placed in the row closest to them). Additionally, Bassili (1993) found that accessibility, again measured by response latency, was better at explaining discrepancies between participants' voting intentions and behaviour than self-reported certainty in their voting intentions. These studies claim that attitude accessibility was an indicator of attitude strength, and thus predicted whether subsequent behaviour would be consistent with reported attitudes.

However, it can be argued that attitude accessibility is not necessarily a measure of attitude strength. For example, Schuette and Fazio (1995) manipulated accessibility by asking participants to express their attitudes towards the death penalty either once (low accessibility) or repeatedly (high accessibility), before asking them to judge the quality and outcome of two scientific papers, one for and one against capital punishment. It was found that participants in the high accessibility condition were more likely to judge the attitude-congruent paper as more well conducted and its results as more convincing than the attitude-incongruent paper. Furthermore, research has shown that a participant's emotions can affect attitude accessibility as well as behavioural intentions: fear appeals regarding breast cancer increased accessibility of attitudes toward self-examinations and behavioural intentions, except when high fear levels triggered defensive reactions which reduced accessibility (Roskos-Ewoldsen et al., 2004). These findings suggest that attitude accessibility, while predictive of behaviour intentions and future behaviour, is unlikely to be a direct measure of attitude strength. Rather, it can be theorised that accessibility is affected by a multitude of factors including situational reminders (Schuette & Fazio, 1995) and an individual's state of mind (Roskos-Ewoldsen et al., 2004).

Ajzen and Cote (2008) distinguished between global and behavioural attitudes. Global attitude describes the attitudes discussed thus far within this chapter; global attitudes refer to evaluations of attitude objects, such as religion or a specific race. In contrast, behavioural attitudes refer to evaluations of behaviours related to global attitudes. Ajzen and Cote (2008) argue that, due to global attitudes being unable to reliably predict individual acts, models to predict behaviour should instead focus on behavioural attitudes. Such suggestions led to the creation of the theory of reasoned action (TRA; Fishbein, 1979) which was later adapted to form Ajzen's (1991) theory of planned behaviour (TPB; see figure 1.2). The TPB predicts behavioural intentions through a combination of behavioural attitudes; subjective norms, including motivation to comply to normative beliefs; and perceived behavioural control. Actual behaviour is then predicted by intentions and further influence of perceived behavioural control. The model predicts that stronger intentions are more likely to lead to consistent behaviour, although behaviour may contradict intentions when the situation restricts behavioural control (e.g. due to time constraints or a lack of required resources).

Support for the TPB has been large since its creation, as evidenced in meta-analyses assessing the TPB's prediction of health-related behaviours, including dietary patterns (McDermott et al., 2015), alcohol consumption (Cooke et al., 2016), and condom use (Albarracin et al., 2001). Each of these

Figure 1.2

Representation of the TRA and the additions made by the TPB (adapted from Chang, 1998, p. 434)
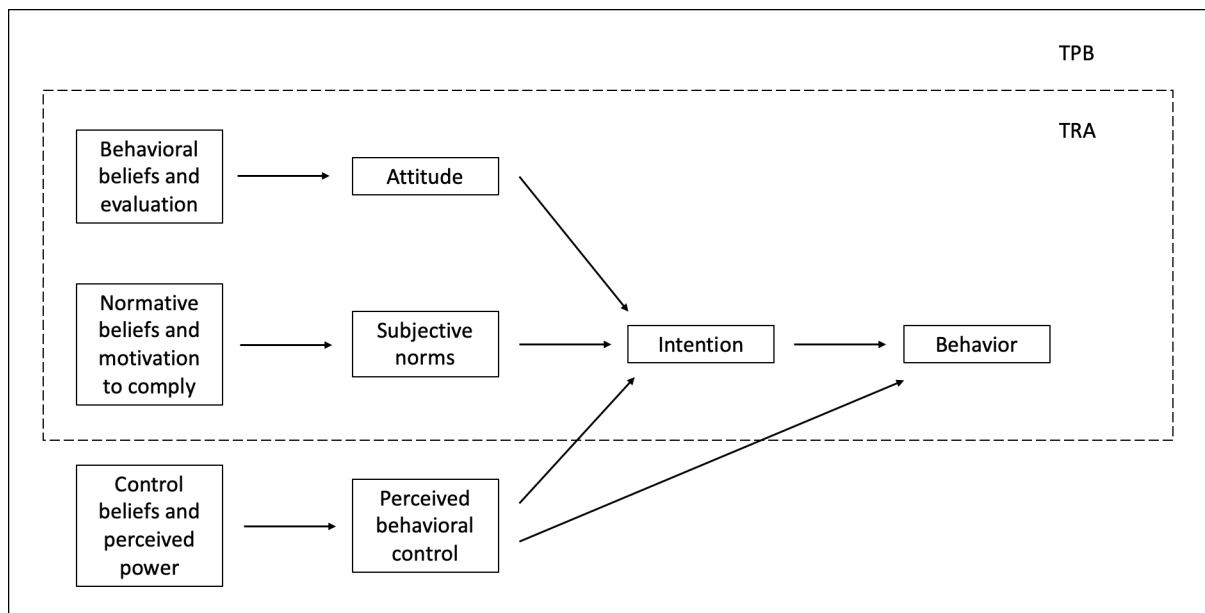
meta-analyses found that attitude, subjective norms and perceived behavioural control all contributed to behaviour intentions, and that intentions and perceived control contributed to reported behaviour. While there has been much support for the TPB, there have also been many criticisms, as addressed by Ajzen (2011). For instance, a meta-analysis of 206 articles predicting health-related behaviours found that the TPB was less effective at predicting behaviours that were performed further in the future (McEachan et al., 2011). Ajzen argues that this is due to intervening factors influencing attitudes, subjective norms and perceived control, a finding which is supported by findings that behavioural intentions have some instability over time (Conner & Godin, 2007). In addition, Ajzen (2011) cites articles in which the authors claim that affect and emotion are neglected by the TPB, a claim which Ajzen says is unfounded since these factors have direct impacts on attitude, norms and perceived behavioural control.

Ajzen (2011) states that "at its core, the TPB is concerned with the prediction of intentions" (p. 1115), suggesting that improvement could be made to explain discrepancies between intentions and actual behaviour. In particular, Ajzen agrees that the role of habit and past behaviour in predicting behaviour is overlooked by the TPB, a concern which is amplified by findings that habit strength has been found to be better than intentions at predicting some health behaviours (Gardner et al., 2011). It has been argued that the conscious planning processes described by the TPB are used for novel or important behavioural decisions, whereas routine behaviours are controlled by habit and past

behaviour (Ajzen & Dasgupta, 2015), meaning that the TPB cannot predict behaviours which are not given conscious consideration. Furthermore, the TPB can only predict very specific, single-act behaviours. As the attitude aspect of the TPB is actually attitude toward the behaviour being predicted, this model cannot predict or explain general patterns of behaviours toward attitude objects.

There have been attempts to adapt the TPB, including by adding factors such as moral identity and confidence level (Sun, 2019), and by merging the theory with others such as the self-regulated learning model (Lung-Guang, 2019). Despite these adaptations, the TPB remains the most influential model for predicting planned behaviours from attitudes (Ajzen, 2011). However, as mentioned previously, the TPB is used to predict single-acts and does not take into account global attitudes. This model also requires individuals to consciously consider their behavioural attitude, subjective norms and perceived behavioural control in order to choose an appropriate behaviour, meaning that spontaneous actions cannot be predicted or explained. While the TPB is useful when predicting behaviours such as recycling or voting in a local election, both of which are planned, single acts, this model cannot predict general patterns in behaviour, particularly in situations where the individual reacts to the attitude object in a rapid, spontaneous manner. In order to independently predict spontaneous and planned behaviours, researchers have begun to question the way in which attitudes are measured.

1.2 Explicitly and implicitly measured attitudes

1.2.1 Measuring attitudes

Traditionally, attitudes have been measured using questionnaire and interview techniques. This explicit way of assessing attitudes requires individuals to consciously judge attitude objects and choose appropriate responses. Such deliberate responding can introduce bias, either consciously or unconsciously, meaning reported attitudes may not align with the individual's underlying attitude. For example, research has shown that social norms and self-presentation concerns can alter reported intergroup attitudes in children, with older children being more internally motivated to suppress in-group bias (Rutland et al., 2005). An early attempt to circumvent external bias was made by Jones and Sigall (1971) using the Bogus Pipeline paradigm. In this classic study of racial attitudes, participants were connected to various physiological measures and told that the machines would

read their affectual responses to questioning. When told that they could not hide their true attitude, participants were much more likely to express negative attitudes towards African Americans.

While procedures such as the Bogus Pipeline can encourage individuals to be more honest with their self-reported attitudes, less conscious biases would still impact explicit attitude measures, leading researchers to develop implicit measures of attitude. The affect misattribution procedure (AMP) aims to access attitudes implicitly using priming: participants are primed with images of the attitude target (e.g. male or female faces when measuring gender attitudes), before being asked to judge the valence of meaningless images, often in the form of abstract symbols (Payne et al., 2005). Participants misattribute the origin of the prime's valence onto the abstract image even when warned of the priming effect, resulting in ratings which reflect the participant's attitudes toward the attitude object. Payne et al. (2005) found that AMP ratings related to explicit measures of political attitudes and voting intentions (Experiment 5), as well as showing racial in-group bias (Experiment 6). A 10-year review of the AMP's use in attitude research concluded that this procedure is at least as valid and reliable as other implicit measures, with scores predicting behaviour measures and Cronbach's alphas at an average of .81 (Payne & Lundberg, 2014). However, as indicated by the name of the AMP, this measure can only assess affective associations with the attitude object, and thus cannot be used to explore cognitive aspects of an attitude.

Alternatively, many researchers have used associative implicit measures. These measures compel participants to respond rapidly to stimuli, usually by pressing keys in response to words or images on a computer screen, although 'low-tech' alternatives using pen and paper have also been used (Vargas et al., 2007). The most prominent of these measures is the Implicit Association Test (IAT; Greenwald et al., 1998). IATs compare positive-negative associations between two attitude objects through the use of two experimental blocks where participants use two keys to respond to stimuli presented in the centre of the screen. Every IAT consists of four categories of stimuli, for example a gender IAT would contain exemplars for the categories: male, female, positive and negative. Each block asks participants to respond to two categories with each key, such that categories are paired according to response key: for the first block of a gender IAT, male-positive and female-negative could be paired, followed by a second block in which male-negative and female-positive are paired. The reaction times across these pairings are compared such that faster responding indicates a greater association between the two concepts. Additionally, attribute categories can differ from the simple positive-negative valence categories, so that cognitive attitudes can be assessed, for example the belief that science subjects are stereotypically 'male' (Rezaei, 2011).

One caveat of the IAT is that attitudes can only be measured in comparison, for example associations with males versus associations with females. A single target implicit association test (ST-IAT) has been developed to assess attitude towards objects without the need of a comparative category (Bluemke & Friese, 2008). The ST-IAT also consists of two experimental blocks, but with three categories of stimuli rather than four. In one block, one key is used to respond to both the attitude object and positive attributes while a second key responds to negative attributes; the second block instead pairs the attitude object with negative attributes. Attitudes toward the attitude object is calculated similarly to in the IAT, with shorter reaction times between the object and attribute indicating a closer association. However, it has been found that the ST-IAT is sensitive to practice effects, with repeated testing reducing effect sizes (Bluemke & Friese, 2008).

Alternatively, the Go/No-go Association Task (GNAT; Nosek & Banaji, 2001) was originally designed as an alternative to the IAT for measuring comparative attitudes, but has shown promise for the testing of non-comparative attitudes (Bar-Anan & Nosek, 2014). Additionally, an altered GNAT in which no comparator category was used for distraction purposes was validated for the implicit measurement of attitudes towards spiders (Teachman, 2007). When compared with other implicit measures, the GNAT performed better than other single-target measures on several criteria, including internal consistency and convergent validity (Bar-Anan & Nosek, 2014). While all implicit tasks are susceptible to practice effects, there is no evidence that the GNAT is particularly affected by this. In fact, it has been found that the GNAT is more demanding and difficult than other implicit tasks (Bar-Anan & Nosek, 2014), suggesting that they may be less susceptible to practice effects and more difficult to alter. Although this increased difficulty makes the GNAT less suitable for examining implicit attitudes among populations with decreased cognitive capacity, the participants within this thesis were all students at a high-ranking university, and as such the GNAT was a good choice to examine attitudes within this population.

1.2.2 Explicit-implicit attitude structure

There has been much debate within the literature concerning what is measured by explicit and implicit measures. One perspective argues that explicit and implicit attitudes are two distinct mental constructs. Wilson et al. (2000) propose a model of dual attitudes which claims that individuals can simultaneously hold two versions of the same attitude following a supposed attitude change. Wilson et al. (2000) define implicit attitudes as evaluations that:

"(a) have an unknown origin (i.e., people are unaware of the basis of their evaluation); (b) are activated automatically; and (c) influence implicit responses, namely, uncontrollable responses and ones that people do not view as an expression of their attitude and thus do not attempt to control." (p. 104)

However, explicit attitudes are not clearly defined by these authors. Explicit attitudes are viewed as the most recent evaluations which are expressed only when individuals are motivated and have sufficient cognitive resources to retrieve them. The authors explain four ways in which dual attitudes can exist, with different Yes/No combinations of awareness of implicit attitude and whether capacity and motivation are needed to override the implicit attitude. Other dual models have been proposed, all with the similar differentiation between fast, automatic, spontaneous processes and those which are slow, effortful, and deliberate (see Van Bavel et al., 2012).

Alternatively, the metacognitive model (Petty et al., 2007) speculates one unified attitude schema which encompasses both good and bad evaluations of the attitude object rather than a person holding separate explicit and implicit attitudes. At attitude formation, said schema can exist with only positive or negative evaluations, however additional information can be gained at a later date which contradicts this initial schema. This introduces oppositely valenced evaluations which are also associated with the attitude object. These individual evaluations are then subject to validity checks, where controlled and effortful attention dictates which evaluations are activated when presented with the object. These deliberate processes can become more automatic with practice, but, until that occurs, the evaluations which would be rejected if sufficient motivation and cognitive capacity allows can be activated and influence responses.

Finally, Van Bavel et al. (2012) propose a dynamic systems approach to attitudes: 'this model characterizes the human brain as a parallel system that generates evaluations by integrating the results of computations performed by a widely distributed network of component processes' (p. 441). This meta-cognitive model, termed the Iterative Reprocessing model (Cunningham et al., 2007), is similar to the previous models in that stimuli evoke rapid evaluative responses, and that individuals can, with the appropriate motivation and opportunity, moderate and adapt said responses. However, the Iterative Reprocessing model does not assume that implicit and explicit attitudes exist as two distinct constructs in memory. Instead, differences in evaluation on these two types of measures occur due to differences in informational processing: attitudes exist as stable units in a connectionist framework, with evaluations reflecting the current pattern of activation. Such activation spreads through multiple iterations of processing in which interactive neural

systems, including cognitive and affective processes, respond to both the stimuli (bottom-up route) and mental processes (top-down route). It is theorised that fewer iterations result in more automatic evaluations, as those measured using implicit tasks.

These different models all attempt to explain how explicitly and implicitly measured attitudes reflect internal evaluative processes. While each of these types of models have gained followers and empirical evidence, the literature is still split regarding how attitudes are structured in the mind. As such, the remainder of this review will examine the relationship between explicitly and implicitly measured attitudes without further discussion of their specific structure. Instead, the remainder of this chapter will focus on the moderators of the explicit-implicit relationship and how each type of attitude measure can predict behaviour.

1.2.3 Explicit-implicit correlations

Much research has assessed the correlations between implicit and explicit measures of attitude, with varying findings: in a meta-analysis of this relationship and potential moderators, correlations ranged from -.05 for gender attitudes to .70 for abortion attitudes, with an average correlation of .36 (Nosek, 2005). Possible explanations for inconsistent correlations between implicitly and explicitly measured attitude correspond to three categories. The first consists of moderators related to measurement, the second of factors related to the attitudes themselves, and the third of social influences.

An initial measurement factor affecting correlations lies in the reliability of measures. Calculated correlation scores are determined by both the correlation between the two psychological constructs themselves and the reliabilities of the measures being used (Furr & Bacharach, 2008, p. 195). As seen in Bar-Anan and Nosek (2014), internal consistency of implicit measures can range widely, with alphas between .48 and .93. Additionally, it has been found that IAT block order and the order in which participants complete implicit and explicit measures moderate the relationship between said measures, with increased correlations when block order is counterbalanced and when explicit measures are completed before implicit measures (Hofmann, Gschwendner et al., 2005). Explicit and implicit measures also correlate to a higher degree when the formats of the measures are more structurally alike (Payne et al., 2008). As such, methodological choices can have a large impact on the found correlations between implicit and explicit measures of attitude.

Explicit-implicit correlations are also affected by factors concerning the individual's attitude and personality. Nosek (2005) found that attitude strength and distinctiveness (defined as the difference between an individual's attitude and the perceived norm) both increase the correlation between implicit and explicit attitude scores. The individual's judgement of attitude importance also increases this relationship (Anderson, 2019), while the cognitive effort people invest in thinking about the attitude reduces explicit-implicit correlations (Hofmann, Gawronski et al., 2005). Hofmann, Gawronski, et al. (2005) also found that correlations varied depending on the attitude object being investigated, with higher correlations for consumer-related attitudes and measures of self-concept, and lower correlations for implicit and explicit measures stereotypes and self-esteem. The authors argue that lower correlations between measures for stereotypes and self-esteem may be because they are socially sensitive topics, although this may be due to a higher level of cognitive elaboration when topics are more socially sensitive.

With regards to social influences, Nosek (2005) found that self-presentation, in reference to motivated altering of responses due to self-report concerns, reduces the correlation between explicit and implicit attitudes. Similarly, impression management was found to reduce consistency between implicit and explicit attitudes towards asylum seekers, while self-deceptive mechanisms such as positive self-bias had no effect on the relationship between measures (Anderson, 2019). In addition, Hofmann, Gschwendner, et al. (2005) found that high levels of motivation to control prejudiced reactions resulted in individuals with negative implicit racial attitudes to respond more positively on explicit measures, but only when public self-consciousness was also high. These examples suggest that responding on explicit measures can be largely affected by self-presentation concerns, and that this in turn reduces the correlation between implicitly and explicitly measured attitude.

1.2.4 Using explicit and implicit measures to predict behaviour

It has been theorised that two processes guide behaviour: conscious deliberation and spontaneous actions (Fazio, 1990). Fazio speculated that not all behaviour is planned, and that an individual's performance of planned and spontaneous behaviours are determined by different mental routes. Whether one agrees with a single or dual model of explicit and implicit attitudes, some research has found that explicit and implicit measures can differently predict planned and spontaneous behaviour. For example, implicit attitudes towards snacks and fruit has been correlated with spontaneous snack/fruit choice, while explicit attitudes correlated with self-report ratings of

consumption (Perugini, 2005). Furthermore, the inclusion of both explicit and implicit measures in predicting behaviour has implications for health-related interventions. Explicit and implicit attitudes have been found to predict smoking cessation differently for those with and without experiences of failure to control smoking (Chassin et al. , 2010). These researchers suggest that, since smoking cessation involves planned and automatic processes, interventions should aim to change both explicit and implicit attitudes.

Friese, Hofmann, and Schmitt (2008) classify two dimensions of moderators of the implicit attitude and behaviour correlation, which exist in a 3x3 matrix. The first dimension relates to control and has three distinct elements: opportunity to control, motivation to control, and reliance on automatic or controlled processes. The second dimension involves mode of functioning, and can affect control at dispositional, situational, or behavioural levels. For example, opportunity to control can present at the dispositional level as trait impulsivity, at the situational level as cognitive capacity, and at the behavioural level as controllability of behaviour. Alternatively, motivation to control at a dispositional level can present as motivation to control prejudiced reactions, at a situational level as social control, and at a behavioural level as motivation to inhibit certain behaviours. Reliance on automatic or controlled processes presents at the dispositional mode of functioning as preference level for intuition, the situational mode as mood, and the behavioural mode as habitualness. As can be seen in Friese, Hofmann and Schmitt (2008), there are a multitude of factors which can affect the relationship between implicit attitude measures and behaviour, with a total of twenty-four being listed by the authors. A selection of these will now be discussed, although readers are advised to refer to Friese, Hofmann and Schmitt's (2008) work, in particular their appendix, for an overview of findings for each factor.

Opportunity to control cognition has been shown to affect attitude-behaviour consistency at both dispositional and situational levels. Working memory capacity is a trait which varies among individuals and allows for control of attention to specific tasks. For those scoring highly in working memory capacity, explicit attitudes were associated with the consumption of snacks and anger expression, while those scoring low in this trait exhibited behaviour which correlated with their implicit attitudes (Hofmann, Gschwendner et al., 2008). Similar findings have been found when investigating at-risk youths' drug use (Grenard et al., 2008) and alcohol consumption (Thush et al., 2008). Alternatively, specific situations can alter the individual's cognitive capacity, which affect self-regulatory resources and reduce opportunity to control behaviour. For example, in Friese, Hofmann, and Wänke's (2008) first study, participants were asked to remember a number either one digit

(high cognitive capacity) or eight digits (low cognitive capacity) in length while performing a behavioural choice task. When the situation allowed for high cognitive capacity, explicit attitude predicted choice of fruit versus chocolate, whereas the low cognitive capacity manipulation resulted in implicit attitude predicting this choice. A procedure involving another memory task manipulation of cognitive capacity also resulted in similar findings with regards to racial prejudice (Hofmann et al., 2008).

Process reliance factors also moderate the relationship between attitude and behaviour at both dispositional and situational levels. Firstly, individual differences in preference for intuition have been shown to have a significant effect on how well implicit attitudes predict behaviour: implicit moral attitude best predicts moral decisions when preference for intuition is high (Hofmann & Baumert, 2010). These authors also found that the correlation between implicit moral attitudes and anticipated guilt when performing immoral behaviour was stronger for individuals who rated a higher preference for intuition, suggesting that individuals who prefer to trust their instincts are more likely to rely on automatic processes to guide behaviour. However, situational factors can also affect when individuals will use these automatic processes. Holland et al. (2012) found that mood manipulations affected how participants made behavioural decisions: when asked about their eagerness to become blood donors, participants in a 'happy' state relied on implicit attitudes to guide behaviour, whereas 'sad' participants used explicit attitudes.

At the behavioural mode of functioning, level of controllability has an impact on whether implicit or explicit attitudes guide behaviour. For instance, in Dovidio et al.'s (2002) research on race-related attitudes and behaviours, it was found that implicit attitudes were related to non-verbal behaviour, while explicit attitudes were related to verbal behaviour. Similarly, results show that explicit measures predict juridic decisions and evaluations of individuals, while implicit measures predict more spontaneous responding, including racially primed word completions and eye contact (Dovidio et al., 1997). Additionally, research has shown how elements of behavioural control interact with other attitude-behaviour moderators. It has been found that the level of habitualness of a behaviour moderates the relationship between implicitly measured attitude and behaviour, with implicit measures being more strongly correlated with behaviour when said behaviour was more habitual (Conner et al., 2007). Meanwhile, the same study showed that an individual's need for cognition, a trait which reflects preference for using deliberative and thoughtful processes, moderated the relationship between explicit attitude and behaviour, such that a high need for cognition increased this correlation.

1.2.5 Problems predicting behaviour from implicit measures

While there has been much research aiming to predict behaviour from explicit and implicit attitude measures, it is worth noting that most studies find that attitude measures have very little predictive power when used to explain behaviour: predictive power of measures varied widely between .08 for diet and exercise, and .35 for self-concept in a meta-analysis (Phipps et al., 2019). Meissner et al. (2019) outline four explanations why implicit measures, specifically the IAT although criticisms can generalise to other associative measures, fail to predict behaviour. One criticism mentioned was discussed above, in section 1.1.3, and involves the measuring of behaviour. Attitude measures can fail to predict behaviour when measuring behavioural intentions rather than actual behaviours (Ajzen, 2011), or specific behaviours rather than general behaviour patterns (Fishbein & Azjen, 1974). Furthermore, attitude measures often measure attitude towards an attitude object, rather than attitude towards behaviours. This results in more discrepancy between attitude and behaviour measures as behaviours are determined by a multitude of factors, and not solely attitude towards the attitude object (see TPB and TRA discussion above). A related criticism outlined by Meissner et al. (2019) is that implicit attitude measures often assess how much the attitude object is liked, whereas behaviours is more likely to be guided by want or need. For example, it has been found that hunger increases wanting, but not liking, of presented food options, and that want better predicted subsequent food choices (Finlayson et al., 2008).

The remaining two criticisms mentioned by Meissner et al. (2019) relate to associative implicit measures themselves. It has been argued that these measures are susceptible to recoding, where participants are able to respond faster in compatible blocks by recoding the task to group target and attribute stimuli by salience or other common features. Although Greenwald et al (2005) argue that such recoding is simply demonstrative of associative strength as designed in the IAT, Rothermund and Wentura (2004) found that IAT effects were affected by factors unrelated to affective or cognitive evaluations of the target, such as familiarity and text colour. This also relates to the final criticism listed by Meissner et al. (2019), which claims that associative measures are unable to measure cognitive aspects of attitude. These authors argue that measuring associations between attitude objects and attributes is not the same as measuring belief. It could be argued that participants recode attribute categories to be positive or negative to make the task easier, resulting in affective association being measured rather than belief.

1.3 Summary and conclusions

This chapter began by discussing various definitions of attitudes. Definitions vary in terms of their inclusion of affect, cognition and behaviour. Considering the often poor correlation between behaviour and attitude measures, it was concluded that defining attitudes as composites of affective and cognitive associations with an attitude object was the most appropriate definition. Attitudes are formed through experiences with attitude objects, whether directly by personal exposure or indirectly by the views of those around us. Attitudes are often resistant to change, but are most likely to be altered if they are weakly held, or if new information is viewed as salient and as originating from a reliable source. When used to predict behaviour, attitude measures are most successful when used to predict patterns of behaviour rather than single acts.

Research has distinguished two types of measures of attitude: explicit and implicit. It is theorised that explicit measures are highly susceptible to manipulation, either conscious or unconscious, while implicit measures are thought to measure underlying attitudes. Additionally, implicitly measured attitudes are more accurate when measuring spontaneous behaviours, while explicitly measured attitudes are better when measuring controlled or planned behaviours. Early implicit measures, such as the IAT, measured attitudes in a comparative manner, such as comparing associations with both White and Black people to assess race attitudes. However, this is problematic when wanting to examine attitudes towards a concept in isolation. The ST-IAT and GNAT have both shown that attitudes can be measured implicitly without a comparison target, with the GNAT showing promising levels of reliability and convergent validity.

The thesis will now introduce the concept of self-harm and discuss research which has examined attitudes towards people who self-harm.

Chapter 2: Self-harm

The following chapter will begin by discussing how we define self-harm, from the behaviours we include to suicidal intent. Self-harm statistics will then be presented, with particular attention to the population being investigated. The Health Belief Model will then be discussed in terms of help-seeking, before discussing research exploring help-seeking for self-harm. Finally, attitudes towards people who self-harm will be discussed. This will involve research mainly examining the attitudes of medical professionals using purely explicit measures of attitude. The research presented in this thesis will then be introduced.

2.1 Defining self-harm

2.1.1 Self-harm throughout history

As outlined in Chaney (2017), there have been cases of self-inflicted injuries throughout history, with self-harmful behaviour often having cultural or religious significance. However, these practices differ between those performed by the self and those consented to by the individual but performed by others. For example, there are many types of body modification practices across the globe and different cultures, including tattooing, scarification, piercing, and limb stretching. These practices can be used to commemorate important life experiences, such as nose piercing for newlywed women and tattoos when men come of age, or to change appearance, such as scarification to convey strength or neck stretching to increase physical attractiveness (Chaney, 2017). Such modifications are usually consented to by individuals, but the acts are not performed by the individual themselves, making it contentious whether or not such behaviours could be classed as self-harm.

In contrast to practices in which injury is caused with the consent of the harmed individual, instances of self-flagellation for religious purposes have occurred across multiple religions and continents. Examples of this can be seen in Christianity sects over the past 800 years, with believers using self-flagellation as penance for perceived transgressions or to honour the Passion of Christ, a practice which, while being declared heretical by the church in 1350, continued to be a ritualistic component of worship for some groups until the late 16th Century (Barnes, 1988). Additionally, followers of Islam engage in "*matam*", or "acts of lamentation for the deceased", during which mourners hit themselves on the chest to express their grief or even, in a minority of Shia Muslims, self-flagellate

with sharp implements (Pinault, 2016, p. 6). Acts of self-harm have even been mentioned in Ancient Greek mythology, with Sisyphus stabbing himself in the thigh to relieve the distress he felt at hating his brother Salmoneus yet being unable to act on that hatred (Fry, 2018).

While self-inflicted injuries have had cultural and religious significance, self-harm has more recently been associated with mental illness, with self-harmful behaviours, such as cutting or hitting oneself, being used in response to emotional distress (Mikolajczak et al., 2009). A review of the literature regarding self-harm among psychiatric inpatient service users found that an average of 17.4% of service users self-harmed, although this percentage varied widely across studies with a low of 0.67% and a high of 68.8% (James et al., 2012). Across the reviewed studies, service users were most likely to self-harm following psychological distress or when they felt the ward's rules restricted their freedom, with the majority of self-harming episodes occurring during the evening hours in private areas of the wards. Self-harm was also more likely on forensic wards. Marzano et al. (2010) interviewed female prisoners who had self-harmed, the majority of whom met the diagnostic criteria for at least two psychiatric disorders.

2.1.2 Self-harm in research

As discussed above, self-harm has taken many forms throughout history. When researching self-harm, we need to be clear about our definitions, including the terms we use, which behaviours are included, and the inclusion or exclusion of suicidal intentions. Throughout the literature, many terms are used interchangeably to refer to the act of deliberately causing harm to one's own body, including self-harm and deliberate self-harm; self-injury and non-suicidal self-injury; and self-mutilation. Different terms are sometimes used within a single research article, even when the authors state that the use of multiple terms within the literature is confusing (e.g. Borrill et al., 2009). Others have argued that the variation in definitions and terms explains variations in estimates of self-harm prevalence (Gillies et al., 2018). However, there are differences between how each of these terms are defined, primarily with regard to the self-harmful behaviours they encompass and variations in suicidal intent.

Firestone and Seiden (1990) describe a continuum of what they term self-destructive behaviour, which distinguishes between suicidal behaviours, self-harm, risky behaviours and negative self-talk. This continuum also refers to behaviours which may adversely affect physical health, including substance use and disordered eating. However, while all are identified as harmful to the self, only

suicidal behaviours and self-harm cause direct physical harm to the self. Self-harm tends to include a wider range of physically harmful behaviours whereas self-injury and self-mutilation specifically refer to behaviours which result in tissue damage, for example all would include cutting oneself while only self-harm would include self-poisoning (Gillies et al., 2018). Self-injury and self-mutilation have been differentiated in terms of severity, with self-mutilation referring to more severe and life-threatening injuries (Claes & Vandereycken, 2007).

Research has repeatedly found that self-harm is associated with an increased risk of attempted and completed suicide (e.g., Runeson et al., 2016; Ohlis et al., 2020; Zahl & Hawton, 2004). Hawton et al. (2015) found that people presenting at hospital for self-harm were 49 times more likely to die by suicide than the general population, while Zahl and Hawton (2004) found that those who presented at hospital for self-harm multiple times were over twice as likely to die by suicide than those presenting a single time. It has also been found that 12% of adolescents who engage in self-harm report having attempted suicide by the age of 21 years (Mars et al., 2019). Definitions of self-harm differ regarding the inclusion of behaviours enacted with suicidal intent, with Nock and Favazza (2009) introducing the term non-suicidal self-injury (NSSI). This term refers to direct and deliberate destruction of an individual's own body tissue, without suicidal intent. However, the question of suicidal intent has been labelled a false dichotomy (Kapur et al., 2013). Research suggests that suicidality exists on a continuum, with suicidal behaviours and NSSI as two extremes of the same concept (Orlando et al., 2015).

While some differences in definitions may seem minor, they have an impact on how self-harm is researched. Most often, these differences appear in the measures used to assess history of self-harm, whether the research aims to examine prevalence, risk factors or treatment outcomes. For the purpose of the present research, self-harm will be defined in line with the definition used within the Inventory of Statements About Self-Injury scale (ISAS; Klonsky & Glenn, 2009), which uses Nock and Favazza's (2009) definition of NSSI while also including behaviours more usually associated with self-harm (e.g. swallowing chemicals):

> "This questionnaire asks about a variety of self-harm behaviors. Please only endorse a
> behavior if you have done it intentionally (i.e., on purpose) and without suicidal intent
> (i.e., not for suicidal reasons)" (Klonsky, n.d., p. 1)

This definition was adopted due to the present thesis's focus on community-based self-harm, which may result in less severe harm since medical assistance is unlikely to be sought. As the present research was concerned with beliefs about people who self-harm, it was deemed important to keep the definition brief so that participants could be led by their own concept of self-harm. As such, participants disclosing self-harm were encouraged to report any behaviours which they themselves viewed as part of their self-harm.

2.2 Self-harm statistics

2.2.1 Prevalence

Self-harm research often relies on hospital presentations as a measure of self-harm prevalence. For instance, the Multicentre Study of Self Harm in England collects data from hospitals across three centres in England to study trends in self-harm hospital presentations (e.g. Geulayov et al., 2016). This large project found that there were 13,547 episodes of self-harm resulting in presentation at 6 hospitals between 2010 and 2012 (Clements et al., 2016). Tsiachristas et al. (2020) used the Multicentre data from 2013 to estimate that 159,857 patients presented to hospitals in England for self-harm in 2013, with some of these patients presenting multiple times in the same year. Following presentation to hospital for self-harm between 2000 and 2010, 1.6% of patients died by suicide by 2012, representing a 49 times higher risk compared to the general population (Hawton et al., 2015).

While hospital presentations provide insight into severe cases of self-harm, the majority of individuals who self-harm do not seek help from formal sources such as hospitals: Doyle et al. (2015) found that only 6.9% of adolescents present to hospital for self-harm, and that these individuals "represent the 'tip of the iceberg' of adolescent self-harm" (p. 485). As such, research has turned to self-report measures, with much of this research asking school students to complete self-harm surveys. For example, the Child and Adolescent Self-harm in Europe (CASE) study asked school pupils aged 14 to 17 years to anonymously report thoughts and acts of self-harm. It was found that 2.6% had self-harmed in the year prior to participation, with 3.2% of the sample reporting historic and repeated self-harm (Madge et al., 2011). Research has also found that adolescent self-harm in the community is 16 times more common than adolescent hospital-treated self-harm (McMahon et al., 2014). As such, self-harm prevalence estimates are very likely to be underestimates if extrapolated from rates of hospital presentation.

Research has also investigated self-harm prevalence among university students. A study of first year undergraduates across 6 Mexican universities found non-suicidal self-injury rates of 5.3% in the previous year and 13.3% lifetime prevalence (Benjet et al., 2019). When exploring non-suicidal self-harm among full-time university students in Norway, researchers found 12-month prevalence rates of 4.1% and lifetime prevalence rates of 19.6% (Sivertsen et al., 2019). While these samples differed slightly in their rates of self-harm, it is important to note that there are differences in the qualities of the participant, for example age: 80% of Benjet et al.'s (2019) sample was 18 years of age, while Sivertsen et al.'s (2019) sample ranged between 18 and 35 years, with the largest proportion (63%) being aged between 21 and 25 years of age. Additionally, research conducted among UK university students has found that, while 27% of students reported historic self-harm with 10% self-harming while at university, rates of self-harm were significantly higher among Psychology students than the students of other subjects (Borrill et al., 2009).

In addition to research examining self-harm prevalence in young adults, older adults also experience self-harm, although age criteria for inclusion varies across the literature (Chan et al., 2007). The Multicentre Monitoring of Self Harm Project found that 1177 older adults (aged 60 years and over) presented to six English hospitals for self-harm across seven years, with 12.8% repeating self-harm within 12 months (Murphy et al., 2012). However, this study, along with the vast majority of self-harm research among older adults, uses only hospital-based samples. In Troya et al.'s (2019) review of the literature, only 6 of 40 included studies were recorded as including any community-based data, although all of these either related to attempted suicide rather than self-harm, or recruited participants through health services. As such, the true extent of older adult self-harm remains largely unknown.

While there are questions concerning self-harm across the lifespan, researchers have also explored how self-harm differs between males and females. When investigating adolescent self-harm, some research has found that females are more likely to report self-harming than males when recruiting school-based samples: Bakken and Gunter (2012) found that 17% of females and 9% of males had self-harmed, while Laye-Gindhu and Schonert-Reichl (2005) found that 20.3% of females and 8.5% of males had self-harmed. Likewise, McMahon (2014) found that adolescent girls were 3.7 times more likely to report self-harming than adolescent boys and 1.7 times more likely to present to hospital for self-harm. However, this same study found that adolescent boys were 6.1 times more likely that girls to die by suicide. Alternatively, Lundh et al. (2007) found no gender differences in adolescent self-harm, although self-harm rates were much higher than these other studies: 65.9% of

adolescents reported self-harming once, 41.5% reported self-harming more than once, and 13.8% reported self-harming "many times". There are similarly mixed findings when investigating self-harm in adult populations. Gratz et al. (2002) found no gender differences in self-harm, again with somewhat high rates overall: 38% of the sample had ever self-harmed, 18% had self-harmed more than 10 times, and 10% had self-harmed more than 100 times. While both of these studies found no gender differences, they differed in terms of percentage of participants who had self-harmed. This may be due to participant recruitment techniques: Lundh et al. (2007) tested students in schools, where adolescents may have felt more inclined to participate, while Gratz et al.'s (2002) participants were self-selected, meaning that some university students may have chosen to not participate due to the sensitive nature of the study.

Aside from prevalence, other studies have found other differences between males and females who self-harm. For instance, Lundh et al. (2007) found that females were more likely to engage in self-cutting than males, while Laye-Gindhu and Schonert-Reichl (2005) found that females were more likely than males to report using multiple methods to self-harm and self-harmed more frequently. It was also found that adolescent boys and girls reported different reasons for self-harm, with girls reporting feeling unhappy or depressed or feeling a need to harm themselves, and boys reporting self-harming due to boredom, thinking it would be fun, wanting to avoid doing something or to be part of a social group (Laye-Gindhu & Schonert-Reichl, 2005). Multiple studies have also found different risk factors for males and females. Bakken and Gunter (2012) found that, while feeling sad or hopeless was a risk factor for both genders, male adolescents were more likely to self-harm if they were victims of bullying or used alcohol, nicotine or marijuana, while female adolescents were more likely to self-harm if they were of a sexual minority, experienced sexual assault, engaged in behaviours associated with eating disorders or used hardcore drugs such as cocaine or inhalants. Alternatively, Gratz et al. (2002) found that self-harm in male university students was more likely if they experienced childhood separation or dissociation, while female students were more likely to self-harm if they experienced dissociation, insecure paternal attachment, childhood sexual abuse or maternal emotional neglect. Finally, Beckham et al. (2019) found gender differences in adult prognosis following adolescent self-harm: when followed up at age 30, compared to females, males who self-harmed were less likely to be married or have offspring, more likely to be unemployed and more likely to have died, although risk of suicide was equal across males and females.

The above research has looked solely at differences between males and females with no comparison of individuals identifying as non-binary or transgender. This is likely a product of when data was

collected and improved inclusivity since: Beckham et al. (2019) mention that the records accessed and data extracted did not include information on either non-binary or transgender identities. In a national survey of LGBT adolescents, Jadva et al. (2021) found that self-harm was 3.95 times more likely in those identifying as female, 4.11 times more likely in those identifying as non-binary, and 3.81 times more likely in those identifying as transgender. Similarly, suicidal ideation has been found to be 2.82 times more likely in transgender individuals and 4.43 times more likely in those identifying as non-binary. While self-harm is more common in those identifying as LGBTQ+, Veale et al. (2017) found a different pattern for adolescents and young adults: at 14-18 years of age, self-harm was highest for transgender males and non-binary adolescents, while self-harm at ages 19-25 was highest for non-binary young adults. However, this study does not distinguish between gender assigned at birth for non-binary individuals, although the authors do note that over 80% of non-binary participants were assigned female at birth. Rimes et al. (2019) found that those assigned female at birth (including transgender males and non-binary individuals) were most likely to have self-harmed and to report a mental health condition that interfere with daily life, while non-binary individuals assigned male at birth had lower rates of self-harm than those assigned female at birth and transgender females.

2.2.2 Risk factors and co-morbidities

As mentioned previously, some self-inflicted and harmful behaviours are classified as part of specific mental illnesses, for example disordered eating behaviours, such as self-starvation, are fundamental parts of eating disorders. In addition, self-harm has long been classified as a symptom of emotionally unstable personality disorder, also known as borderline personality disorder, a mental health condition characterised by problems with emotional regulation and interpersonal relationships. It has been estimated that between 60% and 80% of patients diagnosed with this disorder have a history of self-harm (Brickman et al., 2014). Also, receiving psychiatric treatment has been found to be a risk factor for self-harm among older adults presenting to hospitals following an episode of self-harm (Murphy et al., 2012). Alternatively, having a depression diagnosis and not receiving mental health care prior to admission was found to be associated with self-harm among child and adolescent patients at a mental health inpatient unit (de Kloet et al., 2011), indicating that having untreated mental health conditions, particularly depression, is a risk factor for self-harm.

Aside from mental health conditions, there are a multitude of factors which increase the risk of self-harm, including an individual's living situation. Murphy et al. (2012) found that older adults

presenting to hospital for self-harm were more likely to be single, divorced or widowed, and living without a spouse relative or friend. Among this sample, self-harming older adults were significantly more likely to be living in a hostel or institution setting. Additionally, children and adolescents who self-harm are more likely to live with a step-parent and are more likely to report problems within their family life than peers who do not self-harm (de Kloet et al., 2011). These studies demonstrate how homelife can affect self-harm rates across the lifespan.

While current living conditions affect risk of self-harm, prior trauma also contributes to risk. Childhood abuse and emotional neglect have been linked to self-harm later in life (Fliege et al., 2009; Gratz, 2003), as has witnessing domestic violence and being bullied (de Kloet et al., 2011). Additionally, research has examined the link between self-harm and adverse childhood experiences, which include abuse, the loss of a caregiver, and exposure to a household member's substance abuse or mental illness. Repeated hospital presentation for self-harm has been linked to having a greater number of adverse childhood experiences, particularly with regards to abuse, emotional neglect and having a family member with mental ill health (Cleare et al., 2018). Similar findings have been mirrored among self-harming youth (Pitkänen et al., 2019) and prisoners (Ford et al., 2020), as well as post-partum women with self-harm ideation (Doi & Fujiwara, 2019).

Adverse childhood experiences are related to reduced emotional well-being (Balistreri & Alvira-Hammond, 2016; Cloitre et al., 2019; Espeleta et al., 2020). While Gratz (2003) found that traumatic childhood experiences were related to self-harm, it was also found that self-harm was associated with greater emotional intensity and reactivity. Similarly, a heightened experience of negative emotion, in terms of both frequency and intensity, has been linked to self-harm (Fliege et al., 2009). These authors also note that self-harm is higher among individuals experiencing alexithymia (the inability to recognise emotion) and reduced emotional expressivity. Additionally, self-harm has been linked to increased mood-based impulsivity (Lockwood et al., 2017). As such, individuals who self-harm are more likely to experience intense negative emotions which they are unable to label and express, while also reacting to those emotions impulsively.

2.2.3 Theories of self-harm

While there are many factors which coincide with self-harm, correlation does not mean that those factors cause or contribute to self-harm. Suyemoto (1998) reviewed self-harm theory literature and outlined four models of self: environmental, drive, affect regulation, and interpersonal.

Environmental models claim that self-harm begins and is maintained by interaction between the person and people in their environment. Namely, a person learns to self-harm either by familial modelling in the form of abuse teaching the individual that harming themselves is right, or through observing the benefits of another's self-harm. Self-harm is maintained through attention and care given from others in response to disclosure or discovery. However, responses as the key maintaining factor for self-harm is inconsistent with the finding that the majority of people who self-harm do so in private and never disclose to others (Klineberg et al., 2013). In terms of treatment, dialectical behaviour therapy (DBT) focuses on behavioural and cognitive changes alongside social support and learning. DBT often includes group therapy, where behavioural change, and not self-harm, is socially rewarded. While social adjustment has been found to improve with DBT, self-harm frequency remains unchanged (Linehan et al., 1993). This suggests that changing social responses within group session did not affect maintenance of self-harm, although responses from other sources were not investigated.

Alternatively, drive models explain self-harm through psychoanalytic drives. One such drive is sexual, which posits that the individual holds conflict over sexuality and menstruation. A second theory is that self-harm serves an anti-suicide solution to the conflict between life and death drives. However, these drives are theorised to exist unconsciously, and as such self-report accounts do not support these drive models as causing and maintaining self-harm. When looking for support from treatment of self-harm, the focus is on psychoanalytic methods which address to resolve repressed sexual conflict and reconcile life and death drives. A meta-analysis of randomised control trials found that psychoanalytic therapies reduced the number of patients attempting suicide at 12-month follow-up and self-harm at 6-month follow-up, but there was no significant reduction in self-harm at 12-month follow-up (Briggs et al., 2019) . Secondary outcome measures also found no significant effect on depression, anxiety, or psychosocial functioning.

Affect regulation models argue that an inability to regulate emotion leads an individual to self-harm when strong emotion is evoked, regardless of whether the emotion is positive or negative. In these models, self-harm is used to express or to exert control over emotion, or to cause physical pain which is easier to tolerate than emotional pain (Gratz et al., 2011). The Experiential Avoidance Model (Chapman et al., 2006) of deliberate self-harm posits that intense emotional responses to stimuli, along with difficulty regulating emotion and poor distress tolerance, triggers self-harm as an avoidance coping mechanism, and that the temporary relief experienced reinforces the behaviour so

that self-harm becomes a conditioned response to distress. Additionally, overwhelming emotion can cause dissociation, which self-harm is used to dispel by grounding the individual and reenforcing a sense of self or identity (Tolmunen et al., 2008) Treatments under this model emphasis is on improving emotion regulation. For example, emotion regulation group therapy is an acceptance-based intervention which focuses on identifying, tolerating, and regulating emotion, and aims to move patients from emotional avoidance to emotional acceptance (Gratz & Gunderson, 2006). This treatment has been shown to improve emotion regulation, and reduce levels of self-harm, depression, and anxiety, although the majority of research has been conducted solely with patients with borderline personality disorder (e.g. Gratz & Gunderson, 2006; Gratz et al., 2015). Even when not the main component of therapy, changes in emotion regulation have more of an effect on self-harm than changes in depression, anxiety, and suicidal thoughts (Slee et al., 2008).

Finally, interpersonal models claim that self-harm arises from unstable attachments and the need to establish boundaries to create a distinction between the self and others. Unstable early attachments lead to perceived abandonment, which evokes a strong sense of loss of self due to the individual's lack of boundaries. This model claims that the individual can define their own boundary by harming their skin, their most basic physical boundary (Long et al., 2013). It is also claimed that an adolescent need for autonomy triggers early attachment issues, therefore explaining the high rates of self-harm in adolescence (Stänicke et al, 2018). However, these claims do not explain self-harm in people of different ages or self-harmful behaviours which do not injure the skin, for example ingestion of dangerous substances or overdoses. In a study of attachment-based treatment, patients receiving the target treatment, which included both individual and family therapy, had lower self-harm rates at the end of treatment compared to patients receiving treatment based on UK National Institute for Health and Clinical Excellence (NICE) guidelines (Rossouw & Fonagy, 2012). In a review of treatment including a family component, authors found that attachment-based therapies reduced suicidal ideation and self-harm. However, these therapies also involved additional components not related to interpersonal models, such as problem-solving and emotion regulation.

2.3 Help-seeking

2.3.1 The Health Belief Model

The Health Belief Model (HBM; see figure 2.1) was created in the 1950s in an attempt to understand and predict preventative health-related behaviours (Rosenstock, 1974). The centre of the HBM

consists of individual beliefs, including perceptions of: the susceptibility to a disease, the severity of a disease, the threat of a disease, benefits and barriers of preventative actions, and self-efficacy. Modifying factors act on these perceptions, including demographic variables, personality, and knowledge about the disease and preventative actions. Finally, individual beliefs interact with cues to action, such as media campaigns or the illness of a family member, to determine individual behaviours. For example, if considering attending a cancer screening, individual beliefs would include perceived threat of cancer to the self and perceived benefits of cancer screenings. This would be influenced by modifying factors such as age or personality, with, for instance, younger individuals feeling they are less susceptible to cancer. Finally, the individual's beliefs interact with cues to action, such as advertisements encouraging cancer screening, to decide whether or not to arrange a cancer screening themselves. Harrison et al. (1992) conducted a meta-analysis of HBM studies to find that the model accounted for very little variance in screening, risk reduction and adherence to medical regimens, despite being the most frequently cited and researched model of health-related behaviour. These authors criticised the quality of the included studies and concluded that further research was needed.

Figure 2.1

HBM (recreated from Champion & Skinner, 2008, p. 49)
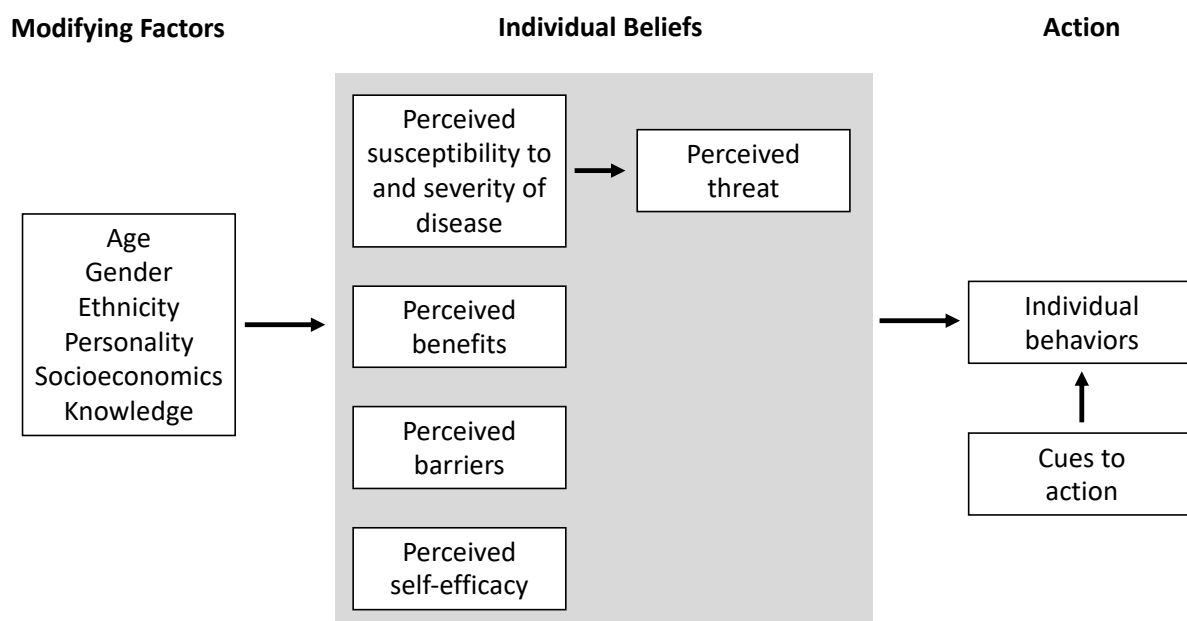
More recently, meta-analyses have found that an action's perceived benefits and barriers were strong predictors of behaviour, with predictive power being higher when preventative versus

treatment behaviours are investigated and when the time between HBM variable testing and actions is shorter (Carpenter, 2010; Sulat et al., 2018). The HBM has been used to advise interventions to improve breast cancer screenings, with self-examinations being associated with perceived self-efficacy, benefits and severity (Didarloo et al., 2017), and mammograph attendance being associated with real and perceived barriers (VanDyke & Shell, 2017). This model has also been related to treatment adherence, with HBM guided counselling and educational interventions improving adherence to tuberculosis treatment (Tola et al., 2016). As such, the HBM has been shown to be useful to understand physical health-related behaviours, whether they are prevention or treatment focused.

While the initial goal of the HBM was to understand adherence to preventative health advice, it has also been applied to help-seeking behaviours and treatment compliance for mental health. Of the HBM components, it has been found that perceived severity and susceptibility of mental illness, and perceived benefits of help-seeking are particularly important in predicting help-seeking and treatment compliance. For example, Kim and Zane (2016) found that perceived severity of psychological distress and benefits of psychological treatment predicted American students' intentions to seek help, while Kelly et al. (1987) found that perceived medication benefits and susceptibility to relapse predicted medication compliance among a psychiatric outpatient group. It has also been found that the relationship between perceived susceptibility and health behaviour intentions is moderated by personality, with susceptibility only affecting behaviour among health-conscious individuals (O'Connor et al., 2014). These same authors argue that perceived benefit is the most important predictor of help-seeking intentions due to its strength as a predictor and also potential ease of modification through educational interventions.

Although O'Connor et al. (2014) claim that perceived benefit is more important than perceived barriers when predicting help-seeking behaviours, research suggests that the type of barriers measured could affect this. For instance, Kelly et al. (1987) found that medication side effects were not as important as perceived benefits when predicting medication compliance. However, perceived barriers are more predictive of help-seeking when they are of a social nature: university students are much less likely to use mental health services when they fear stigma and the loss of social support following diagnosis (Nobiling & Maykrantz, 2017). Social support has been shown to be a protector against stress, anxiety and depression (Harandi et al., 2017), while social support also provides cues to action which improve mental health help-seeking (Castonguay et al., 2016; Nobiling & Maykrantz, 2017).

2.3.2 Self-harm help-seeking

Research has consistently found that most people who self-harm do not seek professional help, whether that be presenting to hospital for wound care, or seeking mental health treatment or support (Michelmore & Hindley, 2012). Additionally, males and Black youth are least likely for seek help, even when suicidal (Fortune & Hawton, 2005). When young people do seek help by presenting to health services, many disengage from treatment, although reasons for this is not known: in a meta-analysis of self-harm treatments, 27.7% of those receiving psychological treatments and 43.3% of those receiving treatment as usual failed to attend at least four sessions (Ougrin & Latif, 2011). In a study at a London-based university, it was found that only 20.5% of self-harming students received support for self-harm, which was classified as 'help', 'advice' or 'treatment' in questionnaires, with 13.8% of the sample seeking support from their general practitioner, 3.7% from the university medical centre, 2.1% from ambulance services, and 1.8% from the university counselling service (Best, 2009).

While few people who self-harm seek help from medical sources, most adolescents prefer to approach friends, followed by family members, for social support (Evans et al., 2005; Michelmore & Hindley, 2012; Rowe et al., 2014). However, research has also shown that, compared to other adolescents, adolescents who self-harm report having fewer people they feel able to talk to, particularly with regards to family and teachers (Evans et al., 2005). When school pupils who self-harm felt unable to approach family members for help, they were more likely to approach a school nurse (Watanabe et al., 2012), suggesting that readily available formal help sources can act as substitutes when young people prefer not to speak with family. Conversely, experiencing supportive responses from peers and family members can facilitate formal help-seeking (Rowe et al., 2014), whereas other researchers suggest that negative experiences may result in increased self-harming (Wu et al., 2012). Alternatively, Best (2009) found that, when asking university students who had self-harmed, 16.8% sought support from parents, 12.5% from friends, and 8.0% from other students, suggesting that parents can become a more accessed source of support when moving from adolescence into early adulthood.

Parental detection of youth self-harm increases the likelihood of help-seeking (Mojtabai & Olfson, 2008). This increased help-seeking may be due to parents seeking help on behalf of the young person, since young people are unlikely to themselves, even following an intentional overdose

(Michelmore & Hindley, 2012). Research has shown that self-harm is perceived as an impulsive act which is not serious or important enough to warrant seeking help (Fortune et al., 2008). These researchers also found that adolescents who self-harm believe that they should be able to cope alone, a belief mirrored in other research: young adults have expressed the view that they should be strong enough to handle problems themselves (Nada-Raja et al., 2003), with some adolescents stating that they do not want help (Doyle et al., 2015). Furthermore, higher rates of help-seeking have been found when individuals report suicidal ideation (Michelmore & Hindley, 2012), with self-harming behaviours more commonly associated with suicidal intent (e.g. overdoses compared to self-cutting) resulting in higher rates of hospital presentation (Hawton et al., 2009). It could be argued that suicidal ideation or intent increases perceived severity, resulting in a higher likelihood of help-seeking.

In addition, perceived barriers also reduce help-seeking for self-harm. While Michelmore and Hindley (2012) found low endorsement for practical barriers such as lack of services and personal resources, people who self-harm have reported social barriers to seeking help. For instance, Nearchou et al. (2018) found that help-seeking was predicted more by perceived public stigma towards mental illness than the individual's own stigmatised beliefs. A fifth of adolescents report not wanting anyone to know about their self-harm, fearing that others would not understand (Doyle et al., 2015). Self-harming individuals also report fearing negative reactions from others (Rowe et al., 2014), including fearing seeking help would exasperate their problems and lead others to accuse them of seeking attention (Fortune et al., 2008).

2.4 Attitudes toward self-harm

Anticipated stigma has been cited as a reason for not disclosing or seeking help for self-harm, but what is stigma and how does it relate to actual attitudes towards self-harm?

2.4.1 Stigma and discrimination

As discussed in Chapter 1, attitudes can be defined as associations in memory between an attitude object, and affective judgements and beliefs. The beliefs associated with a group of people form a stereotype of that group, for example the stereotype that older adults are warm and friendly but less able and perhaps incompetent (Fiske et al., 2002). Goffman (2009; p. 3) labels these negative, "deeply discrediting" stereotypical beliefs stigma.

Stigma has been associated with discriminating behaviours, where individuals belonging to a specific group are treated differently to others because of their group membership. An example can be seen in the cyberbullying and verbal abuse experienced by Wuhan residents following the beginning of the COVID-19 pandemic (Xu et al., 2021). Additionally, hate crimes involve criminal victimisation aimed at members of marginalised groups, such as people with intellectual disabilities (Sherry & Neller, 2016) or those who identify as non-heterosexual (Herek, 2009). Alternatively, discrimination can be more subtle, for example avoidance or aversion to interaction (Bos, Pryor, Reeder & Stutterheim, 2013). Using a virtual reality experiment, Toppenberg et al. (2015) found that participants were slower to approach homosexual HIV patients, compared to patients with a broken leg. People who self-harm have reported experiencing stigma, for example being told by hospital staff that wounds were "just superficial" or "not that bad" (Byrne et al., 2021, p. 8), and being called "freak" or "crazy" by peers (Mitten et al., 2016, p. 9)

2.4.2 Self-harm attitudes

A recent review of qualitative research exploring the experiences of patients presenting to hospital for self-harm has found that experienced responses range from gentle to hostile (MacDonald et al., 2020). Experiences of gentle and compassionate care included medical professionals making them feel at ease and gently handling and treating wounds. Alternatively, hostility experienced by some participants included perceived lack of sensitivity from medical professionals, denial of pain relief, and failure of clinicians to effectively communicate treatment to patients. Participants found hostile responses triggering and reported feeling less inclined to seek help in the future. In addition, it has been found that perceived public mental health stigma reduces help-seeking intentions for adolescents who self-harm (Nearchou et al., 2018).

While it has been found that both perceived and experienced stigma affect help-seeking intentions, research has also measured attitudes towards people who self-harm. Much of this research has been conducted with medical professionals. For instance, interviews with psychiatric ward nurses found that nurses often felt frustrated and angry at patients who self-harmed (Wilstrand et al., 2007), while others were knowledgeable of some of the factors contributing to self-harm (Rissanen et al., 2011). When measuring attitudes using questionnaires, the majority of studies found that healthcare professionals held positive attitudes towards patients who self-harmed. For example, Gagnon and Hasking (2012) found that knowledge of self-harm was high and that attitudes on the

attitudes towards deliberate self-harm questionnaire (McAllister et al., 2002) was positive, while Conlon and O'Tuathail (2012) found that scores were low on the self-harm antipathy scale (Patterson et al., 2007), indicating a positive attitude towards people who self-harm. However, as discussed in the previous chapter, explicit measures of attitude are susceptible to manipulation, and may not measure the underlying attitude.

Although attitudes towards self-harming behaviours have been measured implicitly (Knowles & Townsend, 2012), research has not explored implicit attitudes towards people who self-harm. Research investigating implicit attitudes towards people with mental illnesses such as schizophrenia has found negative implicit associations, with mixed findings on explicit measures. Teachman et al. (2006) used an IAT to compare implicit affective and cognitive attitudes towards physical and mental health, along with explicit differential scales and a perceived dangerousness scale, and found that mental health was viewed more negatively than physical health on both implicit and explicit measures. Alternatively, Wang et al. (2012) measured attitudes towards mental illness in isolation rather than in comparison with physical illness by using a series of SC-IATs to implicitly measure attitude, and a social distance scale and feeling thermometer to explicitly measure attitude. This study found negative implicit attitudes, neutral feelings, and negative social distance attitudes, suggesting that participants held negative underlying attitudes towards mental illness and desired to distance themselves from these conditions, while explicitly holding neutral affective attitudes. As discussed in Chapter 1, implicit measures of attitude can improve understanding of associations with an attitude object. If applied to the investigation of attitudes towards people who self-harm, implicit measures may explain discrepancies between positive explicit attitudes, and negative experiences and perceived stigma of people who self-harm.

2.5 Conclusion

The current chapter began by discussing definitions of self-harm and how these differ, largely with the inclusion or exclusion of suicidal intent. It was also specified that the current thesis will define self-harm as self-harmful behaviours done intentionally without suicidal intent. Self-harm prevalence was then discussed with regards to hospital presentations, adolescent self-harm, and self-harm in adult communities. The HBM was then described and examined in relation to help-seeking behaviour, before focusing specifically on help-seeking for self-harm. Barriers to help-seeking were discussed, including perceived public stigma. Experienced and perceived stigma of self-harm was outlined, and then attitude research was discussed. Prior self-harm attitude research has not

explored implicit measures of attitude towards people who self-harm, which could explain why past research has found both positive explicit attitudes and negative experiences when seeking help for self-harm.

2.6 Present research

The current research aimed to explore the disclosure and help-seeking experiences of students who self-harm, along with attitudes towards people who self-harm. Specifically, Chapter 3 aimed to explore disclosure and help-seeking experiences of students with a history of self-harm. This was achieved using semi-structured interviews analysed using reflexive thematic analysis. Chapters 4 – 6 aimed to explore university students' attitudes both explicitly and implicitly. Specifically, Chapter 4 introduced a new GNAT to implicitly measure attitudes towards people who self-harm, along with an adapted depression stigma scale to explicitly measure attitudes in a community sample. Chapter 5 aimed to explore these attitudes in more depth by separately measuring affective and cognitive attitudes on both explicit and implicit measures. Finally, Chapter 6 aimed to differentiate between attitudes towards self-harmful behaviours and individuals who self-harm using a novel learning procedure to enable a GNAT to measure associations without using behaviours as target stimuli.

Chapter 3: An exploration of students' experiences of self-harm disclosure and help-seeking

3.1 Introduction

The prior chapters discussed attitude theory and self-harm. In Chapter 2 it was established that people who self-harm view stigma as a barrier to help-seeking, and that some have experienced negative responses in medical settings. However, people who self-harm do not commonly seek help in a healthcare setting, with most choosing to instead disclose to peers or family. The current study aimed to explore the disclosure and help-seeking experiences of students with a history of self-harm.

While self-harm is often engaged in secretly, the first stage of seeking help is disclosure. Research has found that adolescents are sometimes reluctant to talk about their self-harm and unwilling to accept offers of help, particularly if self-harm had been discovered rather than disclosed (Klineberg et al., 2013). Responses to disclosure and discovery also has an impact on help-seeking intentions. Frey et al. (2016) created a scale to quantitatively measure suicide disclosure and how responses related to subsequent levels of depression. It was found that family responses to suicide attempt disclosure were more positive when more information was disclosed, and positive responses were related to lower subsequent depression rates. As such, the experiences of disclosure can determine whether a person who self-harms will seek help in the future.

Research in adolescents who self-harm has found that those who choose to seek help most often do so from friends and family (Fortune et al., 2008). In one study, participants described social support as a key reason for their self-harm cessation, while interpersonal issues were also viewed as barriers to stopping self-harm (Gelinas & Wright, 2013). Additionally, participants have reported fear of stigma as a barrier to help-seeking (Nada-Raja et al., 2003). Research conducted in the UK found that 27% of students had self-harmed previously, with 10% self-harming while at university (Borrill et al., 2009), while 70.1% of students at a London-based university reported knowing a fellow student who had self-harmed (Best, 2009). In Best (2009), 20.5% of self-harming students reported receiving some form of support, with the most common sources being parents, general practitioners, and friends. Together, these pieces of research highlight the importance of social support in self-harm help-seeking and recovery.

The current chapter aimed to explore the disclosure and help-seeking experiences of students with a history of self-harm. By focusing on student self-harm, the current project aims to explore the experiences of a much under-studied population which has been found to have relatively high rates of historic self-harm (e.g. Benjet et al., 2019; Sivertsen et al., 2019). It has also been found that 12% of adolescents disclosing self-harm attempt suicide by the age of 21 years (Mars et al., 2019), highlighting the importance of researching self-harm in young adults. Furthermore, as people who self-harm are unlikely to seek professional help (Fortune et al., 2008), the current project will also investigate students' experiences of disclosure and help-seeking in the community.

3.2 Method

3.2.1 Design

To address the study's aim, a qualitative approach was selected to explore experiences in depth. Braun and Clarke (2013, Table 3.1, p. 45 - 47) was consulted to inform the type of data and analysis. As the study aimed to explore experiences, and factors influencing disclosure and help-seeking, it was advised that the data be collected by interviews, focus groups or qualitative surveys. It was decided that one-to-one interviews would be the most appropriate for the sensitive nature of the topis of self-harm and the exploratory nature of the study. It was also decided that reflexive thematic analysis (Braun & Clarke, 2006; 2021) best suited the questions the present study aimed to answer, as both experiences and influencing factors can be explored using this type of analysis. The researcher adopted a critical realist approach, with analysis being data-driven and semantic, such that the identified themes describe the data supplied by participants. A theme was characterised as grouped codes which appeared across the dataset, although importance was not dependent on high frequency. For instance, a theme appearing in 50% of the dataset could be less, equally, or more important than a theme appearing in 20% of the dataset.

When conducting this type of research, it is important to question the role of the researcher in how the research was conducted and analysed. The researcher had a psychology undergraduate background and experience as a support worker for women with comorbid learning disabilities and personality disorders. It is acknowledged that data collection and analysis may have been affected by the values, beliefs, and experiences of the researcher. For example, working with women who self-harm in their role as a support worker, the researcher may have adopted certain beliefs about people who self-harm, which may have influenced how the researcher interacted with interviewees.

In an attempt to minimise any bias, discussions with supervisors were used when planning the interviews and analysing the transcriptions.

3.2.2 Participants

Twenty-two students at the University of Warwick were recruited through on-campus poster advertisements (see Appendix 1). Participants self-identified as having a history of self-harming behaviours and contacted the researcher via email to receive further information about the study and to arrange the interview. Three participants were excluded from the analysis: the first was used as a pilot interview, the second audio file was lost due to technical difficulties, and the third due to an incomplete interview. Of the remaining 19 interviewees, 16 identified as female while 3 identified as male, and ages ranged from 18 to 32 years (M = 20.6, SD = 2.93). Thirteen interviewees described themselves as White British, 2 as White European, and 1 each as Chinese, Indian British, South Asian, and Mixed Race.

Across the participants, ten different self-harm behaviours were reported. While 7 participants reported just one form of self-harm each, the remaining participants reported multiple forms of self-harm: 6 reported two behaviours and 6 reported three behaviours. The most common form was cutting, being reported by 15 interviewees, followed by 5 interviewees reporting scratching themselves. Four participants reported restricting food intake as a form of self-harm, 3 reported burning themselves, 2 reported hitting objects, and another 2 reported biting themselves. Hitting oneself, purging, taking intentional overdoses and pinching oneself were each reported by one participant. When asked which behaviours were their main forms of self-harm, 14 responded cutting, 3 responded scratching themselves, and restricting food intake, purging and biting themselves were reported by 1 interviewee each. Key demographic information given by each interviewee is outlined in Table 3.1.

3.2.3 Ethical considerations

This study followed ethical guidelines outlined by the British Psychological Society (2021) and received ethical approval from the Psychology Departmental Research Ethics Committee at the University of Warwick. Before attending the interview, potential participants were sent the information sheet (see Appendix 2) and given the opportunity to ask the researcher questions via email. Participants were invited to an interview within a private section of the Department of

Psychology at the University of Warwick and given the option of a secondary on-campus location if they preferred the interview to occur away from this department. Interviewees were given a paper copy of the full information sheet before the interview began and were asked to complete a consent form (see Appendix 3). Participants were then given the £5 Amazon gift voucher as a thank-you for their time and assured that they could end the interview at any point without forfeiting this compensation. Participants were asked for permission to record the interview both verbally and on the consent form, and were also reassured that the interview and its recording could be paused or stopped at any point. Following interview completion, participants were given a debrief sheet (see Appendix 4). Furthermore, a list of resources was compiled in the case of interviewees feeling distressed (see Appendix 5), with several resources also being included on the debrief information given to participants.

3.2.4 Procedure

The semi-structured interview schedule was developed to explore the interviewees' experiences of disclosure and help-seeking for self-harm. To create an initial draft of the interview schedule, prior research investigating self-harm through interview techniques were consulted, for example the Listen-Up! Project conducted to explore self-harm in cared for youth (Wadman, personal communication, 28 January 2016; Wadman et al., 2018). The initial draft was discussed with the project supervisors and adjusted to improve depth of the interviews. The final interview schedule included three main sections: experiences of disclosure/discovery, experiences of help-seeking, and the decision to seek help (see Appendix 6 for full interview structure). The first section was created to chronologically explore the participants' experiences, starting with first disclosures, before proceeding to general experiences of disclosures, and finally the most recent disclosure. The second section asked participants to discuss experiences of help-seeking. This part included both formal and informal help-seeking, and again was explored chronologically, with participants first being asked to discuss prior experiences of help-seeking. Interviewees were then asked to look at a list of possible help sources (see Appendix 7) and to give their general opinions of each. Participants were then asked to discuss their help-seeking intentions. The final section asked participants about perceived facilitators and barriers to help-seeking, along with how they expected and wanted people to respond to disclosure in the future. They were also asked how they would respond to a peer both now and before their personal experiences of self-harm.

Table 3.1:

Participant demographics and self-harm history

Participant Code	Age (in years)	Gender	Ethnicity	First self-harm (age in years)	Self-harm recency	Main self-harm	Other self-harm
P1	19	Female	White British	13-14	2-3 years	cutting	scratching, hitting things
P2	22	Female	White British	16	9 months	cutting	
P3	19	Male	White British	17	2 years	cutting	
P4	21	Female	White British	11	1 month	cutting	
P5	20	Female	White British	< 12	1 week	scratching	biting inside of mouth, picking wounds
P6	20	Female	White British	14-15	2 years	cutting	restricting food intake
P7	20	Female	Mixed White/Black	13	few weeks	cutting	scratching, pinching
P8	21	Female	White British	20	< 1 year	scratching	overdosing
P9	20	Female	White British	14	1 week	cutting	burning
P10	20	Male	White British	18	2 weeks	biting	
P11	18	Female	White British	11	2 years	cutting	hitting walls
P12	20	Female	White British	14	2 weeks	hitting, scratching	cutting
P13	21	Female	White European	14-15	5 years	cutting	

Table 3.1 (Continued)

Participant Code	Age (in years)	Gender	Ethnicity	First self-harm (age in years)	Self-harm recency	Main self-harm	Other self-harm
P14	21	Male	Chinese	15-16	1 year	cutting	burning
P15	19	Female	White European	15	1 year	cutting	restricting food intake
P16	20	Female	Indian British	15	3 years	cutting	
P17	32	Female	White British	17	< 1 year	purging, restricting	hitting self
P18	19	Female	White British	14	2 weeks	cutting	
P19	19	Female	South Asian	15	1 year	cutting	restricting food intake, burning

Interviews were conducted in a private room on the University of Warwick campus. Interviews lasted between 30 and 70 minutes and were all audio recorded with the permission of interviewees. Every interview began by presenting participants with an information sheet and consent form. The audio recorder was then started and the interview began. Participants were first asked to provide demographic information, namely age, gender, ethnicity and self-harm history. Self-harm history questions involved questions about when they first self-harmed, when they last self-harmed and the behaviours they used to self-harm. Disclosure and help-seeking experiences were then explored using the semi-structured interview schedule. Following completion of the interview, interviewees were asked if they had anything else they wished to say and thanked for their participation. Participants were then fully debriefed, during which they were able to discuss the interview and their current feelings.

3.2.5 Data Analysis

The majority of interviews were transcribed by the researcher, with 6 audio files being transcribed using an external transcription service. Externally transcribed files were checked by the researcher for transcription accuracy. Analysis followed the reflexive thematic analysis process outlined by Braun and Clarke (2006; 2021). To begin, all transcripts were read through for the researcher to re-familiarise themselves with the data. On the second read, initial notes were written on each transcript, before further reads involved the rewording and grouping of codes. These groups of codes formed the basis of the initial themes and sub-themes. This process was recursive until themes and sub-themes were distinct and informative, and agreed upon by the researcher and project supervisors. Several transcripts were also coded by the supervisors of the project and compared with the codes generated by the researcher.

3.3 Findings

Reflexive thematic analysis resulted in three themes, each with three sub-themes (see figure 3.1). All of the themes were associated with interpersonal relationships: peers who self-harm, choice, and responses.

3.3.1 Peers who self-harm

The first theme was regarding the experience of having peers who self-harm. The majority of interviewees described having peers who had mental health problems:

"luckily for me like my close circle of friends all have some sort of mental thing" (P4)

"I probably wouldn't have told my housemate if it wasn't for the fact that I knew that he'd had depression before" (P6).

These peers with mutual experience of mental health problems were more likely to be trusted by the interviewee with the knowledge of their self-harm. Many interviewees also had peers who had self-harmed:

"we talked about it […] there was a few other people in my group that sort of experienced the same thing" (P1)

"one of my friends […] sometimes takes too much medication […] another one tends to be anorexic so there's […] different ways of self-harming" (P7).

One sub-theme of peers who self-harm was reciprocal disclosure, which was most often a result of explicitly disclosing self-harm. Some interviewees described disclosures which began with one party reciprocating after the other had disclosed, and included the interviewee as both the initiator and the reciprocator:

"she said I was the first person she's ever told and that was because I told her first" (P6)

"I moved in with some new people this year and I told one of them because he had depression last year" (P6)

"one of us would admit that that's what we used to do […] and the other one would say yeah me too" (P13)

Also, some reciprocal disclosure involved one party noticing the self-harm of the other and then disclosing their own experiences:

"she saw and she just messaged me being like look I know something's up just going to tell you like my story […] and she went through her story" (P4)

"you just notice that they are doing something […] because you have done it yourself you know what to look out for" (P14)

This also included the interviewee disclosing to gain the trust of their self-harming peer to offer better support:

"you do that so you gain their trust […] you know what they are feeling and you can relate to what they are doing then you can start helping them" (P14)

In addition to explicit reciprocal disclosure, some participants also described unspoken knowledge of peer self-harm, including one participant who was told about the study by another participant:

"she […] figured it out from clues […] we haven't really spoken about it but […] she knows on some level" (P10)

Reciprocal disclosure was seen by interviewees as a "safe" (P6) option when choosing who to tell about their self-harm, with some participants being unwilling to disclose to anyone without experience:

"I wouldn't really admit it to people who haven't been through something similar" (P13)

The second sub-theme of peers who self-harm was shared experience and understanding. The majority of interviewees expressed that peers who self-harm were much more likely to understand their experiences:

"it was nice to have someone who understood it" (P8)

"that felt more genuine and less superficial than someone who […] doesn't really know about it" (P16)

"we found some solace in each other […] there's this mutual understanding that you understand what I'm going through" (P19)

These experiences of mutual understanding made the interviewees feel comforted and better supported. Some interviewees held the opinion that self-harm could only be understood by those with personal experiences:

"people who haven't been through it don't understand" (P8)

"it's just hard to explain it to someone who has never tried it […] you just can't get it across" (P14)

This also included the notion that they themselves would not understand self-harming without their own self-harm:

"I only became more understanding through those experiences" (P7)

"I wouldn't understand where they're coming from […] I'd probably panic […] I'd probably listen and be very curious and probably not that aware of their distress" (P8)

The final sub-theme of peers who self-harm was self-other comparisons. The main form of direct comparison was regarding assessments of self-harm severity. Some interviewees judged their peers' behaviour as being more severe than their own:

"I spoke to one of my friends who experienced it a lot worse" (P1)

"I don't deserve to seek help because […] there are people who have it worse" (P9)

This tended to be associated with concluding that their own self-harm did not require or was unworthy of help. Other interviewees judged their own behaviour as being more severe than that of peers:

"I know my sister had a similar experience […] not as severe as my experience" (P4)

Figure 3.1

Thematic map
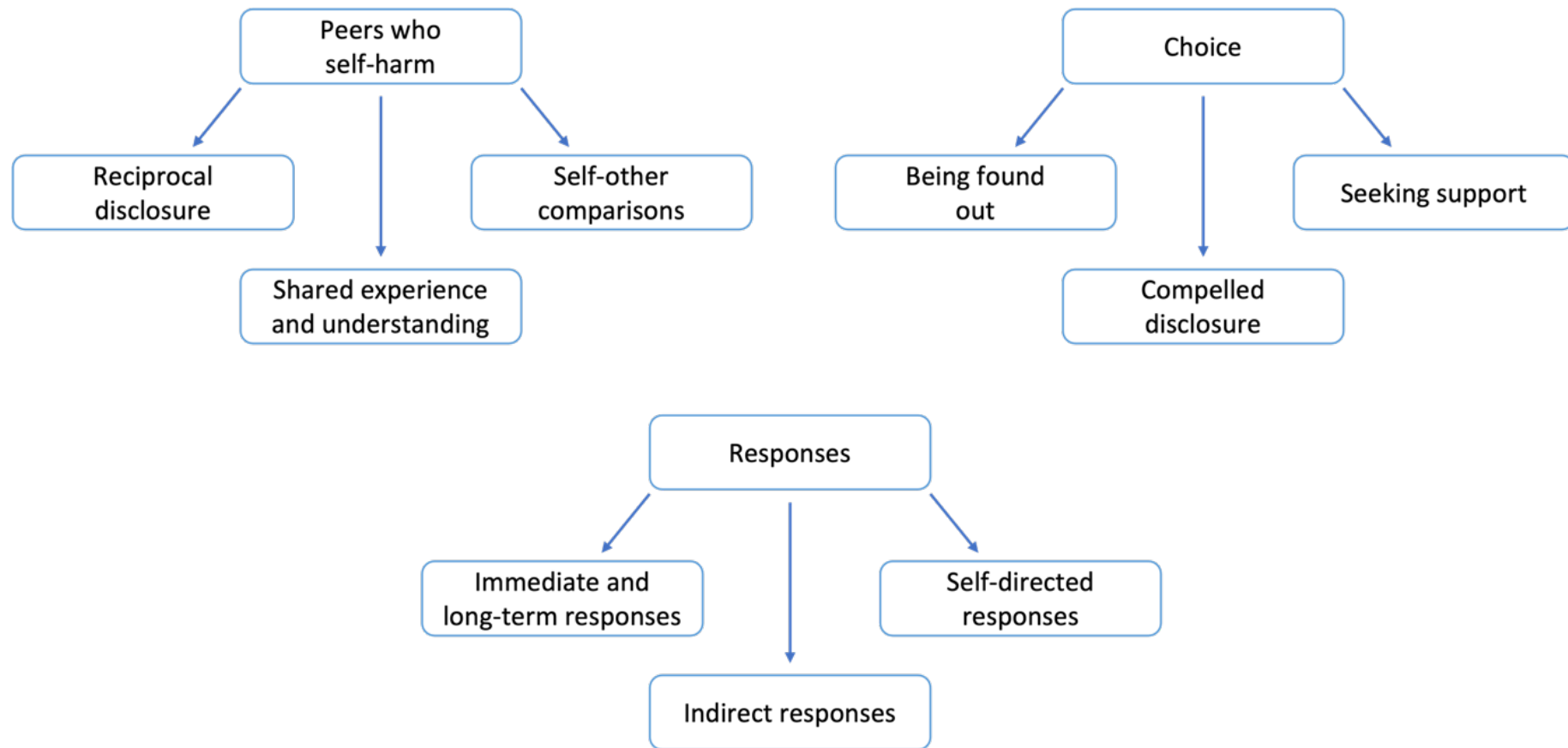
Self-other comparisons sometimes resulted in the interviewee judging that their peer self-harmed to seek attention or sympathy, or to fit in with a sub-culture:

"one person did it for attention and because they wanted to fit in with the whole like emo stereotype […] they would never go as deep as I would so they never had any scars afterwards" (P13)

"there was one girl who […] just did it to look cool" (P11)

"he liked the sympathy" (P3)

There was also an element of competition with regards to self-harming behaviours, particularly when these behaviours included restriction of calorie intake:

"I was like oh I'm stronger than you all cause I do this and you can't" (P19)

"in my experience […] if you're not in the right frame of mind it always turns into a competition and if you're in a room of people who [are] anorexic […] or people who self-harm […] one of them goes well I do it twice a day someone else will go well I do it three times a day" (P6)

Peer relationships were sometimes described as toxic, with peers being unable to help one another, and with some peers approving of the interviewee's self-harmful coping strategies:

"can also be quite negative in a way because they understand the positives of doing it […] and in a way that kind of normalises it and makes it seem like yeah okay it's not something I should be avoiding" (P9)

"when they are in their slump [they] post a lot of negative things […] then that kind of fuels it for you because it's like okay well someone else is doing it […] it's not a big deal if it helps you" (P16)

3.3.2 Choice

The second theme was choice. Some interviewees expressed a willingness to be open about their experiences, for example:

"I'm just very open" (P4)

Meanwhile, others were more private about their experiences:

"I almost want to do it on my own rather than get help for it […] I just don't want to bother people with it" (P5)

One of the key determining factors was recency of a self-harming episode, with those who hadn't self-harmed recently being more willing to disclose past self-harm:

"I have a load of scars on my arm which [...] I don't hide anymore so most people know that I used to [...] I'm very open about having done it in the past [...] when it's still going on that's much more of a personal thing" (P9)

The decision to disclose was one associated with struggle:

"wrestle with the decision to tell someone or seek help" (P13)

Across interviewees' experiences, there was large variation regarding the level of choice when others learned of their self-harm.

One sub-theme of choice was being found out. Many interviewees described experiences of other people discovering their self-harm. This usually involved another person seeing physical marks of self-harm and approaching the interviewee:

"I used to dance like in this group and someone saw it and commented" (P7)

"I had short sleeves on because we'd been in a club [...] and he just spotted the scars" (P2)

Some interviewees responded to these confrontations with denials, to varying degrees of success:

"I thought I'd been really subtle because it was something that I could pass off with an excuse [...] but he just saw straight through it" (P9)

"I have scars from it and people have asked me [...] I panic and lie [...] it's just not something I'm comfortable [...] talking about" (P16)

There was some conflict regarding being found out, with some participants fearing others discovering their self-harm:

"I'm terrified that someone would found out" (P5)

Contrastingly, interviewees also expressed a desire to be seen, specifically without having to disclose:

"part of it was just wanting people to go [...] we need you to sit down and talk about this [...] rather than me having to do it myself [...] I wanted to be taken out [of school] and be told that someone wanted to listen to me and my problems" (P18)

"in ways I did want someone to notice" (P16)

One main concern with their self-harm being found out was that others, in turn, would find out:

"fear of other people finding out and it being spread around" (P8)

"there had been rumours that I had been cutting myself [...] and it kind of got to the [school] counsellor and they phoned home" (P11)

Secondly, compelled disclosure was a sub-theme of choice. One aspect of this was pressure from others to disclose further. For instance, as minors, safe-guarding procedures meant that some

interviewees, were told to disclose their self-harm to their parents to avoid third parties contacting caregivers:

> "she [choir leader] came up to me and said this is something we're going to have to discuss with your parents […] I'll give you two days if you haven't told them by then I'm going to phone your mum" (P9)

In addition, interviewees also received pressure from others to disclose to health professionals:

> "my boyfriend I'd say pressured […] sort of begging of please can you go to the doctor" (P4)

Compelled disclosure also involved internal pressure to disclose. One example of this was disclosing self-harm to health professionals due to a feeling of obligation:

> "in this professional setting [therapy] I thought it best to just disclose everything" (P7)

A further example of internal pressure to disclose was interviewees who felt an obligation to raise awareness:

> "I want to try and break the stigma a bit with it by just talking about it" (P4)

> "I'd rather make people aware than be quiet about it" (P6)

Interviewees also felt compelled to disclose to help others:

> "I would tell them that I'd had experience with it as well […] they're not alone" (P9)

> "I'm all for helping someone else but for the sake of just talking about it personally […] I'd be fine with sharing my experiences if that helped them deal with it or overcome it" (P16)

Some interviewees described reaching a breaking point, often resulting in impulsive disclosures:

> "a build-up of wanting to get emotions out […] I just sort of couldn't hold it together anymore […] I'd been keeping it bottled up for so long […] it just builds up and up and eventually it does erupt" (P3)

> "I kind of just broke down in my meeting and told them what had happened" (P8)

The final sub-theme of choice was seeking support. Disclosing was seen as a necessary first step when seeking help, even when interviewees would rather keep their self-harm secret:

> "you want to be able to get the help and not tell anybody but you just can't" (P14)

> "last year I went to the doctor and was like I want to stop this being […] my main coping mechanism" (P4)

Some participants found disclosing to be helpful, in and of itself.

> "I like being honest about it and I think talking to people about it helps just clear my head about it" (P12)

Sharing their self-harm with others relieved an emotional burden for some interviewees, but others preferred to seek support on a practical level, keeping emotion separate:

"I can't talk […] about it as a thing but I can talk about it as this is affecting me right now and I can't do the work" (P17)

When seeking support, interviewees chose to disclose to peers who were trusted to respond positively:

"I would only choose to tell those people who I kind of trust that they would handle it with respect" (P7)

"they're people what I choose to talk to because I know how they're going to react" (P9)

3.3.3 Responses

The final theme was responses. Interviewees described responses to their self-harm as distinct from responses to other mental health problems:

"mental health is kind of a very current issue […] I feel like I could just go to anyone and they would have a good conversation with me about it but I feel like with self-harm […] because maybe some people don't understand it and I think they might just make too much of a big deal about it" (P7)

Responses also differed depending on the form of self-harm. For example, P19 saw both her restrictive eating and cutting as part of her self-harm:

"people feel sorry for people who have anorexia, people feel disgusted [by] people who cut themselves" (P19)

In addition, responses to self-harm differed depending on the recency of self-harm, with responses to historic self-harm being more understanding than recent self-harm:

"there will be a different kind of understanding, on my part and on other peoples' parts as well because I can say yeah I've cut myself 6 years ago so it doesn't count or it doesn't matter anymore" (P13)

One sub-theme of responses was immediate and long-term responses. The majority of interviewees experienced negative immediate responses, including:

anger and threats,

"his attitude was very much like you better not do it again […] like angry" (P2)

"my mum was really angry […] it was very what have I done have I failed you as a parent kind of thing […] very accusatory" (P11)

"he said to me […] if you do it again I'll do it as well to teach you a lesson" (P9)

dismissiveness and avoidance,

"I don't think we talked much about it afterwards" (P7)

"a couple of people said some things like […] what's that and then kind of realised and […] tried to backtrack because it's not something people want to talk about" (P9)

"my sister just stopped looking at me for a few months because she couldn't deal with it" (P18)

panic,

"if you just come out with it out of nowhere people will panic and not know what to do" (P8)

and judgement

"it's just something like why do you do it […] I don't get it […] it's stupid" (P7)

However, some responses were supportive and included encouraging the interviewee to seek help:

"everyone I've told has been really understanding and very patient" (P7)

"he was really nice about it […] I'm going to completely support you through this […] if you ever feel like you need to do that again then just talk to me" (P9)

"this time [seeking help] was because my friend suggested it and I was like if she thinks that that's okay for me to do then I guess it must be" (P9)

A key element of this sub-theme was change over time. Some initial responses involved a desire to understand, often through asking the interviewee questions about their self-harm:

"he didn't really say much but just kind of asked a few questions like why do you do it […] how do you do it […] when was the last time that it happened" (P7)

Although, there was an important distinction between a desire to understand and curiosity:

"my housemate was like can I see your scars […] I was like you just want to see them for curiosity's sake not because you want to understand" (P6)

Long-term responses were most prominent in relation to family, with parents becoming more understanding of self-harm:

"a lot of people who were closely involved in my life did see my changing through therapy and therefore changed as well, their opinions change" (P19)

"they're just shocked about it […] but I think if they understand why I'm doing it […] they sort of understand more" (P12)

However, it was also believed that parents may revert to initial responses if the interviewee relapsed, despite earlier attempts to educated themselves about their child's self-harm:

"if I start going back to a dark place they'll react how they initially would" (P18)

A further sub-theme involved indirect responses. Some participants described others expressing opinions of self-harm when unaware of the interviewee's experiences. These situations involved peers, family members, and family friends, all of whom expressed views the interviewee perceived as negative:

"the people in my house like it's brought up like jokingly" (P1)

"when people are at school and they're talking about emos slitting their wrists […] my friends had mentioned some of that in front of my dad and then when they'd all gone and it was just me and my parents he was like oh I don't get why people do this slitting their wrists you know if they really wanna die just slit up the vein" (P9)

Participants sometimes judged that these indirect responses were different to how the respondent would address them if they knew about the interviewee's self-harm:

"she would never have said that to me" (P6)

Participants also observed how peers responded to the disclosure of others:

"it completely changed it did change the way we spoke to him […] which showed me that there is still a massive misunderstanding about why people do self-harm" (P3)

While the other two sub-themes related to interpersonal responses, the final sub-theme of responses was self-directed responses. Interviewees commonly viewed self-harm as a part of their identity:

"it's part of who I am" (P4)

This resulted in judgements of self-harming behaviours becoming judgements of themselves as individuals. For instance, some participants viewed themselves as burdens and felt guilt for self-harming:

"my mum was going through something quite difficult and I really I didn't wanna seem like a burden" (P3)

"I just don't want to bother people with it" (P5)

Self-harming was seen as a weak behaviour, indicative of their own being weak:

"it's just a bit embarrassing to know you did that […] it's a bit weak" (P16)

Furthermore, among participants who had not recently self-harmed, their recovery was seen as demonstrating strength:

"I'm very happy to stand up and say […] this is what happened to me because […] now that means I'm strong but if I was then to go to them and be like I'm not doing okay […] that's weakness" (P6)

3.4 Discussion

The current study aimed to investigate the experiences of disclosure and help-seeking of students who have self-harmed. For this purpose, a semi-structured interview was designed, focusing on three sections: disclosure, help-seeking, and perceived facilitators and barriers. Transcribed interviews were analysed using reflexive thematic analysis, resulting in three main themes. The first theme was peers who self-harm with the sub-themes reciprocal disclosure, shared experience and understanding, and self-other comparisons. The second theme was choice with the sub-themes being found out, compelled disclosure, and seeking support. The third and final theme was responses with the sub-themes immediate and long-term responses, indirect responses, and self-directed responses. Each of these themes will now be discussed with reference to past literature and possible implications.

3.4.1 Peers who self-harm

While self-harm is often performed privately and kept secret (Motz, 2010), the current study's interviewees described experiences of reciprocal disclosure which usually involved one person's disclosure prompting the other's disclosure, or one person noticing the signs of self-harm in the other and approaching them. Many of these mutual disclosures involved a sense of shared understanding, with participants feeling they had found acceptance. However, there were occasions when reciprocal disclosure triggered comparisons. While these self-other comparisons could offer some comfort in the way of relief that an individual's situation was not viewed as dire as their peer's, these same comparisons could result in individuals feeling invalidated. In perceiving their self-harm as less severe, some interviewees viewed themselves as less worthy of help, and were less likely to seek help as a result.

Most prior research relating to reciprocal disclosure has focused on internet-based communities. While individuals reach out the others who self-harm via social media in an attempt to understand their own self-harm and seek support (Lavis & Winter, 2020), there are a myriad of both benefits and risks to doing so. Abou Serif et al. (2021) conducted a systematic review of online self-harm communities and found that these could provide a safe space free of stigma where participants are encouraged to practice harm minimisation or to seek help and recovery. However, it was also found

that reading other people's stories could be triggering, and that providing support to others could be stressful and cause the participants to feel distressed. Furthermore, participants felt the need to self-harm to feel a sense of belonging, and to share more extreme content to receive more support from other users. While research has investigated which types of online communities are most likely to be beneficial or harmful (e.g. Marchant et al., 2017), there is no information on why some interactions are more or less helpful, especially with regards to in-person mutual disclosure. Considering the potential benefits of social support in recovery, future research exploring the reasons interactions are beneficial or harmful could inform interventions and the promotion of supportive mutual disclosure.

3.4.2 Choice

The second theme, choice, referred to how others learned of the interviewee's self-harm. With the previously mentioned secretive nature of self-harm, it may be unsurprising that some participants reported not choosing to disclose their self-harm, instead describing being 'caught' by friends, family, or other figures in the community. These experiences were accompanied with anxiety, and sometimes led to compelled disclosures. In these cases, the interviewees described being pressured to disclose to family or medical professionals. While important from a safe-guarding perspective, participants felt anxiety around being pressured to disclose to family members, and fear of parents being told about their self-harm was a deterrent to help-seeking for some. Alternatively, compelled disclosure also occurred as a result of internal pressure to disclose, with participants feeling they reached a 'breaking' point and impulsively chose to disclose. Although there were experiences where interviewees felt a lack of control over the decision to disclose, there were also many occasions where interviewees chose to disclosure to seek support. The help sought varied in its form, ranging from simply wishing to vocalise their experience to asking for formal help from medical professionals.

While past research has recorded where support is sought (e.g. Fortune et al., 2008), the element of autonomy in disclosure has been neglected. Considering the finding that engagement is important for successful therapies (e.g., Jaycox et al., 1998), understanding choice in disclosure and receiving of support has potential implications for supporting individuals who self-harm. Additionally, further research investigating choice to disclose, along with how and when the decision to disclose is reached, could aid efforts to improve help-seeking and well-being outcomes.

3.4.3 Responses

Interviewees described a wide range of responses to their self-harm. An important distinction in experienced responses was time frame. Many interviewees discussed immediate responses which ranged widely in tone, with some respondents being supportive and others being angry or upset. However, with time, family in particular adapted responses, often becoming more understanding and supportive as they adjusted to the knowledge of the interviewee's self-harm. Aside from these responses, interviewees described indirect responses, which involved others discussing self-harm without knowledge of the interviewee's experience. Interviewees perceived many of these indirect responses as showing judgement or a lack of understanding, which some interviewees interpreted as the person's true, uncensored beliefs about self-harm. Additionally, there were also self-directed responses. Interviewees regularly judged themselves for their history of self-harm, with some interviewees thinking of themselves as weak for engaging in self-harm or as strong for resisting urges and coping in less maladaptive ways.

Past research has found that perceived stigma and anticipated negative responses are a barrier to seeking help for self-harm (Nada-Raja et al., 2003). Interestingly, the present study found that individuals can experience a range of responses when disclosing self-harm, and that these responses can change over time. While past research has not explored how responses to self-harm disclosures can change, it has been found that underlying attitudes towards people with mental health conditions are fairly resistant to change with education or exposure to people with those conditions (Sandhu et al., 2019). The current study's finding of responses changing over time could be interpreted in terms of spontaneous versus planned behaviour, where initial discovery triggers surprise and impulsive responses, while longer term knowledge of someone's self-harm allows a respondent to regulate responses to be more positive and supportive. Similarly, indirect responses could be interpreted using attitude theory. When unaware that someone who self-harms is present, an individual may feel more comfortable expressing attitudes which would be filtered otherwise, similar to how explicitly measured attitudes are thought to be affected by response biases (Van de Mortel, 2008).

3.4.4 Conclusion

The current study contributes to our understanding of self-harm disclosure in several ways. Firstly, by using a community-based sample, we were able to investigate disclosure among individuals who do not present to medical services. As most people who self-harm seek support from informal sources such as friends or family (Fortune et al., 2008), this is a population that has been understudied in the past due to reliance on service user samples. In this study, we have explored the disclosure and help-seeking experiences of these individuals. Additionally, the importance of peer support has been explored. The present study has shown the value of community-based support for people who self-harm, with participants preferring to seek help from peers and family than professional help sources. Furthermore, choice and autonomy were important to the study's participants. This was most prominent when participants spoke of experiences from when they were of school age and the decision to disclose was taken from them. While important from a safe-guarding perspective, research has not explored these procedures from the perspectives of young people who self-harm. Also, participants experienced a wide range of responses, including others' responses to their disclosures, others' responses to self-harm without knowledge of the interviewee's history, and self-directed responses.

While any of these themes could be explored further, the remainder of the thesis focuses on investigating attitudes towards people who self-harm. The variation in responses experienced by interviewees and the perceived beliefs of those offering indirect responses could be explored from an attitude theory perspective. The second study of this thesis utilised both explicit and implicit measures of attitude to investigate attitudes towards people who self-harm. It was decided that the sample would be recruited from the student population to continue investigating community-based self-harm.

Chapter 4: An investigation of implicit and explicit attitudes towards people who self-harm

4.1 Introduction

The study in Chapter 3 used semi-structured interviews to explore the disclosure experiences of students who self-harm. Findings revealed three main themes: peers who self-harm, choice and responses. Others' responses to self-harm sometimes changed over time, with later responses showing improved understanding and acceptance. Furthermore, when unaware of the interviewee's self-harm, peers sometimes shared views which demonstrated judgement and a lack of understanding. These findings could be interpreted as behaviour being either spontaneous or controlled by the respondent.

The initial chapter introduced attitude theory, where attitudes were defined as combinations of cognitive beliefs about and affective judgements of an attitude object (Fishbein & Ajzen, 1972). Through attempts to predict behaviour, researchers began to distinguish between explicit and implicit measures of attitude. It was concluded in the first chapter that explicit attitude typically predicts planned or deliberate behaviour, while implicit attitude tends to predict more spontaneous behaviour (Fazio, 1990). However, attitude measures were only able to predict patterns of behaviour and not individual acts (Meissner et al., 2019).

The second chapter introduced self-harm, where self-harm was defined as intentional, self-inflicted, harmful behaviour, including behaviours such as cutting or hitting oneself (Klonsky & Glenn, 2009). Definitions often specify that behaviours are done without suicidal intent, although the validity of suicidal intent as dichotomous has been challenged (Kapur et al., 2013). Self-harm serves a number of functions, such as relieving distress and communicating distress to others (Chapman et al., 2006). The prevalence of self-harm varies widely across research due to differing definitions and sample populations. Specifically, hospital presentations of self-harm are a commonly studied subset of people who self-harm, although the majority of self-harm occurs in community samples. Although rates vary between studies, hospital presentation data has placed UK self-harm rates at approximately 0.4% (Horrocks & House, 2002), while rates in excess of 25% have been found in studies of university student self-harm (Borrill et al., 2009).

While the majority of studies indicate neutral or positive attitudes towards individuals who self-harm (e.g. Gagnon & Hasking, 2012), individuals who self-harm themselves perceive public attitude to be negative, with teenagers who self-harm citing fear of stigma as a barrier to help-seeking (Fortune et al., 2008). One possible reason for this discrepancy lies within how public attitudes have been measured; prior research has exclusively used explicit measures to assess attitudes towards individuals who self-harm (McHale & Felton, 2010). These measures can be influenced by many factors which result in the measured attitude not reflecting the underlying attitude. For example, individuals can choose to respond more positively to questionnaire items to appear more agreeable. Additionally, research examining attitudes towards individuals who self-harm regularly uses professional samples (e.g. Conlon & O'Tuathail, 2012). These participants may feel more inclined to respond in a way which makes them appear more sympathetic toward patients. Additionally, as help-seeking from informal sources is much more common than medical professionals, research exploring attitudes of the community is needed.

The current study aimed to investigate attitudes towards people who self-harm among a university student sample. Past research has not used implicit measures to assess attitudes towards individuals who self-harm, while most research using explicit measures of attitudes towards this group have focused on the attitudes of medical professionals such as nurses and doctors. The current study focuses on attitudes among a community-based sample due to findings that the majority of people with a history of self-harm do not seek help and that those who do seek help do so from friends or family (Fortune et al., 2008). This study also introduces a GNAT designed to implicitly measure attitudes towards people who self-harm, to measure underlying attitudes without biases such as social desirability.

Hypothesis 1: Explicitly measured personal attitudes will be more positive than perceived public attitudes.

A potential reason for explicitly and implicitly measured attitudes being uncorrelated is found in response biases. Primarily, individuals want to see themselves, and be seen by others, in a favourable light. This can mean that underlying attitudes are censored, either consciously or unconsciously, such that explicitly measured attitudes are more positive. It is also possible that individuals overestimate the stigma held by others as a method of self-reassurance regarding their own stigmatised views. Research into mental illness stigma has found that participants regularly rate perceived attitudes as more negative than their personal attitudes (Lally et al., 2013). Griffiths et al.

(2011) found similar results when assessing depression stigma using the Depression Stigma Scale (DSS; Griffiths et al., 2008), which was adapted for use in the current study.

Hypothesis 2: When measured implicitly, people who self-harm will be more strongly associated with negative attributes than positive attributes.

As discussed in the final section of the self-harm introductory chapter, implicit measures of attitude toward those with mental illness have found associations between negative attributes and mental illness (Teachman et al., 2006). Furthermore, explicit measures of attitudes towards both people who self-harm tend to be tolerant (Nielsen & Townsend, 2018), while people with these conditions also report experiencing stigma and negative responses upon disclosure. These findings suggest that underlying attitudes toward people who self-harm are likely to be negative. As such, it is predicted that self-harm will be more strongly associated with negative compared to positive attributes on the implicit attitude measure.

Hypothesis 3: The correlation between explicitly and implicitly measured attitudes will be moderated by social desirability, such that attitudes will be positively correlated when social desirability is low.

Hofmann, Gschwendner et al. (2005) found that the correlation between explicit and implicit attitude measures were higher when the attitude object was of less social significance, for example explicit and implicit attitudes towards insects and flowers showed above average correlation while stereotyping explicit and implicit attitudes showed below average correlation. It is hypothesised that this will also apply when individuals differ in trait social desirability. As such, it is predicted that low social desirability will result in self-reported attitudes which are less censored and therefore more consistent with implicitly measured attitudes.

Hypothesis 4: Participants with a history of self-harm will hold more positive attitudes than those without a history of self-harm.

Teachman et al. (2006) found that those with a history of mental illness explicitly rated people with mental illness more favourably than did those without such experience, although implicit associations did not differ across the groups. In addition, the interview study in Chapter 3 found that interviewees believed that experience of self-harm made for an increased understanding and more

empathic responses when self-harm is disclosed. Therefore, it is predicted that participants with a history of self-harm will hold more positive attitudes than those without a history of self-harm.

4.2 Method

4.2.1 Design

A mixed design was used to examine implicit and explicit attitudes towards people who self-harm.

Independent Measures: The between-subject independent variables were personal history of self-harm, measured by Yes/No responses to if they have ever intentionally harmed themselves, and social desirability score, measured by average score on the revised Social Desirability Scale-17 (SDS-17R; Stöber, 2001). Within-subject independent variables consisted of type of attitude measure (explicit and implicit), explicit subscale (personal and public), and implicit block (good person and bad person).

Dependent Measures: The dependent measures consisted of average scores on the two explicit subscales (personal stigma and public stigma), and average reaction times on correct "Go" trials of the implicit measure for the two blocks (good person and bad person).

4.2.2 Participants

Ninety-two university students participated in the study, 52 as a course requirement for first year Psychology undergraduates at the University of Warwick. The remaining 40 participants received £3 for their time. An error rate above 20% on the implicit measure, as suggested by Nosek and Banaji (2001), was used as a threshold for exclusion from analysis, resulting in 8 participants being excluded. This resulted in a final sample of 84 participants (66 female, 61 Native English), of which only 26 provided their age (*M* = 20.6 years, *SD* = 4.12). A possible reason for this low response rate for age may be in the layout of the webpage and the other questions presented (see Appendix 8). On this page, participants were asked their age, gender and native English speaker status, with age being the only question with a text box for responses; responses for gender and native English speaker status were multiple choice. This, and the appearance of the text box as a grey bar, may have resulted in participants not noticing the age question. While it is possible that participants simply did not wish to provide their ages, the vast majority of participants in chapters 5 and 6, where

skipped questions resulted in a pop-up asking them if they were sure they wished to continue without completing all questions, did provide their ages. As such, it appears likely that participants in the present study failed to provide their age due to the design and appearance of the survey.

Thirty-seven participants (44.0%) disclosed some history of self-harm. Of these, 21 provided a response to when they last self-harmed, 9 of which reported having self-harmed in the past year. As with the interview study (Chapter 3), the majority (n = 29) of students disclosing self-harm reported multiple self-harming behaviours, with the most common behaviours being hitting oneself (n = 21), biting oneself (n = 18) and interfering with wound healing (n = 18). Cutting oneself was reported by 14 participants and was the most reported primary form of self-harm (n = 8 of 17 respondents). Two participants listed "other" behaviours, both relating to disordered eating. Endorsed self-harm functions were mainly intrapersonal in nature, although every function was endorsed by at least one participant (see table 4.1). The majority of participants with a history of self-harm reported always being alone when they self-harmed (73.0%) and wanting to stop self-harm (72.2%).

4.2.3 Measures

Personal history of self-harm

A literature search for history of self-harm measures was conducted. The most commonly used scale was the Inventory of Statements About Self-harm (ISAS; Klonsky & Olino, 2008; see Appendix 9), which asks participants if they have ever intentionally harmed themselves without suicidal intent, with the options 'Yes', 'No', and 'Prefer not to disclose'.

Affirmative responses led to part one of the ISAS, which involves 7 questions. The first of these asks participants to estimate how many times they have ever engaged in specified behaviours (e.g. 'cutting', 'biting', 'burning'), along with an 'other' option where participants are asked to report any self-harming behaviours not listed. On acknowledgement that no known literature reported any participants utilising the 'other' category, along with Turp's (2003) argument that self-harmful behaviours lie on a continuum of social acceptability including both active and passive behaviours, such as excessive alcohol consumption or restrictive eating respectively, two alterations were made to this scale. Namely, participants were reminded that listed behaviours were exemplars and encouraged to report any behaviours they consider a form of self-harm in which they engage, and the 'other' option was presented three times, as opposed to the original scale's single presentation,

to allow participants to report multiple alternative behaviours. Following this first question, the ISAS asks participants to identify a 'main form of self-harm' if applicable. The remainder of part one of the ISAS asked participants when they first and last self-harmed, whether they feel pain when self-harming, whether they are alone or with others when self-harming, how much time typically elapses between urge and act of self-harm, and if they want to stop self-harming. Part two of the ISAS involves rating the personal relevance ('not relevant', 'somewhat relevant', or 'very relevant') of 39 functions of self-harm which map onto 13 subscales, each comprising of 3 items. Five subscales are of an intrapersonal nature, for example affect regulation and marking distress, while the remaining 8 are interpersonal in nature, for example interpersonal boundaries and peer bonding (Klonsky & Glenn, 2009). Participants also have the option to add further functions if they so wish, in terms of functions which both do and do not apply to themselves.

Table 4.1

Self-harm functions endorsed by study participants

Function	M^a	SD	α
Intrapersonal	1.93	1.44	.83
Affect regulation	3.29	2.04	.73
Anti-dissociation	1.42	1.84	.85
Anti-suicide	1.00	1.62	.84
Marking distress	1.39	1.52	.64
Self-punishment	2.59	2.14	.86
Interpersonal	.52	.64	.82
Autonomy	.40	.91	.67
Interpersonal boundaries	.70	1.39	.82
Interpersonal influence	.50	.94	.59
Peer bonding	.20	.68	.88
Revenge	.15	.36	-.15
Self-care	.71	1.07	.29
Sensation-seeking	.40	.60	.13
Toughness	.86	1.13	.58

[a] Average score across three items (minimum 0, maximum 6)

Self-harm adapted depression stigma scale

As previous self-harm attitude research has mainly been conducted among medical professionals, many existing scales are not suitable for examining the attitudes of community-based individuals. For example, questions on some existing scales specifically ask participants about working with patients who self-harm, for example the Self-Harm Antipathy Scale, which includes the statement "I demonstrate warmth and understanding to self-harming clients in my care" (Patterson et al., 2007; p. 441). When measuring self-harm attitudes in community-based samples, there are no standard, validated scales available. Therefore, scales investigating community attitudes towards individuals with other mental health conditions were assessed. The Depression Stigma Scale (DSS; Griffiths et al., 2008) has been used to investigate attitudes towards people with depression (e.g. Griffiths et al., 2011) and has also been adapted to investigate attitudes towards people with prescription drug abuse (Shupp et al., 2020).

The Depression Stigma Scale (DSS; Griffiths et al., 2008) was adapted to explicitly measure self-harm stigma (SH-aDSS; see Appendix 10). The DSS contains 18 items rated on a 5-point scale ('strongly disagree' to 'strongly agree'), split equally into two subscales: personal and public. Public stigma items are identical to personal stigma items, but altered to 'most people believe that' (e.g. 'people who self-harm are dangerous' for personal stigma versus 'most people believe that people who self-harm are dangerous' for public stigma). Note, the term 'public stigma' in this context refers to the participants' perceptions of stigma among the general public. Subscale item ratings are averaged to obtain scores between 1 and 5 for personal and public stigma, such that higher scores indicate higher levels of stigma. This scale was piloted on 22 self-selected participants, resulting in significant differences between personal (*M* = 1.79, *SD = 0.*50) and perceived public stigma (*M* = 3.44, *SD = 0.*65; *t*(21) = 8.53, *p* < .001), mirroring prior research (e.g. Griffiths et al., 2008), and acceptable internal validity (α = .79, α = .88, respectively). The main study's data matched these levels of internal validity (α = .82, α = .77, respectively).

Social desirability

Social desirability was measured using the revised Social Desirability Scale-17 (SDS-17R; Stöber, 2001). The SDS-17R contains 16 items related to socially desirable (e.g. 'I always eat a healthy diet') and socially undesirable (e.g. 'I sometimes litter') behaviours rated dichotomously as true or false. There are 6 socially undesirable items included in the SDS-17R, which were reverse coded before

calculating average social desirability score ranging from 0 (least socially desirable responding) to 1 (most socially desirable responding; α = .65).

Implicit measure

Due to the aim of the current project and the phrasing of SH-aDSS questions, the implicit measure had to measure associations with people who self-harm in isolation, not in comparison to a second group of individuals. As such, implicit measures of absolute attitudes were compared. Of these, the Go/No-Go Association Task (GNAT; Nosek & Banaji, 2001) was one of the most well-established and out-performed similar measures on multiple factors (Bar-Anan & Nosek, 2014). The GNAT measures association, in the form of reaction times, between the subject category and two oppositely valenced attribute categories. Using this task, faster reaction times indicate greater association between the subject and attribute. For example, in the present study, self-harm would be associated with Good Person if response times were faster when paired together than when self-harm is paired with Bad Person.

A GNAT was created to assess associations of self-harm with positive and negative attributes. Stimuli for the GNAT were separated into three categories each containing 5 words: Self-harm, Good Person and Bad Person (see table 4.2). Stimuli were taken from the ISAS, DSS (Griffiths et al., 2008), previous literature (e.g. Rowe et al., 2014), and antonym/synonym searches, with average word length matched across the Good Person and Bad Person categories. All chosen attributes were person-focussed due to the burden on the attribute categories to frame the task as measuring attitudes towards people who self-harm, not self-harming behaviours. The GNAT consists of two blocks (order counterbalanced across participants), one pairing the topic category with positive attributes (i.e. Self-harm and Good Person), and the other pairing the topic with negative attributes (i.e. Self-harm and Bad Person). The target categories within each block (Self-harm and Bad Person in one block, and Self-harm and Good Person in the other block) are named at the top of the screen throughout all trials with left or right alignment of topic and attribute category counterbalanced between participants. Each trial presents a random stimulus to the centre of the screen after 400ms for a maximum duration of 800ms (1000ms for 20 practice trials prior to each block). Within this 800ms window, participants are required to press the spacebar for stimuli belonging to either of the target categories ("Go"), or to wait for the time to elapse for distractor stimuli ("No-Go"). Immediately after a "Go" or "No-Go", participants are shown feedback: a green circle for correct

responses and a red cross for incorrect. After 400ms, the feedback vanishes from the screen and the next trial begins. An example of a "Go" Good Person trial can be seen in figure 4.1.

Table 4.2:

GNAT stimuli for the three categories of Self-harm, Good Person, and Bad Person

Category	Stimuli				
Self-Harm	cutting	biting	hitting	pulling hair	scratching
Good Person	capable	harmless	reliable	conscientious	trustworthy
Bad Person	weak	dangerous	false	attention-seeker	unpredictable

Participants completed a total of 120 trials (60 per block), although 3 participants saw just 60 trials (30 trials in each block) due to experimenter error when setting up the task. Within each block, stimuli in target categories were presented 3 times each, while distractors (stimuli from the non-target attribute category) were presented 6 times each. GNAT scores were calculated as average reaction time for correct "Go" trials within each block. A ratio was then calculated for each participant such that a score below 1 indicated greater association between Self-harm and Bad Person, and a score above 1 indicated greater association between Self-harm and Good Person.

4.2.4 Procedure

This study followed ethical guidelines outlined by the British Psychological Society (2021) and received ethical approval from the Psychology Departmental Research Ethics Committee at the University of Warwick. Participants read an on-screen participant information sheet before the study (Appendix 11) and completed an on-screen consent form (Appendix 12). Following completion of all measures, participants completed a positive mood induction task where they recalled a positive memory. This was included to counteract any negative emotion elicited by the study. Participants were then presented with debrief information on the screen, which was also given to them in paper form to take with them (Appendix 13). They were given the opportunity to ask questions about the study before, during and after taking part, and were able to email the researcher and supervisors with any additional queries.

Figure 4.1
Example of a GNAT trial

a) Beginning of trial, target categories for the current block are labelled above a central focal point for 400ms
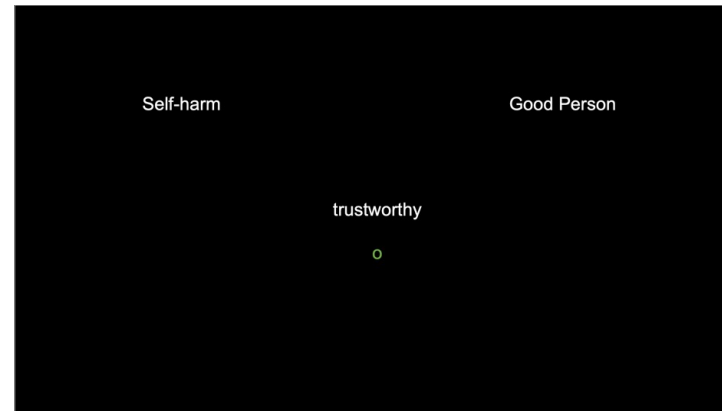
c) Here, a correct 'Go' (spacebar press within 800ms) results in the display of a green circle to feedback a correct response
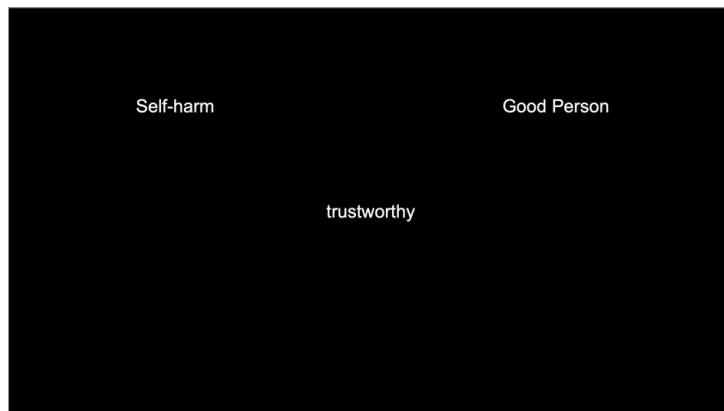
b) Trial stimuli appears in the centre of the screen for 800ms or until the participant presses the spacebar

d) Here, an incorrect 'No-Go' (failure to press spacebar within 800ms) results in the display of a red cross to feedback an incorrect response

All parts of the study were completed on a computer. All questionnaire pages included a "quit" button in the top right corner which led to debrief information should the participant wish to withdraw from the study. Participants were asked to read the study information and to alert the researcher if they had any questions, before the cubicle door was closed and the participant could complete the study privately.

Demographic questions were always asked first, followed by the GNAT, SH-aDSS and SDS-17R in a randomised order. Participants then completed the self-harm screening question and the ISAS if applicable. Lastly, participants completed a positive mood induction task which required them to describe a recent pleasant memory before being fully debriefed and receiving the relevant compensation for their time.

4.2.5 Data analysis

The data were extracted using Microsoft Excel and analysed using SPSS. The SH-aDSS scores were calculated as mean item ratings on each subscale; higher scores indicated greater agreement with stigmatising views, with mid-point of 3 indicating the participant neither agreed nor disagreed with statements on average. Social desirability scores were calculated by averaging responses to each item, such that a higher score indicated greater socially desirable responding. Correct "Go" reaction times within each block were averaged, with a ratio being calculated by dividing average negative block "Go" reaction times by that of the positive block, such that a ratio below 1 indicated a stronger association between self-harm and bad person, and a ratio above 1 indicated a stronger association between self-harm and good person. Average scores, along with standard deviations, can be seen in Table 4.3. Paired-samples t-tests were used to test hypotheses 1 and 2, by comparing scores on the two SH-aDSS subscales and reaction times across GNAT blocks. Correlations were conducted to examine the relationship between attitude measures, with moderator analysis being used to test hypothesis 3. Finally, a series of independent samples t-tests assessed hypothesis 4, by comparing attitudes scores between those with and without a history of self-harm. Due to the high number of statistical tests, a conservative p-value of .001 was used to indicate significance. When this corrected significance level was not reached, Bayesian analysis was conducted using JASP (JASP Team, 2021) to ascertain level of support for or against the null hypothesis.

Table 4.3

Average scores on attitude and social desirability measures

Measure	n	M	SD
Explicit attitude			
Personal stigma	84	2.37	.65
Public stigma	84	3.35	.59
Implicit attitude			
GNAT[a] ratio	84	.97	.05
GNAT good RT (ms)	84	583.85	32.77
GNAT bad RT (ms)	84	566.93	33.80
Social desirability	84	.47	.19

[a] Go/No-Go Association Task

4.3 Results

4.3.1 Testing attitude valence on explicit and implicit measures (hypotheses 1 and 2)

Initially, one-sample t-tests were conducted to compare explicit attitude scores with the mid-points of each measure. Personal stigma was significantly lower than the mid-point of 3 ($t(83) = 8.91$, $p <$ .001) with a large effect size ($d = .97$), indicating participants disagreed with stigmatising statements about people who self-harm. However, public stigma was significantly higher than the mid-point of 3 ($t(83) = 5.48$, $p < .001$) with a medium effect size ($d = .60$), indicating participants agreed that the public would agree with stigmatising statements about people who self-harm.

Paired-samples t-tests were conducted to evaluate differences between personal and perceived stigma, and whether self-harm was more associated with either Good Person or Bad Person. Participants explicitly rated their own stigma ($M = 2.37$, $SD = 0.65$) as lower than public stigma ($M = 3.35$, $SD = 0.59$; $t(83) = 12.4$, $p < .001$), with a large effect size ($d = 1.35$). There were significant differences between correct "Go" reaction times across positive ($M = 583$ms, $SD = 32.8$ms) and negative ($M = 566$ms, $SD = 33.8$ms) GNAT blocks ($t(83) = 5.23$, $p < .001$), with a medium effect size ($d = 0.57$). This indicates that participants were quicker when pairing Self-harm with the Bad Person

attributes as opposed to Good Person, suggesting greater association between the Self-harm and Bad Person concepts.

4.3.2 Testing the relationship between explicit and implicit attitude measures, and the role of social desirability as a moderator (hypothesis 3)

Bivariate correlations were conducted to assess the relationship between explicitly and implicitly measured attitudes (see table 4.4) prior to moderator analysis. Two correlations were significant at the p = .05 level, but not the corrected level of .001. Bayesian correlations supported a positive correlation between personal and public stigma scores (BF_{10} = 9.63) but were inconclusive for the relationship between public stigma and GNAT ratio (BF_{10} < 3, BF_{01} < 3).

Table 4.4

Correlations between attitude measures and social desirability

Measure	1	2	3	4
1. Personal stigma	-			
2. Public stigma	.32	-		
3. GNAT[a] ratio	.19	.23	-	
4. Social desirability	.00	-.05	-.17	-

[a] Go/No-Go Association Task

* indicates p < .001

To assess the role of social desirability as a moderator of the correlation between personal stigma (explicit measure) and GNAT ratio (implicit measure), the analyses of similar studies were replicated. For example, Egloff and Schmuckle (2003) explored if social desirability moderated the relationship between explicit and implicit measures of anxiety. In the present study, z-scores for GNAT ratio and social desirability were calculated, before multiplying these values for each participant. A forward forced stepwise linear regression with three steps was then run. The first step contained GNAT ratio as the predictor variable and personal stigma as the outcome variable, while the second step had both GNAT ratio and social desirability as predictors of the outcome variable, personal stigma. The third and final step added the multiplied GNAT ratio and social desirability z-score variable as a third

predictor. No predictor variable in any of the regression steps significantly predicted the outcome variable (see Table 4.5).

Table 4.5

Stepwise regression model measuring the role of social desirability as a moderator of explicit-implicit correlations

Step	Effect	Estimate	SE	95% CI		p
				LL	UL	
1	Intercept	-.01	1.35	-2.70	2.69	1.00
	GNAT[a] ratio	.19	1.76	-.32	5.21	.08
2	Intercept	-.13	1.43	-2.96	2.71	.93
	GNAT ratio	.20	.20	-.31	5.34	.08
	Social desirability	.03	.03	-.66	.88	.78
3	Intercept	-.41	1.43	-3.27	2.44	.77
	GNAT ratio	.22	.22	-.05	5.63	.05
	Social desirability	.05	.05	-.59	.96	.64
	Moderation variable	.15	.15	-.06	.30	.18

[a] Go/No-Go Association Task

* indicates p < .001

4.3.3 Comparing attitudes between those with and without a history of self-harm (hypothesis 4)

A large minority of the sample (44.0%) disclosed a history of self-harm, with 10.7% of the total sample disclosing self-harm within the past year. Independent samples t-tests found no significant differences between those with or without a history of self-harm on personal stigma ($t(88) = 0.50$, $p = .62$), public stigma ($t(88) = 0.46$, $p = .65$), or the implicit measure ($t(82) = 0.15$, $p = .88$). Bayesian comparisons supported equivalent scores between those with and without a history of self-harm for all stigma measures ($BF_{01} > 3$).

4.4 Discussion

The aim of the current study was to investigate attitudes towards individuals who self-harm among a university sample. To do so, participants completed explicit and implicit attitude measures, a social desirability questionnaire, and a history of self-harm questionnaire. Four hypotheses were posited at the beginning of the current chapter, the findings of which will now be discussed.

> **Hypothesis 1:** Explicitly measured personal attitudes will be more positive than perceived public attitudes.

The study found that participants did rate perceived public attitudes as more negative than their own attitude toward individuals who self-harm, mirroring the findings of studies using the DSS (Griffiths et al., 2008) to examine attitudes towards individuals with depression (Griffiths et al., 2011). Furthermore, these two measures were positively correlated, with the data showing that participants consistently judged public stigma to be greater than their own stigma. These results suggest that participants were biased to judge public attitudes as more negative than their own, possibly as a way to justify their own negative beliefs about individuals who self-harm. Alternatively, research has found that students tend to be more liberal than the general public (Hastie, 2007), which may reflect values of equality and tolerance. As such, these values may have contributed to the finding that participants rated public attitudes as more negative than their own.

> **Hypothesis 2:** When measured implicitly, self-harm will be more strongly associated with negative attributes than positive attributes.

Similar to research showing negative associations with mental illness (e.g. Teachman et al., 2006), this study found that self-harm was associated with negative attributes on the implicit measure, as indicated by quicker reaction times when pairing self-harm with bad person. This suggests that participants held the underlying attitude that people who self-harm are more bad than good. Such a finding is consistent with research which found that individuals who self-harm fear stigma when help-seeking (Fortune et al., 2008). Furthermore, this result may explain some of the responses reported by participants in the qualitative study described in Chapter 3. Specifically, underlying beliefs that individuals who self-harm are bad people could explain the anger and disgust responses

participants received from their family and peers, and the indirect negative responses interviewees experienced.

Hypothesis 3: The correlation between explicitly and implicitly measured attitudes will be moderated by social desirability, such that attitudes will be positively correlated when social desirability is low.

Contrary to predictions, social desirability had no effect on the correlation between explicitly and implicitly measured attitudes towards individuals who self-harm; explicit and implicit measures were not correlated, and social desirability was not a moderator of the relationship. There are several possible reasons for both this lack of correlation and of social desirability as a moderator. While past research has shown mixed findings regarding the effect of social desirability on explicit-implicit measure correlations (Hofmann, Gschwendner, et al., 2005), it is possible that the experiment's conditions lowered social desirability concerns. For example, participants were reassured of anonymity at the beginning of the study (see Appendix 10; participant information sheet), and they completed all tasks in individual cubicles, where neither experimenter nor other participants could see their responses. It is also possible that an internalised perception of the self as being agreeable and non-stigmatising resulted in an unconscious alteration of negative associations when responding to the explicit measures.

However, as mentioned in Chapter 1 on attitude theory, the correlation between explicit and implicit measures is also affected by the similarity of the two tasks. Within the context of the current study, the implicit measure assessed purely positive and negative associations while the explicit measure was much more nuanced, with statements assessing very specific beliefs about individuals who self-harm. It is possible that the implicit measure was focusing on affect-based attitudes while the explicit measure accessed cognitive-based judgements. As such, the measures may not be correlated due to their testing different aspects of attitudes toward self-harm.

Hypothesis 4: Participants with a history of self-harm will hold more positive attitudes than those without a history of self-harm.

The current study found that a large minority of the sample had self-harmed within the year prior to participation, highlighting that self-harm is not a condition isolated to adolescence. Additionally, a history of self-harm was present in over 40% of the sample, suggesting that self-harm is much more

prevalent than previously thought (e.g., Gillies et al., 2018). Contrary to predictions, participants with a history of self-harm did not differ in their attitudes on any measure when compared to participants without a history of self-harm. This null finding was supported using Bayesian analyses, which indicated that the null hypothesis was over three times more likely to be true than false. This lack of difference may be due to the overall tolerant explicit attitudes of the participants.

4.4.1 Conclusion

The current study was the first study to explore implicitly measured attitudes towards individuals who self-harm: a GNAT was used to implicitly measure associations between self-harm and good versus bad people attributes. It was found that, while explicitly measured personal attitudes were tolerant, with individuals rating public stigma as higher than their own, GNAT reaction times were quicker when pairing self-harm with 'bad person'. This indicates a greater mental association between self-harm and bad person compared to self-harm and good person. Explicit and implicit measures were not correlated, and this relationship was not moderated by social desirability. Having a personal history of self-harm was fairly common among the sample, although this had no effect on scores on any of the attitude measures.

While the current study was novel in its use of implicit measures, it has been noted that the current task could be interpreted as assessing only affective attitudes. The next study was designed to examine attitudes in more depth by adding implicit tasks to explore cognitive aspects of attitudes. Additionally, the following study included an explicit measure using the implicit tasks stimuli to improve the comparability of these measures. Considering the high rates of historic and recent self-harm in this sample, the current project continued to investigate the attitudes of students.

Chapter 5: Examining beliefs about people who self-harm using both explicit and implicit measures

5.1 Introduction

The previous chapter presented the first quantitative study, which aimed to investigate attitudes of university students towards individuals who self-harm. It was found that participants explicitly rated their own attitudes as being more positive than perceptions of public stigma, while implicitly associating self-harm with "bad person" rather than "good person". Additionally, personal history of self-harm had no effect on attitude scores, and social desirability did not affect the relationship between explicit and implicit measures. The aim of this current study was to expand on the prior chapter by introducing implicit measures using a wider variety of stimuli such that both affective and cognitive attitudes could be measured implicitly.

As discussed within the attitude theory introduction chapter, attitudes can be seen as including both affective and cognitive components. The prior study comprised of a single implicit task which aimed to evaluate whether participants hold positive or negative affective associations with individuals who self-harm. Meanwhile, the explicit attitude measure investigated beliefs associated with individuals who self-harm. The second quantitative study aimed to explore attitudes in more depth, using both affective and cognitive concepts. As such, this study expanded on the previous chapter by using multiple implicit measures to examine beliefs about individuals who self-harm, including beliefs that people who self-harm are blameworthy, helpless and dangerous. This study also explicitly measured associations with these negative attributes and their positively valenced counterparts.

> **Hypothesis 1:** It was hypothesized that participants would explicitly rate their own attitudes as being more positive than perceived public stigma.

As with the initial study, it was predicted that participants would score higher in perceived than personal stigma on the SH-aDSS measure. Research into mental illness stigma has found that participants regularly rate perceived attitudes as more negative than their personal attitudes (Calear et al., 2011; Pedersen & Paves, 2014). The prior study found this expected finding with a large effect size, leading to the prediction that this finding would be replicated in the current study. Such a

finding would confirm that individuals perceive public stigma of individuals who self-harm to be higher than their own stigma.

> **Hypothesis 2:** It was predicted that participants would explicitly associate individuals who self-harm with positive attributes, namely good, good person, competent, safe and innocent.

In an attempt to improve likeness between implicit and explicit measures, the current study included an explicit measure which asked participants to rate the extent to which they associated the implicit attribute categories with individuals who self-harm. While explicit measures of attitude towards people with mental illness and people who self-harm tend to be mixed (e.g., Wilstrand et al., 2007; Gagnon & Hasking, 2012), student samples have been found to hold more tolerant attitudes (Nielsen & Townsend, 2018). It is theorised that participants will explicitly report positive attitudes, as individuals prefer to see themselves as not holding stigmatised views and wish to be perceived as less stigmatising by others. As such, it was predicted that participants would explicitly report positive attitudes, such that individuals who self-harm are rated as good, good person, competent, safe and innocent.

> **Hypothesis 3:** It was predicted that individuals who self-harm would be implicitly associated with negative attributes, namely bad, bad person, helpless, dangerous and blameworthy.

The initial study found that self-harm was more associated with bad person than good person on the implicit measure. Additionally, research which measured attitudes towards mental illness using implicit measures tend to find negative associations on these tasks (Teachman et al., 2006; Wang et al., 2012). As such, it was predicted that self-harm would be associated with negative attributes on the implicit measures. This finding would suggest that underlying attitudes towards individuals who self-harm were negative, with self-harm being viewed as bad, and associated with being a bad person, helpless, dangerous and blameworthy.

> **Hypothesis 4:** It was predicted that participants with a history of self-harm would hold more positive attitudes than those without a history of self-harm.

Teachman et al. (2006) found that those with a history of mental illness explicitly rated people with mental illness more favourably than did those without such experience, although implicit

associations did not differ across the groups. However, the study presented in Chapter 4 did not replicate this with regards to self-harm personal experience and attitudes; Bayesian null testing supported that both explicitly and implicitly measured attitudes were equivalent across the two groups of participants. While it is possible that individuals who self-harm may internalise stigma, as found with individuals with mental illnesses (Corrigan et al., 2011) and addictions (Matthews et al., 2017), the interview study in Chapter 3 did find both experienced negative attitudes from others and the importance of personal experience in empathising with those who self-harm. As such, it was predicted that those with a history of self-harm would exhibit more positive attitudes than those without a history of self-harm.

5.2 Method

5.2.1 Design

As with Chapter 4, a mixed design was used to examine implicit and explicit attitudes towards people who self-harm.

Independent Measure: The only between-subject independent variable measured in the current study was history of self-harm. As with the prior study, this was assessed by Yes/No responses to whether the participant had ever intentionally harmed themselves. Within-subject independent variables consisted of type of attitude measure (explicit and implicit), SH-aDSS subscale (personal and public), attribute rating valence (positive and negative), implicit block (positive and negative), and GNAT version with five levels (Good/Bad, Good Person/Bad Person, Safe/Dangerous, Innocent/Blameworthy, and Competent/Helpless).

Dependent Measures: The dependent measures consisted of average scores on the explicit attitude measures (SH-aDSS and attribute ratings), and average reaction times on correct "Go" trials of the implicit measure within each block of the five versions.

5.2.2 Participants

Using the effect sizes found in Chapter 4, power analysis using G*Power (Faul et al., 2007) suggested a required sample of 105. Considering the previous exclusion rate of 8.70% and the current project's increase in GNAT number potentially increasing that exclusion rate, 140 first year Psychology

students were recruited as part of a course requirement for first year Psychology undergraduates at the University of Warwick. As with the previous study, Nosek and Banaji's (2001) suggestion of excluding participants with error rates exceeding 20% of GNAT trials was used.

Of the initial 140 participants, 38 were excluded from analyses due to exceeding the 20% error rate limit on two or more GNATs, while 1 participant chose to withdraw from the study. The remaining 101 participants (89 female, 81 Native English speakers) were aged between 17 and 20 years ($M = 18.5$, $SD = 0.69$). Of these, 42 participants (41.6%) disclosed a history of self-harm, with 21 participants disclosing they had self-harmed within the past year. The majority of those disclosing self-harm reported using more than one self-harmful behaviour (n = 38). Cutting (n = 28), interfering with wound healing (n= 24), and pinching (n = 23) were the most common behaviours reported.

5.2.3 Measures

History of self-harm

Part one of the ISAS was used to measure lifetime self-harm prevalence, in the same format and with the same adjustments as used in Chapter 4. Due to considerations of time constraints with the inclusion of an additional 4 GNATs, and low reliabilities in Chapter 4 and prior research (e.g. Lindholm et al., 2011), part two of the ISAS, which measured functions, was excluded from this study.

Self-harm adapted depression stigma scale

The SH-aDSS (adapted from the DSS; Griffiths et al., 2008) used in Chapter 4 was used to explicitly measure stigma towards people who self-harm, both in terms of personal stigma and public stigma. The personal stigma subscale was close to achieving acceptable internal consistency ($\alpha = .69$) while perceived public stigma showed acceptable internal consistency ($\alpha = .76$).

Attribute ratings

The person-centred GNAT attribute categories (i.e., all categories excluding Good and Bad) were included in an attribute rating task where participants were asked to rate on a 5-point Likert scale to what extent they agreed that each attribute describes people who self-harm. This task was included

to improve likeness between explicit and implicit attitude measures. Ratings for positive and negative attributes were averaged to produce two scores for each participant, both of which showed low internal reliability (α = .51 and α = .33, respectively).

Implicit measures

Alongside the Good Person/Bad Person GNAT used in Chapter 4, a Good/Bad GNAT was created to distinguish between attitudes towards self-harmful behaviour and attitudes towards people who self-harm. To examine how self-harm was associated with different aspects of stigmatised beliefs, Safe/Dangerous, Innocent/Blameworthy, and Competent/Helpless GNATs were also created. These categories were chosen as they are common aspects of stigma (e.g. Corrigan et al., 2002; Kruis & Choi, 2020; Stull et al., 2018). GNAT procedure and timings were identical to the first quantitative study, except each test block consisted of 40 trials (20 "Go" trials) instead of 60 to reduce the total length of the GNAT section. This number of trials has been shown to be sufficient in the literature (Nosek & Banaji, 2001). Exemplars within each attribute category (see table 5.1) were chosen using the SH-aDSS, previous attitude literature (e.g. Teachman et al., 2006) and antonym/synonym searches. GNAT order was randomised.

As suggested by Nosek and Banaji (2001), an error rate of 20% or higher on a GNAT excluded participants from the analyses for that GNAT. A further threshold was added such that participants failing to achieve 80% accuracy on multiple GNATs were excluded from all analyses due to concerns of attention.

5.2.4 Procedure

This study followed ethical guidelines outlined by the British Psychological Society (2021) and received ethical approval from the Psychology Departmental Research Ethics Committee at the University of Warwick. On-screen, participants were shown an information sheet (Appendix 14) and completed a consent form (Appendix 12). Following completion of all measures, participants completed a positive mood induction task where they recalled a positive memory. This was included to counteract any negative emotion elicited by the study. Participants then read debrief information (Appendix 15) and were given a paper copy to take with them. Participants were able to ask questions about the study before, during and after participating, and were given contact details for the researcher and supervisor should they have further queries about the study.

Table 5.1:

GNAT categories and stimuli

Category	Stimuli				
Self-Harm	cutting	biting	hitting	pulling hair	scratching
Good	good	wonderful	pleasant	excellent	superb
Bad	bad	terrible	horrible	unpleasant	hideous
Good Person	capable	harmless	conscientious	reliable	trustworthy
Bad Person	weak	dangerous	attention-seeker	false	unpredictable
Safe	safe	dependable	predictable	reliable	trustworthy
Dangerous	dangerous	deceitful	unpredictable	unsafe	unstable
Innocent	innocent	virtuous	faultless	guiltless	blameless
Blameworthy	culpable	liable	blameworthy	guilty	accountable
Competent	able	capable	experienced	competent	resourceful
Helpless	unable	incapable	helpless	incompetent	powerless

The study setting was identical to that used in Chapter 4. All participants completed demographic information, before completing the SH-aDSS, attribute ratings and GNATs in a randomised order (GNATs were randomly presented in succession). Participants then completed the ISAS, positive mood induction task, and were fully debriefed. One participant chose to withdraw from the study during the GNATs and was fully debriefed according to study protocol. SH-aDSS and GNAT scores were calculated in the same way as in Chapter 4.

5.2.5 Data analysis

Data were extracted using Microsoft Excel and analysed using SPSS. As with the study in Chapter 4, SH-aDSS scores were calculated as mean item ratings on each subscale; higher scores indicated greater agreement with stigmatising views, with mid-point of 3 indicating the participant neither agreed nor disagreed with statements on average. Attribute ratings, the second explicit attitude measure, were calculated as average rating for positive and negative items, with higher scores indicative of higher association between with individuals who self-harm and the tested attributes. Correct "Go" reaction times within each block were averaged for all GNAT types, such that each GNAT type had a reaction time for both positive and negative blocks. Lower average reaction times indicated greater association between the tested attributes and self-harm. For correlations and comparison between those with and without a history of self-harm, a ratio was calculated for each GNAT by dividing average negative block reaction times by that of the positive block. The resulting scores indicated whether the participant associate self-harm with the positive (ratio above 1) or negative attribute (ratio below 1). See table 5.2 below for average explicit attitude ratings and GNAT ratios.

Paired samples t-tests were conducted for explicit stigma measures to test hypotheses 1 and 2: for hypothesis 1 SH-aDSS personal and public stigma scores were compared, for hypothesis 2 positive and negative attribute ratings were compared. Hypothesis 3 was tested using a repeated-measures ANOVA which assessed the effects of GNAT type (e.g. Good/Bad versus Competent/Helpless) and GNAT block (positive versus negative "Go" blocks) on reaction times. Correlations were also conducted to evaluate the relationship between explicit and implicit measures. Finally, a MANOVA was used to compare explicit and implicit attitude scores between those with and without a history of self-harm to test hypothesis 4. Due to the number of comparisons made, a conservative corrected p-value of .001 was again used, with tests that did not reach this threshold being further explored using Bayesian statistics with JASP (JASP Team, 2021).

Table 5.2

Average scores on explicit and implicit attitude measures

| Measure	n	M	SD
1. Personal stigma	101	2.13	.49
2. Public stigma	101	3.34	.53
3. Positive attribute ratings	101	3.10	.49
4. Negative attribute ratings	101	2.21	.55
5. Good/Bad GNAT[a] ratio	101	.96	.06
6. Good Person/Bad Person GNAT ratio	93	.96	.06
7. Safe/Dangerous GNAT ratio	97	.97	.07
8. Innocent/Blameworthy GNAT ratio	91	.97	.07
9. Competent/Helpless GNAT ratio	98	1.00	.07

[a] Go/No-Go Association Task

5.3 Results

5.3.1 Testing explicitly measured attitudes towards people who self-harm (hypotheses 1 and 2)

The paired-samples t-tests found that participants rated their personal stigma (M = 2.13, SD = 0.49) lower than public stigma (M = 3.34, SD = 0.53; $t(100)$ = 19.9, p <.001), with a large effect size (d = 2.37), replicating study 1's finding. Additionally, participants explicitly associated people who self-harm with positive (M = 3.11, SD = 0.49), rather than negative (M = 2.21, SD = 0.55), attributes ($t(100)$ = 10.3, p < .001), also with a large effect size (d = 1.73). As seen in Figure 5.1, compared to the scale mid-point, participants agreed that people who self-harm are good people ($t(100)$ = 6.13, p < .001) and innocent ($t(100)$ = 4.55, p < .001), and disagreed that people who self-harm are bad people ($t(100)$ = -19.0, p < .001), dangerous ($t(100)$ = -7.892, p < .001), safe ($t(99)$ = -6.51, p < .001) and blameworthy ($t(100)$ = -12.6, p < .001). Participant ratings for the competent attribute was

significant at the p < .05 level, but not the corrected p-value of .001 ($t(99)$ = 2.57, p < .05). Bayesian analysis was inconclusive for competent ratings (BF_{10} < 3, BF_{01} < 3).

Figure 5.1

Average agreement rating for all attributes, separated into their GNAT pairs, with error bars showing 95% confidence intervals
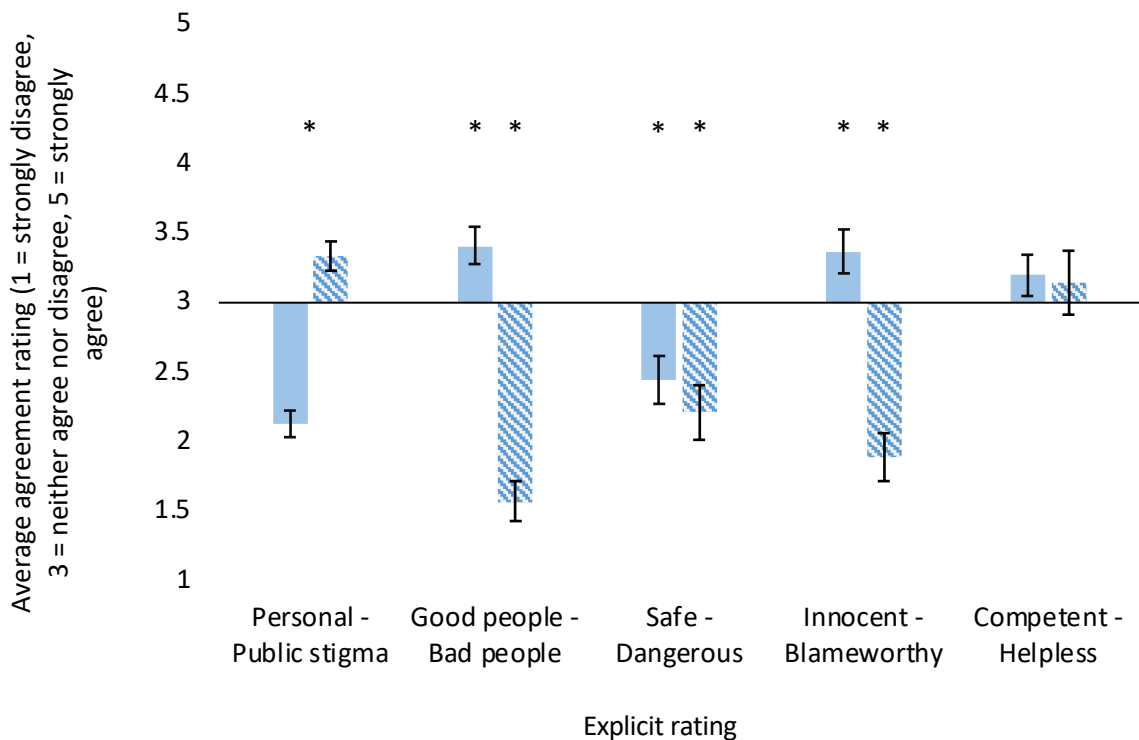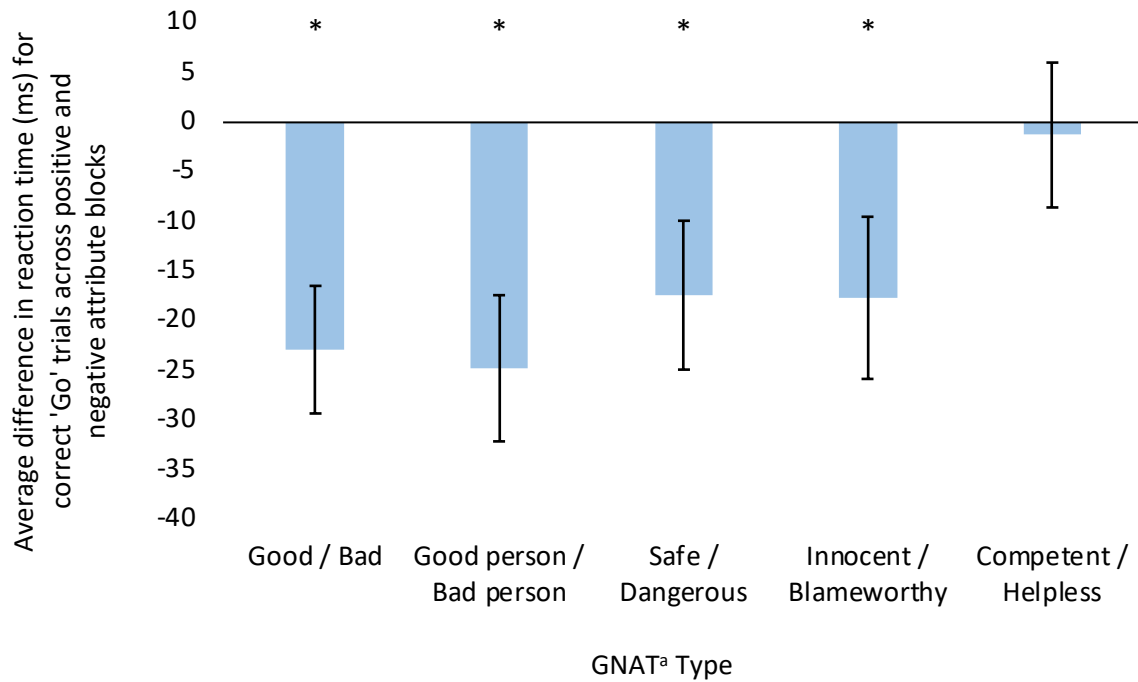

 * indicates p < .001

5.3.2 Exploring implicit associations between attributes and self-harm (hypothesis 3)

A repeated-measures ANOVA was conducted to assess the effect of GNAT block ("Go" for positive or negative valenced attributes) and GNAT type (e.g. Dangerous/Safe). Data from the 79 participants who had reached the acceptable accuracy rate on all GNAT measures were analysed. There were significant main effects for GNAT block ($F(1, 78)$ = 49.3, p < .001, η_p^2 = .39) and GNAT type ($F(1, 78)$ = 18.8, p < .001, η_p^2 = .50), signifying differing reaction times for positive and negative blocks regardless of GNAT type, and differing reaction times for GNAT type regardless of GNAT block. The interaction between GNAT block and type was also significant ($F(4, 75)$ = 8.48, p <.001, η_p^2 = .34). Simple main effects analysis revealed that reaction times were different across blocks for all GNATs except Helpless-Competent (see Figure 5.2). The lack of difference for this GNAT was supported by Bayesian statistics (BF_{01} = 4.80). As such, the results showed that participants responded faster when

pairing self-harm with bad, bad person, dangerous and blameworthy, compared to good, good person, safe and innocent respectively, suggesting a greater mental association between self-harm and these negative concepts.

Figure 5.2

Correct 'Go' reaction time differences across all 5 GNATs with 95% confidence intervals

^a Go/No-Go Association Task

* indicates p < .001

Bivariate correlations between all stigma measures were conducted to examine the relationship between explicit and implicit measures (Table 5.3). Personal stigma ratings were negatively correlated with positive attribute ratings (r = -.38, p < .001) and positively correlated with negative attribute ratings (r = .48, p < .001), with positive and negative attribute ratings being negatively correlated (r = -.422, p < .001). Five additional correlations were significant at the p < .05 level but did not survive the correction to p < .001. Using Bayesian correlations, one of these did obtain sufficient support: personal stigma and perceived public stigma ratings were positively correlated (r = .30, BF_{10} = 6.41).

Table 5.3:

Correlations between explicit and implicit attitude scores

Measure	1	2	3	4	5	6	7	8	9
1. Personal stigma	-								
2. Public stigma	.30	-							
3. Positive attribute ratings	-0.38*	-.08	-						
4. Negative attribute ratings	0.48*	.18	-0.42*	-					
5. Good/Bad GNAT[a] ratio	-.03	-.19	-.07	.09	-				
6. Good Person/Bad Person GNAT ratio	.30	.00	-.04	.09	.13	-			
7. Safe/Dangerous GNAT ratio	.10	.10	.06	.14	.23	.16	-		
8. Innocent/Blameworthy GNAT ratio	.19	.02	-.09	.06	.08	.21	.09	-	
9. Competent/Helpless GNAT ratio	.17	.02	-.04	.15	.28	.03	.26	.01	-

[a] Go/No-Go Association Task

* indicates p < .001

Bayesian null hypothesis testing supported a lack of correlation between all GNAT measures (BF_{01} > 3), and between all GNAT measures and positive attribute ratings (BF_{01} > 3). There was also support for a lack of correlation between 4 GNATs and personal stigma (BF_{01} > 3; inconclusive for Safe/Dangerous Ratio); 3 GNATs and public stigma (BF_{01} > 3; inconclusive for Good/Bad Ratio and Innocent/Blameworthy Ratio); and 4 GNATs and negative attribute ratings (BF_{01} > 3; inconclusive for Innocent/Blameworthy Ratio). There was also support for a lack of correlation between perceived public stigma and positive attribute ratings (BF_{01} > 3; inconclusive for negative attribute ratings, BF_{01} > 3).

5.3.3 Comparing attitudes between those with and without a history of self-harm (hypothesis 4)

Forty-two (41.6%) of the participants disclosed a history of self-harm, with half of these (20.8% of the entire sample) reporting self-harm in the past year. Most participants who had ever self-harmed reported using multiple behaviours (n = 38), with cutting (n = 28), interfering with wound healing (n = 24), and pinching (n = 23) being the most commonly reported behaviours.

A MANOVA was conducted to compare explicit attitude scores, including SH-aDSS subscales and attribute ratings, between participants with and without a history of self-harm (see table 5.4). Compared with those who had never self-harmed, participants with a history of self-harm scored lower on personal stigma and agreed more strongly that people who self-harm are good people. These participants also rated people who self-harm as less dangerous and blameworthy, and more competent and innocent. Due to differing sample sizes, independent t-tests were conducted to assess group differences in implicit attitude scores (see table 5.5). All group differences for GNAT ratios were not significant (p > .001). Bayesian null hypothesis testing supported that there were no group differences for 4 of the GNATs (BF_{01} > 3; inconclusive for Safe/Dangerous). Bayesian analysis was also inconclusive for differences in perceived public stigma ratings between those with and those without a history of self-harm (BF_{10} < 3, BF_{01} < 3).

Table 5.4

Differences in explicit attitude between those with and without a history of self-harm

Measure	Self-harm history (n = 42)		No self-harm history (n = 54)		F(1, 94)	η2
	M	*SD*	*M*	*SD*		
SH-aDSS[a]						
Personal stigma	1.89	.41	2.31	.49	20.37*	.18
Public stigma	3.44	.56	3.29	.52	1.84	.02
Attribute ratings						
Bad people	3.57	.74	3.28	.60	4.66	.47
Good people	1.57	.83	1.61	.71	.06	.00
Safe	2.45	.71	2.44	.93	.00	.00
Dangerous	1.83	.94	2.56	.93	14.27*	.13
Innocent	3.69	.92	3.15	.66	11.30	.11
Blameworthy	1.62	.76	2.11	.93	7.77	.08
Competent	3.50	.77	2.94	.69	13.89*	.13
Helpless	3.12	1.19	3.24	1.12	.27	.00

[a] Self-harm adapted depression stigma scale

* indicates p < .001

Table 5.5

Differences in implicit attitude between those with and without a history of self-harm

Measure	Self-harm history			No self-harm history		
	n	*M*	*SD*	*n*	*M*	*SD*
GNAT[a] ratios						
Good/Bad	42	.96	.06	56	.96	.06
Good Person/Bad Person	39	.95	.06	51	.96	.06
Safe/Dangerous	42	.98	.06	52	.97	.07
Innocent/Blameworthy	39	.96	.05	49	.97	.07
Competent/Helpless	40	1.00	.07	55	1.00	.07

[a] Go/No-Go Association Task

* indicates p < .001

5.4 Discussion

The current study aimed to replicate the findings outlined in Chapter 4 while also further exploring the mental associations people make between individuals who self-harm and various attributes. To do this, the current study expanded the dichotomous good-bad person implicit attitude measure to assess how participants evaluate individuals who self-harm in terms of blameworthiness, dangerousness and competence. This study replicated most of the findings from Chapter 4: participants rated their own stigma lower than public stigma, and self-harm was implicitly more associated with negative, as opposed to positive, attributes. Furthermore, participants also explicitly associated individuals who self-harm with positive, rather than negative, attributes. Contrary to the study in Chapter 4, those with a history of self-harm explicitly rated their personal stigma lower than that of participants without a history of self-harm. However, there were no group differences on any of the implicit measures, mirroring past literature (Teachman et al., 2006).

> **Hypothesis 1:** As with the prior study, it was hypothesized that participants would explicitly rate their own attitudes as being more positive than perceived public stigma.

As with the study from Chapter 4, participants rated their personal stigma as lower than perceived public stigma with a large effect size. This also mirrored prior findings when using the DSS (Griffiths et al., 2011) and adapted versions of the DSS, for example when investigating stigma towards prescription drug abuse (Shupp et al., 2020).

> **Hypothesis 2:** It was predicted that participants would explicitly associate individuals who self-harm with positive attributes, namely good, good person, competent, safe and innocent.

Participants explicitly associated individuals who self-harm with positive, as opposed to negative, attributes. These positive explicit attitudes are not unexpected considering previous research, including that individuals tend to hold tolerant explicit attitudes towards people who self-harm (Nielsen & Townsend, 2018). Furthermore, students are generally liberal (Hastie, 2007) and therefore may either hold more liberal attitudes or feel the need to appear to hold more socially-acceptable attitudes.

Hypothesis 3: It was predicted that individuals who self-harm would be implicitly associated with negative attributes, namely bad, bad person, helpless, dangerous and blameworthy.

On the whole, individuals who self-harm were associated with negative attributes on the implicit measure: faster reaction times were observed when self-harm was paired with bad, bad person, dangerous and blameworthy. However, reaction times were not significantly different when self-harm was paired with competent or helpless attributes. This suggests that participants generally held negative underlying attitudes towards people who self-harm. This could explain some of the responses experienced by interviewees in Chapter 3, along with prior research describing negative experiences of people who self-harm (Lavis & Winter, 2020).

Hypothesis 4: It was predicted that participants with a history of self-harm would hold more positive attitudes than those without a history of self-harm.

Contrary to Chapter 4, participants with a history of self-harm did display more positive attitudes than those without a history of self-harm on some measures. Students who self-harm scored lower on the personal stigma subscale. On the explicit attribute ratings, students agreed more strongly that people who self-harm are good people, more competent and more innocent, while disagreeing more strongly that people who self-harm are dangerous and blameworthy. While it is unclear why this study found a difference in personal stigma, Chapter 4 did not include attribute ratings. As such, the differences in explicit attitudes found here between students with and without a history of self-harm may be due to explicit attitudes being measured in a more simple and direct way.

While there were no differences between groups on any of the implicit measures, the group differences for the Safe vs Dangerous GNAT were inconclusive. One possibility for this is that this GNAT may have been interpreted in multiple ways. If interpreted as intended, dangerousness would have been conceived as the level of threat participants felt from people who self-harm. However, there are two other potential interpretations. Firstly, the task could have been misconstrued as the danger people who self-harm pose to themselves. Secondly, this GNAT could have been interpreted as the dangerousness of self-harming behaviours. As such, this task could be viewed as ambiguous, which reduces the inferences which can be made from the findings.

5.4.1 Conclusion

The current study aimed to explore attitudes in more depth than the previous study. To do so, explicit attitude measures were expanded to include attribute measures which matching the implicit stimuli, and implicit measures were expanded to include measures of cognitive-based attitudes. Participants again rated their own stigma as lower than perceived public stigma, while also rating people who self-harm positively on attribute ratings. Alternatively, on the implicit measures, self-harm was associated with negative affective stimuli (bad and bad person) and some negative cognitive stimuli (dangerous and blameworthy).

While the affect-based implicit measures distinguished between attitudes towards self-harmful behaviours and people who self-harm through the use of person and non-person focused attributes, cognition-based implicit measures were less direct and more open to interpretation. For instance, although the concept of competence is decidedly person-focused, the dangerousness implicit measure may be interpreted in terms of dangerous behaviour or dangerous person. As such, the next study aimed to introduce a new procedure to implicitly measure the association between dangerousness, and self-harm behaviours and people who self-harm.

Chapter 6: Using a novel task to implicitly measure associations between self-harm and dangerousness

6.1 Introduction

The study in Chapter 5 used explicit and implicit measures to explore affective and cognitive attitudes towards people who self-harm. The explicit measures showed positive attribute ratings and higher perceived public than personal stigma. Alternatively, both of the affective and two of the cognitive implicit measures indicated negative associations with self-harm. There was, however, potential ambiguity with regards to whether the implicit task measuring dangerousness was accessing associations with self-harmful behaviours or people who self-harm. As such, the current study aimed to create a new procedure to implicitly measure the association between dangerousness and both self-harmful behaviours and people who self-harm.

As there are not often a series of stimuli available to represent individuals with various conditions, previous research exploring implicit measure of attitude towards, for example, those with mental health conditions have resorted to using symptoms of those conditions as stimuli within implicit topic categories (e.g. Teachman & Brownell, 2001). However, there is a potential problem with this, as measured associations could in fact be assessing associations between the condition itself and the attribute categories, rather than assessing associations with people with said conditions. Therefore, chapters 4 and 5 used self-harmful behaviours as a GNAT topic category with person-focused concepts within the attribute categories, e.g. Competent and Helpless, to examine the associations between people who self-harm, and negative and positive attributes. However, the Dangerous and Safe categories used in chapter 5 are not person-focused, resulting in various possible interpretations: self-harmful behaviour is viewed as dangerous, people who self-harm are viewed as a danger to themselves, or people who self-harm are viewed as dangerous. A similar dilemma is evident in Denenny et al. (2014), where implicit measures were used to assess the dangerousness of schizophrenia. While the authors conclude that people with schizophrenia were viewed as dangerous, the implicit bias may actually suggest that schizophrenia as an illness is believed to be dangerous, particularly when considering that the schizophrenia stimuli consisted of symptoms of this disorder.

This final study aimed to differentiate between attitudes towards self-harming individuals and self-harmful behaviour by using a learning procedure where participants were trained to associate non-

word names with self-harm, resulting in a person-focused substitution for the Self-harm GNAT category. The following hypotheses were made.

> **Hypothesis 1:** It was hypothesized that participants would explicitly rate their own attitudes as being more positive than perceived public stigma.

As with the prior chapters, it was predicted that participants would rate their personal stigma levels as lower than perceived public stigma. This finding would replicate the past two chapters as well as research showing tolerant explicit attitudes towards people who self-harm (Nielsen & Townsend, 2018).

> **Hypothesis 2:** It was predicted that participants would explicitly associate individuals who self-harm with positive attributes, namely safe, predictable, dependable, calming and trustworthy.

The second hypothesis also predicted a replication of the last chapter. Participants would explicitly rate the extent to which they associated implicit attribute stimuli (e.g. dangerous and safe) with individuals who self-harm. It was predicted that participants would agree that people who self-harm are associated with positive, safe attributes, and disagree that people who self-harm are associated with negative, dangerous attributes. This would replicate the positive explicit attitudes found in the previous two studies and past literature (e.g., Nielsen & Townsend, 2018).

> **Hypothesis 3:** It was predicted that self-harm and individuals who engage in self-harm would be implicitly associated with dangerous attributes.

It was expected that participants would respond quicker when self-harming behaviours were paired with dangerous, rather than safe, attributes, indicating a mental association between self-harming behaviours and dangerous. Additionally, the current study implemented a learning procedure of non-word names representing people who self-harm to further explore implicit attitudes towards people who self-harm. It was predicted that participants would respond quicker when these names were paired with dangerous, rather than safe, attributes, indicating a mental association between people who self-harm and dangerous.

Hypothesis 4: It was predicted that participants with a history of self-harm would hold more positive attitudes than those without a history of self-harm.

Chapter 3 found that interviewees perceived higher understanding and empathy from peers with personal experience of self-harm. Additionally, prior research investigating mental illness attitudes has found more positive attitudes among those with a history of mental illness (Teachman et al., 2006). While the previous two studies found mixed results concerning attitude differences between those with and without a history of self-harm, it was again predicted that participants who had self-harmed would hold more positive attitudes.

6.2 Method

6.2.1 Design

As with the quantitative studies outlined in chapters 4 and 5, a mixed design was used to examine implicit and explicit attitudes towards people who self-harm.

Independent Measures: The only between-subject independent variable measured in the current study was history of self-harm. As with the prior study, this was assessed by Yes/No responses to whether the participant had ever intentionally harmed themselves. Within-subject independent variables consisted of type of attitude measure (explicit and implicit), SH-aDSS subscale (personal and public), attribute rating valence (positive and negative), implicit block (positive and negative), and GNAT version with two levels (self-harm and people who self-harm).

Dependent Measures: The dependent measures consisted of average scores on the explicit attitude measures (SH-aDSS and attribute ratings), and average reaction times on correct "Go" trials of the implicit measure within each block of the two versions.

6.2.2 Participants

Initially, 115 psychology students (97 female; 89 Native English speakers) with an average age of 18.9 years (*SD* = 1.06) participated in study 3 as part of course requirement for first year Psychology undergraduates at the University of Warwick. GNAT error rates were calculated two days into testing (n = 27). As with the prior quantitative studies, an 80% accuracy requirement was

implemented for the GNATs in accordance with (Nosek & Banaji, 2001). Of these, 1 participant did not meet the accuracy requirement for the self-harm GNAT while 6 did not meet this requirement for the person who self-harms GNAT. Due to this high error rate for the new GNAT among these initial participants, a third learning task was added in an attempt to improve accuracy rates for the remaining participants. Of the remaining participants, 55 met the 80% accuracy requirement for the person GNAT, and 62 met this threshold for the behaviour GNAT. One participant chose to not respond to any explicit measure question, resulting in the explicit measures being completed by 114 participants. In summary, a total of 115 participants completed at least one measure. Explicit attitude was analysed for 114 participants, and implicit attitudes were analysed for 73 participants, with 52 participants reaching sufficient accuracy on both implicit measures.

Forty-nine participants (42.6%) disclosed a history of self-harm, with 25 of these (21.8% of the entire sample) reporting that they had self-harmed in the past year. All provided behaviours were used by at least one participant, with skin-picking (n = 4), over-exercising and punching out (both n = 1) being added as other behaviours. The most common self-harming behaviours reported were pinching (n = 31), severe scratching (n = 27) and interfering with wound healing (n = 27), with cutting being the most reported main form of self-harm (n = 6).

6.2.3 Measures

History of self-harm

As with Chapters 4 and 5, part 1 of the ISAS was used to measure self-harm prevalence.

Self-harm adapted depression stigma scale

The SH-aDSS (adapted from the DSS; Griffiths et al., 2008) used in Chapters 4 and 5 was used to explicitly measure stigma towards people who self-harm, both in terms of personal stigma and public stigma. For the purposes of this study, two items were added to each subscale, relating to the risk people who self-harm pose to themselves and to others (i.e. "people who self-harm pose a significant risk to [themselves/others]"). This was to explicitly ask participants to rate perceived dangerousness of people who self-harm, in order to increase similarity between explicit and implicit measures. With the new additions, the internal reliability of both subscales increased, with both personal (α = .76) and public (α = .82) stigma subscales achieving acceptable internal consistency.

Attribute ratings

An attribute rating procedure identical to that used in Chapter 5 was included where participants rated association between people who self-harm and the GNAT attribute stimuli. This was introduced to explicitly measure stigma in a way as consistent with the implicit procedure as possible. Participants were asked to rate the extent to which the GNAT attribute stimuli (i.e., all stimuli within the Dangerous and Safe categories) described people who self-harm. This was measured on a 5-point Likert scale with 1 representing strongly disagree and 5 representing strongly agree. Ratings for positive and negative attributes were averaged to produce two scores for each participant. The composite positive attribute ratings showed below acceptable internal reliability (α = .63), while the composite negative attribute rating reached acceptable internal reliability (α = .73).

Implicit measures

Two GNATs were used to implicitly measure stigma. Both measures contained 5 stimuli each for the attribute categories Dangerous and Safe (see table 6.1). These were paired according to the GNAT procedure used previously with Self-harm for the behaviour GNAT and "Person who self-harms" for the person GNAT. Self-harm stimuli were identical to those in the previous studies. Safe and Dangerous stimuli from the prior study in Chapter 5 was used if they could refer to both a behaviour and a person, with additional exemplars being chosen using synonyms and antonyms. The person GNAT stimuli were created using an online non-word generator (Fake Word Generator, n.d.). Non-words which could feasibly be used as names were extracted and piloted online with 73 participants being recruited via social media, 49 of which completed all questions. Participants were asked to provide any words from any language which came to mind when presented with each non-word. Participants were then instructed to imagine each non-word as the name of a person, before being asked to rate how likable, reliable, and threatening each person would be. Finally, participants rated the ease of imagining each non-word as a name. All ratings were 7-point Likert scales where 1 represented "not at all [adjective]", 4 represented "neutral", and 7 represented "extremely [adjective]". Any non-words with harm-related associations (e.g. "Soaranu" and "sore") were discarded, leaving 12 non-word names. The 10 non-words for the study were selected by matching names with similar threateningness ratings and overall positive associations, creating 2 groups of non-word names with similar valence ratings. One group was used for the topic category "Person who self-harms" while the second was used as distractors alongside the "No-Go" attributes within each block (see table 6.1).

Table 6.1:

GNAT categories and stimuli

Category	Stimuli				
Self-Harm	cutting	biting	hitting	pulling hair	scratching
Person who self-harms	Nemunni	Ybuwyn	Glilmed	Nihspyr	Plifal
Distractor 'names'	Faudio	Orleorn	Biasdo	Cheilith	Feandra
Safe	safe	predictable	calming	dependable	trustworthy
Dangerous	dangerous	unpredictable	violent	unsafe	scary

6.2.4 Procedure

As with the prior empirical chapters, the current study was conducted according to the ethical guidelines outlined by the British Psychological Society (2021) and received full ethical approval from the Psychology Departmental Research Ethics Committee at the University of Warwick. Participants read an on-screen information sheet (Appendix 16) and completed the consent form (Appendix 12). Following completion of all measures, participants completed a positive mood induction task where they recalled a positive memory. This was included to counteract any negative emotion elicited by the study. After the study, participants read on-screen debrief information (Appendix 17), which they also received a paper copy of. Participants were able to ask questions about the study before, during and after participation, and were given contact details of the researcher and supervisors should they have any further queries.

Study setting and protocol was identical to the previous studies: participants completed demographic questionnaires; the sets of explicit and implicit measures in a randomised order; part 1 of the ISAS; and, finally, the positive mood induction task. In the explicit set of tasks, participants completed the SH-aDSS and attribute ratings in a random order. In the implicit set of tasks, participants first completed a series of learning tasks. The first of these presented the 10 non-word names to the participant with a " ~ " symbol denoting the 5 people who had a history of self-harm. Participants were asked to take time to learn these words, with the button for the next page

appearing after 20 seconds had elapsed. Following this, participants saw a 10x3 matrix where each name was presented 3 times. Participants were asked to click to highlight the names of the people who self-harm. Following high GNAT error rates among the initial 27 participants, an additional learning task was introduced. This task was presented at the start of the GNAT, and involved both the non-word self-harm names and distractor names appearing in the centre of the screen. Each name was presented twice, resulting in 20 trials. Participants were instructed to press the spacebar if the person self-harms or the right arrow key to move to the next trial. Feedback in the form of a green circle for correct and red cross for incorrect were given after each trial. Following this, participants completed the 2 GNATs in a random order, before completing the last learning task again, with the additional instruction to respond as quickly and accurately as possible. This acted as a learning test to provide a measure of strength of association between the non-word names and self-harm.

6.2.5 Data analysis

Data were extracted using Microsoft Excel and analysed using SPSS. As with the study in Chapter 4, SH-aDSS scores were calculated as mean item ratings on each subscale; higher scores indicated greater agreement with stigmatising views, with mid-point of 3 indicating the participant neither agreed nor disagreed with statements on average. Attribute ratings, the second explicit attitude measure, were calculated as average rating for positive and negative items, with higher scores indicative of higher association between with individuals who self-harm and the tested attributes. Correct "Go" reaction times within each block were averaged for both GNAT types, such that each GNAT type had a reaction time for both positive and negative blocks. Lower average reaction times indicated greater association between the target (i.e., Self-Harm or Person who self-harms) and the tested attribute (i.e., Dangerous or Safe). For correlations and comparison between those with and without a history of self-harm, a ratio was calculated for each GNAT by dividing average negative block reaction times by that of the positive block. The resulting scores indicated whether the participant associate self-harm with the positive (ratio above 1) or negative attribute (ratio below 1; see table 6.2 for average scores on all attitude measures).

Paired samples t-tests were conducted for explicit stigma measures to test hypotheses 1 and 2: for hypothesis 1, SH-aDSS personal and public stigma scores were compared; for hypothesis 2, positive

Table 6.2

Summary of attitude scores

Measure	*n*	*M*	*SD*
1. Personal stigma	114	2.26	.56
2. Public stigma	114	3.52	.57
3. Positive attribute ratings	114	2.55	.54
4. Negative attribute ratings	114	2.86	.72
5. Behaviour GNAT[a] ratio	65	.94	.07
6. Person GNAT ratio	60	1.00	.07

[a] Go/No-Go Association Task

and negative attribute ratings were compared. Hypothesis 3 was tested using a repeated-measures ANOVA which assessed the effects of GNAT type (i.e., Self-Harm vs Person who Self-Harms) and GNAT block (Safe versus Dangerous "Go" blocks) on reaction times. Correlations were also conducted to evaluate the relationship between explicit and implicit measures. Finally, due to the high error rates on the implicit measures meaning the sample size would be largely diminished if a MANOVA was used, a series of t-tests were conducted to compare explicit and implicit attitude scores between those with and without a history of self-harm to test hypothesis 4. Due to the high number of comparisons, a conservative p-value of below .001 was used to indicate significance.

6.3 Results

6.3.1 Testing explicitly measured attitudes towards people who self-harm (hypotheses 1 and 2)

The paired-samples t-tests found that participants rated their personal stigma (*M* = 2.43, *SD* = 0.52) lower than public stigma (*M* = 3.58, *SD* = 0.56; *t*(113) = 19.0, *p* < .001), with a large effect size (*d* = 2.37), replicating the findings presented in chapters 4 and 5. When comparing the dangerous and safe attribute ratings, the adjusted significance level was not reached, although there was a tendency for participants to rate people who self-harm as more dangerous (*M* = 2.86, *SD* = 0.72) than safe (*M* = 2.55, *SD* = 0.54; *t*(113) = 3.08, *p* = .003). This trend was supported by Bayesian analysis (BF_{10} = 8.99).

6.3.2 Testing implicit associations between dangerousness and self-harm (hypothesis 3)

A repeated-measures ANOVA was conducted to assess the effect of GNAT block ("Go" for Safe or Dangerous) and GNAT type (Self-harm or Person who self-harms). Data from the 52 participants who had reached the acceptable accuracy rate on both GNAT measures were analysed. There was a significant main effect for GNAT block ($F(1, 51) = 35.8$, $p < .001$, $\eta_p^2 = .41$), indicating differing reaction times across all safe and dangerous "go" trials, although there was not a significant main effect for GNAT type ($F(1, 51) = 2.44$, $p > .001$). The interaction between GNAT block and GNAT type was significant ($F(1, 51) = 14.1$, $p < .001$, $\eta_p^2 = .22$). Simple main effects analysis revealed that the difference between block type was only significant for the Self-Harm GNAT ($t(64) = 6.93$, $p < .001$) and not the Person who self-harms GNAT ($t(64) = .854$, $p > .001$; see figure 6.1). The lack of a difference between blocks for the person who self-harms GNAT was supported by Bayesian null-hypothesis testing ($BF_{01} = 5.00$). This showed that participants were faster when pairing self-harm with dangerous, as opposed to safe, attributes, suggesting that self-harmful behaviours, but not people who self-harm, are associated with being dangerous.

Figure 6.1

Reaction times for Self-harm behaviour and Person who self-harms GNATs within Dangerous and Safe blocks
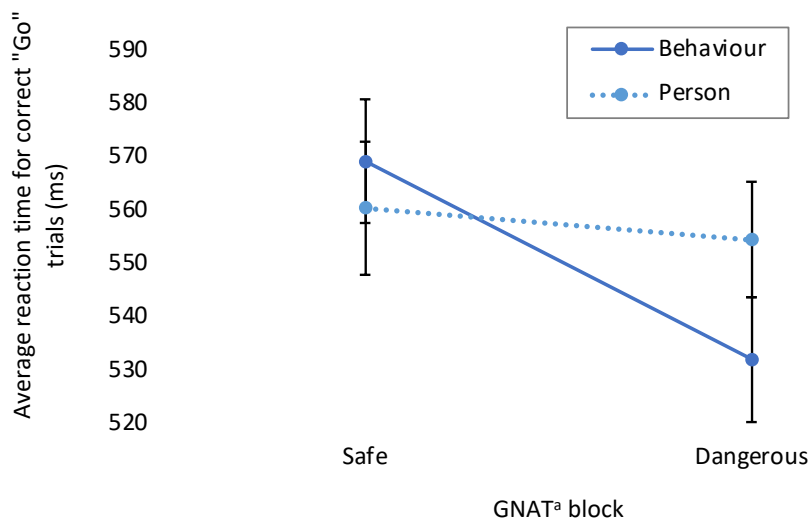
ª Go/No-Go Association Task

Bivariate correlations between all stigma measures were conducted to examine the relationship between explicit and implicit measures (see table 6.3). There was a tendency for personal stigma to be positively correlated with perceived public stigma (p = .006) which was supported by Bayesian correlation testing (BF_{10} > 3), indicating that those higher in personal stigma also rated perceived public stigma as higher. Personal stigma was positively correlated with dangerous attribute ratings and negatively correlated with safe attribute ratings, suggesting that higher personal stigma was associated with viewing people who self-harm as more dangerous and less safe. In addition, dangerous attribute ratings and safe attribute ratings were negatively correlated, indicating that rating people who self-harm as more dangerous was associated with rating them as less safe. Finally, average reaction times on the safe trials of the person who self-harms GNAT were positively correlated with personal stigma ratings, signifying that those higher in personal stigma took longer to pair people who self-harm with safe attributes, suggesting a weaker link between these two concepts. There was also a trend positive correlation between dangerous attribute ratings and the average reaction times on the safe trials of this same GNAT (r = .307, p = .018), although Bayesian testing proved inconclusive (BF_{10} < 3, BF_{01} < 3).

6.3.3 Comparing attitudes between those with and without a history of self-harm (hypothesis 4)

Self-harm rates were similar to in chapters 4 and 5, with 49 participants (42.6%) disclosing a history of self-harm, and 25 participants (21.8% of the entire sample) reporting self-harm within the past year. While cutting was the most reported main form of self-harm (n = 6), the most common reported behaviours were pinching (n = 31), severe scratching (n = 27) and interfering with wound healing (n = 27).

None of the t-tests examining explicit attitude differences between those with and without a history of self-harm reached the p < .001 significance level, although there were trends for more positive attitudes on the personal stigma SH-aDSS subscale, and dangerous and safe attribute ratings (see table 6.4). Bayesian t-tests offered support for a difference between these groups for personal stigma ratings (BF_{10} > 3) and dangerous attribute ratings (BF_{10} > 3), but was inconclusive for safe attribute ratings (BF_{10} < 3, BF_{01} < 3). None of the t-tests examining implicit attitude differences between those with and without a history of self-harm reached the p < .001 significance level (see table 6.5).

Table 6.3

Correlations between all attitude measures

Measure	1	2	3	4	5	6
1. Personal stigma	-					
2. Public stigma	.19	-				
3. Positive attribute ratings	-.39*	-.02	-			
4. Negative attribute ratings	.62*	.06	-.47*	-		
5. Behaviour GNAT[a] ratio	-.06	.12	.23	-.06	-	
6. Person GNAT ratio	-.24	-.03	.21	-.17	-.13	-

[a] Go/No-Go Association Task

* indicates $p < .001$

Table 6.4

Comparing explicit attitudes between those with and without a history of self-harm

Measure	Self-harm history (n = 49)		No self-harm history (n = 61)		F(1, 108)	η2
	M	*SD*	*M*	*SD*		
SH-aDSS[a]						
Personal stigma	2.09	.51	2.40	.57	8.45	.07
Public stigma	3.61	.53	3.46	.59	1.82	.02
Attribute ratings						
Safe	2.67	.51	2.45	.55	.04	.04
Dangerous	2.67	.68	3.05	.73	.01	.07

[a] Self-harm adapted depression stigma scale

* indicates p < .001

Table 6.5

Comparing implicit attitudes between those with and without a history of self-harm

Measure	Self-harm history			No self-harm history			*t*	*df*	*p*
	n	*M*	*SD*	*n*	*M*	*SD*			
GNAT[a] ratios									
Behaviour	26	.95	.07	36	.93	.08	.99	60	.33
Person	25	.98	.07	32	1.00	.07	-1.20	55	.24

[a] Go/No-Go Association Task

* indicates p < .001

6.4 Discussion

The current study aimed to replicate findings of chapters 4 and 5, while also differentiating between associations of dangerousness with self-harming behaviours and people who self-harm. To do so, the current study used non-word names to represent people who self-harm in the implicit task. This study replicated the finding from chapters 4 and 5 that participants rated their own stigma as lower than public stigma. However, this study was the first to find that participants explicitly associated people who self-harm with negative (dangerous), rather than positive (safe), attributes. With regards to the implicit measures, participants associated self-harmful behaviours, and not people who self-harm, with dangerous attributes. Furthermore, this study was the only one in the thesis to find a correlation between implicit and explicit measures: participants took longer to implicitly associate people who self-harm with safe attributes when they scored higher on personal stigma. This study also found that participants with a history of self-harm rated their personal stigma lower than participants without experience of self-harm, as well as rating people who self-harm as less dangerous. As with the prior chapters and past literature (Teachman et al., 2006), there were no group differences on the implicit measures.

> **Hypothesis 1:** It was hypothesized that participants would explicitly rate their own attitudes as being more positive than perceived public stigma.

As with the last two chapters, personal stigma was rated lower than perceived public stigma. This also replicated prior findings when using the original DSS (Griffiths et al., 2011) and an adapted version of the DSS which explored stigma towards people who abuse prescription drugs (Shupp et al., 2020). In the present study, these two subscales were also positively correlated, indicating that participants rated public stigma as higher when their own stigma was high. This may represent a self-image preservation bias such that participants adjusted their view of public stigma to justify their personal stigma.

> **Hypothesis 2:** It was predicted that participants would explicitly associate individuals who self-harm with positive attributes, namely safe, predictable, dependable, calming, and trustworthy.

In conflict with expectations and the findings of Chapter 4, participants explicitly associated people who self-harm with dangerous, rather than safe, attributes. This was unexpected as past research

has found that individuals hold tolerant explicit attitudes towards people who self-harm (Nielsen & Townsend, 2018). One possibility for this finding is that participants felt secure in expressing their true attitudes with regards to the dangerousness of people who self-harm. However, they also may have interpreted this section as the danger which people who self-harm pose to themselves. For instance, when agreeing that people who self-harm are unpredictable, they could have viewed this as people who self-harm being unpredictable in terms of their self-harm, rather than exhibiting unpredictable behaviour towards the participant. It is suggested that future research should aim to differentiate between danger to the self and danger to others when exploring attitudes towards people who self-harm.

> **Hypothesis 3:** It was predicted that self-harm and individuals who engage in self-harm would be implicitly associated with dangerous attributes.

On the behaviour GNAT, participants associated self-harming behaviours with dangerous, rather than safe, attributes, indicating a negative underlying attitude towards self-harm. However, the person GNAT revealed no difference in reaction times across dangerous and safe blocks. This indicates that the participants did not associate people who self-harm with either dangerous or safe attributes. It is possible that this is due to the non-word names being insufficiently learned, and therefore not being mentally paired with self-harm. However, this study did find a correlation between reaction times on the block pairing people who self-harm with safe attributes and explicit personal stigma. This correlation suggests that people high in personal stigma of self-harm find it more difficult to associate people who self-harm with safe attributes. Therefore, it is possible that the lack of association represents a neutral underlying attitude in relation to the dangerousness of people who self-harm. Furthermore, there is also the possibility that the task was interpreted, at least by some participants, as the risk people who self-harm pose to themselves. It is suggested that future implicit research should aim to develop methods to fully explore dangerousness attitudes, including both risk to the self and risk to others.

> **Hypothesis 4:** It was predicted that participants with a history of self-harm would hold more positive attitudes than those without a history of self-harm.

Participants with a history of self-harm rated their personal, but not perceived public, stigma lower than participants without such a history. Additionally, participants who had self-harmed were less likely to explicitly associate people who self-harmed with dangerous attributes. There were no group

differences on either implicit measure. This replicates findings in the previous quantitative chapters. Furthermore, more positive explicit attitudes are consistent with Chapter 3's finding that peers who self-harmed were more empathetic and understanding than those without such experience. The lack of difference on implicit measures is also unsurprising considering past literature (Teachman et al., 2006).

6.4.1 Conclusion

The current study aimed to differentiate between dangerousness attitudes towards self-harming behaviours and people who self-harm on implicit measures of attitude. For this purpose, participants were trained to associate non-word names with a history of self-harm, following which they completed GNATs pairing these names and self-harming behaviours with dangerous and safe attributes. In addition, participants completed explicit attitude measures, namely the adapted DSS which consisted of personal stigma and perceived stigma subscale, and dangerous and safe attribute ratings. Explicitly, participants rated their own personal stigma as lower than public stigma. However, participants also explicitly associated people who self-harm with dangerous attributes. It was concluded that this was due either to participants feeling secure in expressing their underlying attitudes or interpreting the question as the danger people who self-harm pose to themselves. It was suggested that future research aim to distinguish between danger to the self and others when measuring associations between dangerousness and people who self-harm.

On the implicit attitude measures, self-harming behaviours were associated with dangerous, not safe, attributes. This was expected as self-harming behaviours by definition cause harm to the individual. However, there was no significant differences in reaction times across dangerous and safe blocks for the person who self-harms GNAT. This suggests that participants on average did not associate people who self-harm with either dangerous or safe attributes. There are multiple possible explanations for this. Firstly, it is possible that the non-word names were not sufficiently associated with self-harm to elicit participants' associations between people who self-harm and dangerousness. Alternatively, there may have been ambiguity in the person who self-harms GNAT. For instance, some participants may have interpreted the task as measuring the risk people who self-harm pose to themselves while others may have thought of the risk people who self-harm pose to others. It is suggested that future implicit measures aim to distinguish between these two, very different, ideas.

Chapter 7: General Discussion

7.1 Chapter summary

7.1.1 Chapter 1

This thesis began with an overview of attitude theory. In Chapter 1, attitudes were defined as a composite of affective and cognitive judgements of an attitude object. These judgements and beliefs are formed through experiences with the attitude object, whether directly or indirectly through the beliefs of people around us. An attitude can be altered by an experience if new judgements are viewed as being typical of the attitude object, important to our view of the attitude object, or as coming from a reliable source. However, attitudes which are entrenched are resistant to change, with compatible information being perceived as more important than conflicting information.

A key element of attitude research has been how attitudes relate to our behaviour. Chapter 1 concluded that attitudes were best at predicting patterns of behaviour rather than individual acts. Furthermore, different measures of attitude can predict behaviour under varying circumstances. Attitudes measured explicitly, for example via questionnaires, are best at predicting controlled or planned behaviour. Conversely, implicitly measured attitudes, such as those measured using tasks such as the IAT or GNAT, are better at predicting spontaneous behaviours.

7.1.2 Chapter 2

The second chapter of this thesis introduced the concept of self-harm. This current work defined self-harm as intentional behaviour which harms an individual's physical body, without suicidal intent. Prior research which has also used this definition includes Kortge et al. (2013) and Klonsky et al. (2015). Prevalence of self-harm varies depending on the population being investigated. For instance, research suggests that 159,857 patients present to hospital for self-harm each year in England (Tsiachristas et al., 2020), while it was found that only 6.9% of adolescents who self-harm present to hospital (Doyle et al., 2015). Research investigating self-harm in adolescence has found historic self-harm levels of 3.2% (Madge et al., 2011). The current thesis explored self-harm in a university student population, where prior studies have found lifetime prevalence rates of between 13.3% (Benjet et al., 2019) and 19.6% (Sivertsen et al., 2019).

Much of the prior self-harm literature has focused on hospital presentations for self-harm, for example one of the largest self-harm studies in the UK has explored self-harm presentations at A&E departments across Oxford, Manchester and Derby (Clements et al., 2016). However, adolescent samples have previously stated that they are unlikely to seek help from formal sources such as medical professionals, preferring instead to seek help from friends and family (Fortune et al., 2008). Despite this, much of the research exploring self-harm attitudes has been conducted with medical staff. These studies have found participants to hold tolerant attitudes (e.g., Gagnon & Hasking, 2012), seemingly in conflict with the fear of stigma (Nearchou et al., 2018) and prior negative experiences reported by individuals who self-harm (MacDonald et al., 2020). Chapter 2 concluded that this discrepancy may be explained by prior research exclusively using explicit measures of attitude.

7.1.3 Chapter 3

The empirical work of this thesis began with a qualitative project. The aim of Chapter 3 was to explore the disclosure and help-seeking experiences of students with a history of self-harm. This study took a realist approach, with analysis being data-driven and semantic. A semi-structured interview was designed in three main parts: experiences of self-harm disclosure, experiences of help-seeking, and help-seeking facilitators and barriers. The interviews were transcribed and analysed using reflexive thematic analysis as described by Braun and Clarke (2006; 2021).

Three main themes were produced. The first was peers who self-harm, which involved reciprocal disclosure, shared experience and understanding, and self-other comparisons. The second theme was choice, which consisted of three levels: being found out, compelled disclosure, and seeking support. Finally, participants discussed various responses, which came under the sub-themes of immediate and long-term responses, indirect responses, and self-directed responses. It was concluded that the responses experienced by interviewees, along with the associated beliefs about respondents' attitudes, could be explored under an attitude theory framework.

7.1.4 Chapter 4

The findings of Chapter 3 raised numerous questions. The remainder of the thesis aimed to investigate attitudes towards people who self-harm. To begin to explore this, Chapter 4 aimed to investigate explicit and implicit attitudes towards people who self-harm. This first quantitative study

recruited students to complete an explicit stigma scale, an implicit GNAT, a social desirability scale, and a measure of self-harm history. This chapter found that participants explicitly rated their self-harm stigma as lower than perceived public stigma, with personal attitudes being tolerant. Implicitly, self-harm was associated with 'Bad' and 'Bad Person', indicating negative underlying attitudes. Social desirability and having a history of self-harm has no impact on either explicit or implicit attitudes.

7.1.5 Chapter 5

Following the findings of Chapter 4, Chapter 5 aimed to investigate attitudes in more depth by measuring both affective and cognitive attitude components. For this purpose, three additional GNATs were included, along with attribute ratings for each GNAT attribute category. As with the previous chapter, participants rated their own stigma as lower than public stigma. Additionally, participants explicitly associated people who self-harm with positive attributes. However, most of the implicit measures indicated associations of self-harm with negative attributes, namely 'Bad', 'Bad Person', 'Dangerous' and 'Blameworthy'. In contrast to the previous chapter, participants with a history of self-harm had more positive attitudes on the explicit, but not the implicit, measures. While the GNATs were designed such that attributes were person-focused, this was left ambiguous for the dangerous versus safe GNAT.

7.1.6 Chapter 6

The final empirical chapter aimed to investigate associations between people who self-harm and dangerousness. To do so, a series of non-word names were generated. Participants underwent a learning procedure where half of these names were partnered with self-harm. They then completed GNATs where self-harm behaviours and the self-harm paired names were associated with dangerous and safe attributes, along with an explicit stigma scale, attribute ratings, and a measure of self-harm history. This chapter replicated the previous findings that personal stigma was rated lower than perceived public stigma, along with the finding that participants with a history of self-harm held more positive explicit attitudes. Most of the attribute ratings indicated positive associations, although people who self-harm were rated as both unsafe and unpredictable. The implicit measures showed an association between self-harm behaviours and dangerous, but not between people who self-harm and dangerous.

7.2 General discussion

7.2.1 Implications

The quantitative studies within this thesis consistently found historic self-harm rates above 40%, with approximately 20% of students self-harming in the year prior to participation. Additionally, many of the interviewees in Chapter 3 discussed disclosing self-harm to peers and family members. This was reminiscent of previous findings that people who self-harm are more likely to seek support from the community than medical professionals (Fortune et al., 2008). These findings support the iceberg model of self-harm (McMahon et al., 2014), where self-harm rates derived from individuals seeking professional help represent only the tip of the iceberg, indicating true rates are much higher than these rates suggest. As mentioned in Chapter 2, little research has been conducted exploring community-based adult self-harm, meaning that less is known regarding characteristics and outcomes for this population. For instance, it is unclear why some people who self-harm seek professional help while others do not, or whether lack of professional help-seeking is accompanied by low disclosure and community help-seeking rates.

In addition to the iceberg model of self-harm, the findings of Chapter 3 can inform theories of how self-harm is maintained. Some interviewees discussed toxic relationships with self-harming peers involved competition, where self-harmful behaviours were often seen as positive. This could be viewed as an example of self-harm maintenance under an environmental theory of self-harm, where another's response to the individual's self-harm leads to further self-harm. However, this same study found that peers or family members responding in a supportive manner encouraged the participants to seek further help and reduce self-harming, with some describing seeking out friends when they felt the urge to self-harm. Furthermore, some people responded to disclosure or discovery of self-harm with dismissal and a reluctance to mention self-harm in the future, while others responded with anger. Also, the quantitative chapters of this thesis found negative associations with people who self-harm, although actual responses to self-harm were not measured in these studies. These findings are in direct contrast with the attention and caring responses mentioned in environmental models as the driving force behind maintaining self-harmful behaviour.

Further insight into self-harm theories can be found in Chapter 4, where participants with a history of self-harm rated a number of self-harm functions, although low internal consistencies and time constraints resulted in this measure not being included in chapters 5 and 6. As with other uses of the

ISAS (Lindholm et al., 2011), interpersonal functions were endorsed by fewer participants than intrapersonal functions. The most endorsed function in Chapter 4 was affect regulation, supporting models which argue individuals self-harm when they are unable to regulate emotion in more adaptive ways. Alternatively, some participants endorsed an anti-suicide function for self-harm which would fit with drive models of self-harm, although this was the least endorsed of the intrapersonal functions measured. While it is worth noting that none of the studies in the current thesis explored why an individual might self-harm for the first time, the findings relating to self-harm functions and experiences of disclosure offer some support for several different self-harm theories, suggesting that self-harm varies between individuals. If self-harm function does differ between individuals as suggested by the present findings, approaches to prevention and treatment should explore the multitude of reasons people self-harm and target interventions appropriately.

When determining how best to help people who self-harm, it is important to understand the help-seeking process. Some of the themes discussed in Chapter 3 reflect some components of the HBM, which has been used to understand and predict why people do or do not engage with preventative health-related behaviours (Rosenstock, 1974). For instance, self-other comparisons led some participants to judge their own self-harm as less severe, and therefore themselves as not requiring, or being worthy of, help. Alternatively, supportive responses sometimes acted as cues to action, with some peers actively encouraging the individual to seek help. As mentioned in Chapter 2, social support, in the form of positive responses and shared understanding among peers who self-harm, was perceived as improving well-being and promoting further disclosure. However, there was also a stigma barrier to seeking help. A key finding of this study was that recent self-harm was more difficult to disclose, with interviewees judging themselves as weak for recent self-harm. Negative responses, experienced either directly or indirectly, also made interviewees feel less likely to disclose or seek help. While these findings support the HBM, further research would be needed to explore how these influences interact in order to predict disclosure and help-seeking for self-harm.

In addition to implications for theories of self-harm and help-seeking, the present thesis can provide some insight into attitude theory and measurement. At the beginning of this thesis, attitude was defined as "a function of the affect associated with the beliefs a person holds about the object" (Fishbein & Ajzen, 1972, p. 507). The quantitative chapters found generally positive explicit and negative implicit attitudes towards people who self-harm. However, when expanding the study's tasks to include affective judgements alongside a number of cognitive judgements, this thesis found that attitudes were mixed on both explicit and implicit measures. For instance, participants in

Chapter 5 explicitly rated people who self-harm as good people and innocent, but did not disagree that people who self-harm are helpless. These same participants exhibited negative on affective and most of the cognitive implicit measures, but responded neutrally on the competent/helpless GNAT. The variation in responding on the attitude measures demonstrates how attitudes are complex, comprising of both affective and cognitive judgements about the object. These findings also demonstrate that the measures used are specific and distinct enough to detect these differences, supporting the combined use of questionnaires and GNATs.

Although there were differences on some measures, across the quantitative studies explicit attitudes tended to be positive while implicit attitudes were negative. This mirrors prior research with similarly stigmatised groups, such as people with mental illnesses (Teachman et al., 2006), and could explain some of the responses to disclosure described in Chapter 3. One of the sub-themes outlined in Chapter 3 was immediate and long-term responses, which involved frequently negative immediate responses and more supportive responses over time. While this could be seen as attitudes changing over time with a peer or loved one experiencing self-harm, one participant believed that their parents would respond negatively if faced with new self-harm. This offers an alternative interpretation of spontaneous versus planned behaviour toward the individual who self-harms. In Chapter 1, it was theorised that spontaneous behaviour, such as a response to discovery or disclosure of self-harm, would be predicted by implicitly measured attitudes, while planned behaviour such as long-term interactions would be predicted by explicitly measured attitudes. If this were the case, the negative implicit associations on the GNAT would predict negative immediate responses while positive explicit attitudes on the SH-aDSS the attribute ratings would predict long-term responses. However, this was not measured directly. Future research could explore these interactions, along with the possibility of attitude change following interaction with someone, possibly a friend or family member, who self-harms.

In addition to theoretical and methodological implications, the current thesis also has practical implications. The Chapter 3 interviews demonstrated the importance of community-based support for people who self-harm, whether this support is from peers, family members, or everyday professionals such as teachers or religious figures. However, a key finding of Chapter 3 was that the interviewees received a range of responses, some of which were not perceived as supportive or helpful. Interviewees described some panic-filled responses, which may indicate a lack of understanding or knowledge of how best to respond to a loved one who discloses self-harm. While some interviewees preferred for self-harm to not be discussed as this was associated with

discomfort, the most valued responses involved asking questions to try to better understand the interviewee's experiences, asking if they could help the interviewee in any specific ways, and expressing care for the interviewee. In regard to long-term responses, interviewees sometimes felt that their disclosures were dismissed and never thought about or discussed again. While this suited some interviewees' wish to avoid the discomfort of talking about self-harm, it was also interpreted as avoidance on the behalf of the respondent. In contrast, many interviewees appreciated friends and family checking up on them at a later date. As there are individual differences in wanted responses, the ideal response should be tailored to the individual. While it is possible to use intuition or judgement to choose an appropriate response, the advice garnered from the current thesis is to express concern for the individual, want to understand, and to ask what they would want to happen next. For instance, respondents could ask if the individual would like assistance getting further help or if they could help themselves, and also if the individual would be comfortable with the respondent checking in at later dates.

7.2.2 Strengths of the research

This thesis is novel in its use of both explicit and implicit measures of attitudes towards people who self-harm. Explicitly, participants displayed tolerant attitudes, similar to past research in both students (Nielsen & Townsend, 2018) and medical professionals (Gagnon & Hasking, 2012). However, implicit measures suggested an association between people who self-harm and negative attributes. By measuring attitudes both explicitly and implicitly, the current thesis has demonstrated how attitudes on these separate measures can diverge. This has improved our understanding of student attitudes towards people who self-harm, and suggests that some of the negative experiences of students who self-harm could be due to negative underlying attitudes which are not effectively measured using explicit measures.

A further addition made by this thesis is the measuring of affective and cognitive aspects of attitudes. As discussed in Chapter 1, an attitude can be conceived as a composite of beliefs about the attitude object. The theory behind implicit measures such as the GNAT is that attitude objects and associated concepts are connected mentally and activated together. The majority of past research has used purely positively and negatively valenced categories such as 'Good' and 'Bad', and not categories representing beliefs about an attitude object (Nosek, 2007). The inclusion of both affective and cognitive implicit associations in the current thesis has theoretical implications for how attitudes are defined and measured. Differing levels of association on these implicit measures

provide support for the conceptualisation of attitudes as being composed of both affective and cognitive components. These findings also suggest that these different components can be measured both explicitly and implicitly, resulting in an exploration of attitudes which is more detailed and offers greater insight into how attitude objects are perceived.

Past research exploring implicit attitudes towards people with various physical and mental conditions have used specific conditions or symptoms as stimuli for attitude objects. Due to the lack of stimuli which could be used to directly refer to an individual with a certain condition, using that condition or its symptoms may be the most practical solution. However, as argued previously, these measures could be interpreted as measuring attitudes towards physical and mental conditions rather than the individuals with those conditions. As such, an important consideration in the current thesis was how to more validly measure associations between the individual and various attributes. By creating attribute categories which are person-focused, the current research was able to explore attitudes towards people who self-harm rather than attitudes towards self-harming behaviours. The final study described in Chapter 6 also extended this by creating a GNAT with attitude object stimuli which represented people who self-harm. These quantitative studies demonstrate two ways in which researchers can use implicit measures to explore attitudes towards a social group which cannot be represented using exemplars, allowing us to understand attitudes towards a group of people rather than the qualities which make them 'other'.

An additional strength of the current thesis is the focus on self-harm in university students, a population who have been found to experience self-harm at high rates, both personally and through fellow students (Best, 2009). Considering that over 70% of students know another student who self-harms, and that peers are a common source of support (Fortune et al., 2008), it is imperative that we understand the perceptions and attitudes of this population. Additionally, Chapter 3 increased understanding of disclosure and responses experienced by students who self-harm. Past research has tended to focus specifically on help-seeking for self-harm (e.g. Fortune et al., 2008). By asking participants to discuss experiences of disclosure and discovery, the current thesis investigated the first step in any help-seeking process. As indicated in prior research, initial responses to disclosure can encourage help-seeking when positive, or result in additional self-harm if negative (Wu et al., 2012). Understanding disclosure, responses, and attitudes is imperative for understanding the decision to seek help, and for improving attitudes and help-seeking outcomes.

7.2.3 Limitations of the research

While it was important to investigate self-harm and attitudes among the student population, it is recognised that the findings of this thesis cannot necessarily be generalised to other populations. Prior research has found that students hold more liberal attitudes than the other populations (Hastie, 2007), so the attitudes found in the current thesis may not reflect the attitudes of the public. Although it is likely that students who self-harm will choose to disclose to peers over medical professionals (Fortune et al., 2008), community help sources also include family members, academic staff, or religious figures, all of whom differ from the student population. As such, the current thesis cannot make conclusions about the attitudes of many help sources that students who self-harm may disclose to.

In addition to the lack of generalisability to non-student populations, this research also cannot be used to infer responses to disclosure. As discussed in Chapter 1, a key problem in attitude research is the link between attitudes and behaviour: it has been found that attitudes are not reliable predictors of behaviour, although accuracy increases when examining patterns rather than individual instances of behaviour (Fishbein & Ajzen, 1974). Although disclosure experiences reported in Chapter 3 led to the investigation of attitudes and stigma, the current thesis did not measure attitudes and responses to self-harm disclosure in tandem. While it could be suggested that negative underlying attitudes could explain negative responses, the prediction of responses from measured attitudes is outside the scope of the current research.

One of the main considerations when increasing the number of GNATs in Chapter 5 was the role of practice effects. Along with the ability to implicitly measure attitudes in the absence of a comparative category, the GNAT has been found to be more difficult than other implicit tasks (Bar-Anan & Nosek, 2014). This may suggest that the GNAT is less susceptible to practice effects. However, this also means that error rates when using the GNAT can be higher than other measures, and that this may not improve across blocks and repeated exposure. With the addition of GNATs, more participants failed to reach the 80% accuracy rate suggested by Nosek and Banaji (2001). This resulted in more participants being excluded and decreased power. This was particularly troublesome in the final empirical chapter, where the GNAT was more difficult due to the learned non-word names and their association with self-harm.

A potential future direction involves further investigation and development of implicit measures specifically designed to measure attitudes towards a group of people. The present thesis attempted this in two ways. The first involved using person-focused attribute categories. This was possible for attributes which could not be related to behaviours, such as blameworthy and innocent, but was flawed for more ambiguous attributes, in particular dangerous and safe. While the aim was to measure the extent to which participants viewed people who self-harm as dangerous, pairing self-harm with stimuli associated with dangerousness could have been interpreted as viewing self-harming behaviour as dangerous. The second method involved pairing non-word names with self-harm, and then measuring the association between these names and dangerousness. Some issues with this method were the task difficulty and resulting error rates, along with the possibility that the non-word names were not trained enough to be associated with self-harm. Furthermore, if the task was successful in training the participants to associate the names with self-harm, there is still a potential problem with whether participants interpret the GNAT as measuring dangerousness to the self or others. This is important as dangerousness is often associated with mental health conditions (e.g., schizophrenia in Denenny et al., 2014), and understanding the specifics of these associations could explain behaviour towards people with mental health conditions and inform future interventions.

As discussed above, the current thesis cannot directly relate attitudes and responses to disclosure. A possible future direction could investigate how both explicitly and implicitly measured attitudes relate to behaviour in response to a self-harm disclosure. Additionally, Chapter 3 found that responses changed over time after self-harm disclosure. While this could be viewed as behaviour changing from spontaneous to controlled, it is possible that attitudes towards people who self-harm changed following the disclosure of an acquaintance, peer or loved one. Although Chapter 1 discussed how attitudes could be resistant to change, research could explore the possibility of a person's attitude towards self-harm changing following the discovery of self-harm in somebody close to them.

7.3 Conclusion

The current thesis investigated self-harm disclosure, help-seeking, and implicit and explicit attitudes. In terms of disclosure and help-seeking, it was found that having peers who self-harm was useful for support and mutual understanding, although these relationships could also result in self-other comparisons which reduced help-seeking or even encouraged self-harm. The concept of choice was also important to participants, with disclosure experiences ranging from others finding out about their self-harm, compelled disclosure, and the seeking of support. Participants received a wide variety of responses, some of which were self-directed or indirect, while direct responses regularly changed over time. When exploring attitudes, explicit measures consistently showed positive attitudes and low levels of stigma, with participants rating perceived public stigma as higher than their own stigma. Contrastingly, many of the implicit measures showed underlying associations between self-harm and negative attributes, including 'Bad', 'Bad Person', 'Blameworthy', and 'Dangerous'. One important aspect of the thesis was implicitly measuring attitude towards self-harming behaviours and people who self-harm. It was paramount to distinguish between these as having a particular attitude towards self-harming behaviours does not necessarily mean having the same attitude towards individuals who engage in self-harm. It was concluded that, despite making progress in making this distinction in the implicit measures, there was still ambiguity in how participants viewed the task. Future research should aim to continue to develop measures which specifically measure attitude towards individuals rather than behaviours or conditions. Additionally, future research should explore the relationship between attitudes and responses to self-harm disclosure, and how both can change over time with exposure to people who self-harm.

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Appendices

University of Warwick

Psychology Department

PhD research project on the experiences and perceptions of individuals who self-harm

Researcher: Sarah Olin (S.Olin@warwick.ac.uk)

Supervisors: Dr Claudie Fox (Claudie.Fox@warwick.ac.uk) & Dr Fiona MacCallum (Fiona.MacCallum@warwick.ac.uk)

We'd like to ask you to take part in a research study about your experiences of self-harm, and any support you may have received regarding your self-harm in the past. Before you decide if you wish to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

This research is being conducted to investigate how individuals who self-harm perceive others' responses to the knowledge of their self-harmful behaviours. If you choose to take part, you will be asked a series of questions in an audio-recorded, one-to-one interview with the researcher. The interview will last around an hour and will involve questions around three topics: other people finding out about your self-harm, help-seeking experiences for self-harm, and factors which affect the likelihood of seeking help for self-harm. Please note, you don't have to have told anybody about your self-harm to take part.

Participation in this study is completely voluntary and you are under no obligation to take part. You are free to skip questions, or pause or stop the interview at any time, without giving any reason for doing so. You can also choose to withdraw your data after taking part by contacting the researcher. All data will be stored securely, with any identifiable information removed during transcribing. Data will be used purely for research purposes, including as part of the researcher's PhD thesis, and for potential presentations or publications. Audio recordings will only be accessed by the researcher and the supervisors, although anonymised transcriptions or quotations may be viewed by other academics and the public. By taking part, you will be contributing to the understanding of self-harm, and the factors which affect the decision to seek help. We hope that this will help to create strategies to increase public understanding of self-harm and improve services for those who seek help for self-harm.

While we endeavour to keep all information confidential, there are rare circumstances which may mean the researcher has to breach confidentiality, specifically if you pose a significant threat to yourself or others. Should the researcher be concerned for the well-being of either yourself or others, you will be fully informed and be given the option to contact relevant services yourself.

If you decide to take part, you will receive a £5 Amazon voucher as a thank-you for your time. You will receive this at the beginning of the interview, and will not forfeit the voucher should you decide to stop the interview.

If you have any questions or concerns, please contact the researcher or the researcher's supervisors (see e-mail addresses above) before deciding to take part. We can also be contacted after your participation at the above addresses.

Appendix 3: Chapter 3's consent form

Participant Code: _____

Please complete the following before the interview commences.

	Yes	No
I have been informed of and understand the purposes of the study	☐	☐
I have been given an opportunity to ask questions	☐	☐
If applicable, all questions have been answered sufficiently	☐	☐
I understand that I can withdraw at any time:		
without needing to give reason	☐	☐
without losing my £5 Amazon voucher	☐	☐
I understand that the information I give will be anonymised	☐	☐
I understand that my participation will be kept confidential	☐	☐
I understand that my data will be used solely for research purposes	☐	☐
I agree to this interview being audio-recorded	☐	☐
I agree to participate in this study	☐	☐
I would like to receive a summary of the study's findings	☐	☐

Participant Signature: Date:

Researcher Signature: Date:

Appendix 4: Chapter 3's debrief sheet

This study is an investigation into the experiences and perceptions of people who self-harm. Previous research has found that the majority of people who self-harm do not seek help, and that such individuals may avoid sharing their experiences due to fear of stigma. Similarly, some people who have sought help have reported negative experiences. However, survey research has found that health professionals and members of the public generally report positive attitudes towards individuals who self-harm?. The experiences and beliefs that you shared in this interview will help us to better understand the decision to seek help for self-harm, and how this is influenced by past experiences.

The interviews undertaken in this study will be examined alongside laboratory data assessing stigma of self-harm through direct and indirect methods. We hope that this will increase our understanding of the complex relationship between public stigma and help-seeking for self-harm?. This research will contribute to the creation of interventions aimed to increase help-seeking, and to improve experiences for those who seek help for self-harm.

If you have any questions regarding this study, please contact either the researcher or supervisors at the e-mail addresses below. You can also contact the researcher through their e-mail address should you wish to withdraw your data. If you wish to be alerted of the findings of this study and further research undertaken by the researcher, please inform the researcher.

Researcher: Sarah Olin (S.Olin@warwick.ac.uk)

Supervisors: Dr Claudie Fox (Claudie.Fox@warwick.ac.uk) & Dr Fiona MacCallum (Fiona.MacCallum@warwick.ac.uk)

Thank you for your participation in this study.

If you wish to speak to somebody about your self-harm, or any other mental health issues, you may find the following contact details useful.

University of Warwick's Counselling Service: http://www2.warwick.ac.uk/services/tutors/counselling/

University of Warwick's Mental Health and Well-Being Team: http://www2.warwick.ac.uk/services/student-support-services/mental_health/

Samaritans: http://www.samaritans.org/ or 116 123 (free calls from landline and mobile)

Mind: http://www.mind.org.uk/ or 0300 123 3393

Papyrus: http://www.papyrus-uk.org/ or 0800 068 41 41

Rethink Mental Illness: http://www.rethink.org/ or 0300 5000 927

<u>Appendix 5: Chapter 3's list of crisis resources</u>

Telephone Helplines

- **Mental Health Help and Advice Line**
  This helpline can offer support/advise how to support a student until an appointment can be arranged for assessment or treatment.
  Telephone: **0800 616171** (freephone number, available 24/7)

- **The Samaritans**
  The Samaritans offer a confidential listening and e-mail service, dealing with a wide range of concerns.
  Telephone: **116 123** (free helpline, available 24/7)
  E-mail: jo@samaritans.org.
  Website address: http://www.samaritans.org

- **Saneline**
  Saneline offer specialist emotional support and information to anyone affected by mental illness, including family, friends and carers.
  Telephone: **0845 767 8000** (charged at local rates, available 6pm - 11pm daily)
  Website address: http://www.sane.org.uk/

University of Warwick Health Centre, University Of Warwick, Health Centre Road, Coventry, CV4 7AL

- Telephone**(024) 76524888**

University of Warwick Security Services
If you are on campus out of hours, you can also contact Warwick's Security Services. They are available to support vulnerable students 24 hours a day, 7 days a week.
Telephone: **024 7652 2083**

Coventry and Warwickshire Central Booking Service
This service will take referrals for students experiencing mental health difficulties who are living on campus or in Coventry, Leamington or Kenilworth.
Telephone: **0300 200 0011** 24 hours.

Section 1 – Experiences of others finding out about self-harm

Does anybody know about your self-harm?
> Yes: Roughly how many? (if singular or plural not indicated)
>> One: Who knows? When did they find out? What happened? Was it your choice to tell them? What made you choose them (if did choose to tell) rather than somebody else? What was the experience of them finding out like?
>> Multiple: Who was the first person to know? When/How did they find out? What happened? (i.e. same as above) & Across all your experiences, how have you found people finding out generally? Can you describe you best/worst experience of somebody finding out about your self-harm?
> No: Why do you think you haven't told anybody?

Would you consider telling anybody (else) in the future?
> Yes: Who do you think you'd tell? Do you have any plans to tell them? Why do you think you'd talk to them rather than somebody else?
> No: Why do you feel you wouldn't tell anybody (else)?
> Unsure: Why do you feel unsure about telling people in the future? Pros and cons?

Section 2 – Experiences of help-seeking

If said nobody knows: You said that nobody knows about your self-harm, am I right to think you haven't received any help or support for your self-harm?
If people know but hadn't planned on telling: You said that people found out about your self-harm, did that lead to any help or support from either those people or anybody else?
If told somebody about self-harm: You said that you've told people about your self-harm, have you received or sought any help or support from either those people or anybody else?
> Yes: Roughly how many times? (if singular or plural not indicated)
>> One: Who helped or supported you? When did you receive/seek help? What happened? What was the outcome? (probes: positive/negative, helpful?)
>> Multiple: Above questions for first time;
>> In general, how have help-seeking experiences been? (probe: positive/negative, helpful)
>> Can you describe your best experience of help-seeking?
>> Can you describe your worst experience of help-seeking?
> No: Why do you think you haven't sought help in the past? Have you ever thought about seeking help or support?
>> Thought: Who did you think about seeking help from? What stopped you from acting on those intentions?
>> Not thought: Why do you think you haven't considered asking for help or support for your self-harm?

If you did want to seek help, what sources of help do you know of?
Here is a list of examples of where help or support could be given, were you aware of any of these?
Have you ever sought help from any of these?
> Yes: Loop around to experience questions (*only if 'no' on help-seeking Q?*)

Do you think you'd consider seeking help or support (again) in the future?
> Yes: Where do you think you'd consider going? (keep list from previous question out), Why do you think you'd consider that place/person? What do you think the outcome of seeking help would be?
> No: Do you have any specific reasons that you wouldn't seek help in the future?

Can you think of any help or support that you would like but isn't currently available?

Section 3 – Perceived facilitators and barriers to help-seeking

Can you think of anything that increases the likelihood of you seeking help, either from past experiences or thinking about the future? How about factors that might increase the likelihood of other people in similar positions seeking help?

Again, from either past experiences or thinking about the future, can you think of anything that reduces the likelihood of you seeking help? How about things that might reduce the likelihood of other people in similar positions seeking help?

If you do decide to tell anybody else in the future, how do you think they would respond? How would you want them to respond?

If somebody you know told you that they had self-harmed, how you do think you'd respond? How do you think you would have responded before your experiences with self-harm?

Is there anything else you'd like to add? Anything that you feel I should have asked but didn't?

Appendix 7: Chapter 3's list of help sources

Community/Informal
Family member
Friend
School teacher
University tutor/lecturer
Religious leader
Support group
Telephone help-line (e.g. Samaritans)
Self-help book/workbook

Internet
Web-based information pages (e.g. NHS)
Administrator controlled forums (e.g. Elefriends.org.uk)
User-led forums
Social Media (e.g. Facebook, Twitter)
Blogging sites
Peer-counselling (e.g. 7cupsoftea.com)

Professional
GP
Counsellor
Therapist
Psychiatrist
A&E
Social Worker

Appendix 8: Screenshot of demographic questionnaire from the study in Chapter 4

Below is a list of behaviours which some people engage in to self-harm. Have you ever intentionally (i.e., on purpose) performed any form of non-suicidal self-harm?

Cutting, Biting, Burning, Carving, Pinching, Pulling Hair, Severe Scratching, Banging or Hitting Self, Interfering with Wound Healing (e.g. picking scabs), Rubbing Skin Against Rough Surface, Sticking Self with Needles, Swallowing Dangerous Substances.

      Yes
      No
      Prefer not to disclose

Part 1

Please estimate the number of times in your life you have intentionally (i.e., on purpose) performed each type of non-suicidal self-harm (e.g., 0, 10, 100, 500):

Cutting
Biting
Burning
Carving
Pinching
Pulling Hair
Severe Scratching
Banging or Hitting Self
Interfering with Wound Healing (e.g. picking scabs)
Rubbing Skin Against Rough Surface
Sticking Self with Needles
Swallowing Dangerous Substances
Other (please write behaviour and number)
Other (please write behaviour and number)
Other (please write behaviour and number)

If you feel that you have a main form of self-harm, please write the behaviour(s) that you consider to be your main form of self-harm.

When did you: (approximate date – day/month/year)
      First harm yourself?
      Most recently harm yourself?

Do you experience physical pain during self-harm?
      Yes
      Sometimes
      No

When you self-harm, are you alone?
      Yes
      Sometimes
      No

Typically, how much time elapses from the time you have the urge to self-harm until you act on the urge?

< 1 hour   1-3 hours   3-6 hours   6-12 hours   12-24 hours   > 1 day

Do/did you want to stop self-harming?

       Yes
       Sometimes
       No
       Unsure

Part 2

This inventory was written to help us better understand the experience of non-suicidal self-harm. Below is a list of statements that may or may not be relevant for you:

Select 0 if the statement is not relevant for you at all
Select 1 if the statement is somewhat relevant for you
Select 2 is the statement is very relevant for you

"When I self-harm, I am ….."

Calming myself down
Creating a boundary between myself and others
Punishing myself
Giving myself a way to care for myself (by attending to the wound)
Causing pain so I will stop feeling numb
Avoiding the impulse to attempt suicide
Doing something to generate excitement or exhilaration
Bonding with peers
Letting others know the extent of my physical pain
Seeing if I can stand the pain
Creating a physical sign that I feel awful
Getting back at someone
Ensuring I am self-sufficient
Releasing emotional pressure that has built up inside of me
Demonstrating that I am separate from other people
Expressing anger towards myself for being worthless or stupid
Creating a physical injury that is easier to care for than my emotional distress
Trying to feel something (as opposed to nothing) even if it is physical pain
Responding to suicidal thoughts without actually attempting suicide
Entertaining myself or others by doing something extreme
Fitting in with others
Seeking care of help from others
Demonstrating I am tough or strong
Proving to myself that my emotional pain is real
Getting revenge against others
Demonstrating that I do not need to rely on others for help
Reducing anxiety, frustration, anger, or other overwhelming emotions
Establishing a barrier between myself and others

Reacting to feeling unhappy with myself or disgusted with myself

Allowing myself to focus on treating the injury, which can be gratifying or satisfying

Making sure I am still alive when I don't feel real

Putting a stop to suicidal thoughts

Pushing my limits in a manner akin to skydiving or other extreme activities

Creating a sign of friendship or kinship with friends or loved ones

Keeping a loved one from leaving or abandoning me

Proving I can take the physical pain

Signifying the emotional distress I'm experiencing

Trying to hurt someone close to me

Establishing that I am autonomous/independent

Appendix 10: Self-harm adapted depression stigma scale (SH-aDSS) used in all three quantitative studies

Self-harm encompasses a large range of behaviours which a person does to intentionally harm themselves, without suicidal intent. The following questions ask you to report how much you agree with certain statements about people who engage in self-harm. Please be aware that there are no correct answers, and that responses to these statements are voluntary and anonymous. Please rate how much you agree with each statement using one of the options, ranging from strongly disagree to strongly agree.

1. People who self-harm could snap out of it if they wanted
2. Self-harm is a sign of personal weakness
3. Self-harm is not a real medical illness
4. People who self-harm are dangerous
5. It is best to avoid people who self-harm so that you don't start self-harming
6. People who self-harm are unpredictable
7. If I had ever self-harmed I would not tell anyone
8. I would not employ someone if I knew they had self-harmed
9. I would not vote for a politician if I knew they had self-harmed
10. Most people believe that people who self-harm could snap out of it if they wanted
11. Most people believe that self-harm is a sign of personal weakness
12. Most people believe that self-harm is not a real medical illness
13. Most people believe that people who self-harm are dangerous
14. Most people believe that it is best to avoid people who self-harm so that you don't start self-harming
15. Most people believe that people who self-harm are unpredictable
16. Most people would not tell anyone if they had self-harmed
17. Most people would not employ someone they knew had self-harmed
18. Most people would not vote for a politician they knew had self-harmed

University of Warwick

Psychology Department

Information Sheet

PhD research project on the how the general population
perceive people who have a history of self-harm

Researcher: Sarah Olin (S.Olin@warwick.ac.uk)

Supervisors: Dr Fiona MacCallum (Fiona.MacCallum@warwick.ac.uk) & Dr Derrick Watson
(D.G.Watson@warwick.ac.uk)

We'd like to ask you to take part in a research study on how you perceive people who self-harm and your
beliefs about the general public's perception of such individuals. Before you decide if you wish to take
part, it is important for you to understand why the research is being done and what it will involve. Please
take time to read the following information carefully.

This research is being conducted to examine attitudes of the general population towards people who self-
harm. If you participate, you will complete a series of questionnaires and a reaction time task. You will be
asked to complete questionnaires and a computer task which look at your perceptions of people who
self-harm and public attitudes towards such individuals, before being asked to provide information
concerning your personal history of self-harm (this study is for people with or without such experience,
not just those with experience). All of these questions/tasks are optional, and you can choose to not
disclose some or any information. The study should take approximately 20 minutes to complete.

Participation in this study is completely voluntary and you are under no obligation to take part. You are
free to withdraw at any point during the study, without giving any reason for doing so. Some of the
questions asked may seem unpleasant. If you feel distressed and wish to withdraw during the study,
please use the "quit" button at the top of any page. All data will be anonymous and used purely for
research purposes, including as part of the principle researcher's PhD thesis and potential
presentations/publications. By taking part, you will be contributing to the understanding of how people
who self-harm are perceived by others, which may help to improve strategies for reducing stigma of such
individuals.

If you have any questions or concerns please don't hesitate to contact the researcher or the supervisors
(see e-mail addresses above) before deciding to take part. We can also be contacted after your
participation at the above addresses.

Appendix 12: Consent form used in all three quantitative studies

	Yes	No
I have been informed of and understand the purposes of the study	○	○
I have been given an opportunity to ask questions (and any questions have been answered sufficiently)	○	○
I understand I can withdraw at any time (without needing to give reason)	○	○
I understand that answers are anonymous and will be used solely for research purposes	○	○
I agree to participate in the study	○	○

Appendix 13: Chapter 4's debrief information sheet

This study is an investigation into the prevalence of self-harm stigma, and how personal views of individuals who self-harm are related to perceptions of public stigma. Previous research has concentrated on explicit measures (e.g. questionnaires) of attitudes towards people who self-harm. However, it is theorized that implicit measures (e.g. the reaction time task you completed) may provide a more accurate assessment of attitude due to the difficulty in altering responses. You also completed measures of social desirability and experiences of self-harm; the results of these will help us to understand how responses to explicit and implicit measures of attitude are related.

We have predicted that beliefs about public attitudes will by more negative than participants' personal attitudes. We also predict that individuals with personal experience of self-harm (as opposed to those without such experience) will have more positive personal attitudes towards such individuals, but more negative beliefs about public attitude. This part of the research will be studied further with respect to experiences of help-seeking. Additionally, we expect the relationship between scores on the stigma questionnaire and reaction time test to be stronger when including scores from the social desirability questionnaire, somewhat explaining past findings of uncorrelated explicit and implicit measures of attitude.

If you have any questions regarding this study, pleasure contact either the researcher or supervisors at the e-mail addresses below. You can also use the researcher's e-mail address should you wish to withdraw your data using the participant code you were assigned. If you wish to be alerted of the findings of this study and further research undertaken by the researcher, please e-mail the researcher to be added to the project's e-mail list.

Researcher: Sarah Olin (S.Olin@warwick.ac.uk)

Supervisors: Dr Fiona MacCallum (Fiona.MacCallum@warwick.ac.uk), Dr Derrick Watson (D.G.Watson@warwick.ac.uk)

Thank you again for your cooperation.

If you have been affected by self-harm or other mental health issues, and would like further information or the speak to somebody, please consider using the following resources:

Samaritans: http://www.samaritans.org/ , 116 123 (free calls from landline and mobile)

Mind: http://www.mind.org.uk/ , 0300 123 3393

Sane: http://www.sane.org.uk/ , 0300 304 7000

Rethink Mental Illness: http://www.rethink.org/ , 0300 5000 927

Papyrus: http://www.papyrus-uk.org/ , 0800 068 41 41

NHS self-harm information: http://www.nhs.uk/Conditions/Self-injury/Pages/Introduction.aspx

If you are a student or member of staff at the University of Warwick, you can also contact the on-campus counselling service. Please find this service's information at http://www2.warwick.ac.uk/services/tutors/counselling/

University of Warwick

Psychology Department

Information Sheet

PhD research project on how the general population
perceive people who have a history of self-harm

Researcher: Sarah Olin (S.Olin@warwick.ac.uk)

Supervisors: Dr Claudie Fox (Claudie.Fox@warwick.ac.uk), & Dr Fiona MacCallum
(Fiona.MacCallum@warwick.ac.uk)

We'd like to ask you to take part in a research study on how you perceive people who self-harm and your beliefs about the general public's perception of such individuals. Before you decide if you wish to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

This research is being conducted to examine attitudes of the general population towards people who self-harm. If you participate, you will complete a series of questionnaires and reaction time tasks. You will be asked to complete questionnaires and computer tasks which look at your perceptions of people who self-harm and public attitudes towards such individuals, before being asked to provide information concerning your personal history of self-harm (this study is for people with or without such experience, not just those with experience). All of these questions/tasks are optional, and you can choose to not disclose some or any information. The study should take approximately 30 minutes to complete.

Participation in this study is completely voluntary and you are under no obligation to take part. You are free to withdraw at any point during the study, without giving any reason for doing so. Some of the questions asked may seem unpleasant. If you feel distressed and wish to withdraw during the study, please use the "quit" button at the top of any page and alert the researcher (you will not have to give a reason for stopping the study). All data will be stored anonymously and will be used purely for research purposes, including as part of the researcher's PhD thesis and potential presentations/publications. By taking part, you will be contributing to the understanding of how people who self-harm are perceived by others, which may help to improve strategies for reducing stigma of such individuals.

If you have any questions or concerns please don't hesitate to contact the researcher or the supervisors (see e-mail addresses above) before deciding to take part. We can also be contacted after your participation at the above addresses.

If you have been affected by self-harm or other mental health issues, and would like further information or to speak to somebody, please consider using the following resources:

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NHS self-harm information: http://www.nhs.uk/Conditions/Self-injury/Pages/Introduction.aspx

If you are a student or member of staff at the University of Warwick, you can also contact the on-campus counselling service. Please find this service's information at http://www2.warwick.ac.uk/services/tutors/counselling/

Appendix 15: Chapter 5's debrief information

This study is an investigation into the prevalence of self-harm stigma, and how personal views are related to perceptions of public stigma. Previous research has concentrated on explicit measures (e.g. questionnaires) of attitudes towards people who self-harm. However, it is theorized that implicit measures (e.g. the reaction time tasks you completed) may provide a more accurate assessment of attitude due to the difficulty in altering responses. You also completed a self-harm measure. This will help us to understand how explicit and implicit attitudes vary among those with and without personal experience of self-harm.

We have predicted that beliefs about public attitudes will by more negative than participants' personal attitudes. We also predict that individuals with personal experience of self-harm (as opposed to those without such experience) will have more positive personal attitudes towards such individuals, but more negative beliefs about public attitude. The experiences and perceptions of people who self-harm will be explored further in an on-going interview study. We hope that, together, these studies will help to inform interventions aiming to improve help-seeking for those who self-harm.

If you have any questions regarding this study, pleasure contact either the researcher or supervisors at the e-mail addresses below. You can also use the researcher's e-mail address should you wish to withdraw your data using the participant code you were assigned. If you wish to be alerted of the findings of this study and further research undertaken by the researcher, please e-mail the researcher to be added to the project's e-mail list.

Researcher: Sarah Olin (S.Olin@warwick.ac.uk)

Supervisors: Dr Claudie Fox (Claudie.Fox@warwick.ac.uk) & Dr Fiona MacCallum (Fiona.MacCallum@warwick.ac.uk)

Thank you again for your cooperation.

If you have been affected by self-harm or other mental health issues, and would like further information or to speak to somebody, please consider using the following resources:

Samaritans: http://www.samaritans.org/ , 116 123 (free calls from landline and mobile)

Mind: http://www.mind.org.uk/ , 0300 123 3393

Sane: http://www.sane.org.uk/ , 0300 304 7000

Rethink Mental Illness: http://www.rethink.org/ , 0300 5000 927

Papyrus: http://www.papyrus-uk.org/ , 0800 068 41 41

NHS self-harm information: http://www.nhs.uk/Conditions/Self-injury/Pages/Introduction.aspx

If you are a student or member of staff at the University of Warwick, you can also contact the on-campus counselling service. Please find this service's information at http://www2.warwick.ac.uk/services/tutors/counselling/

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Psychology Department

Information Sheet

PhD research project on how the general population
perceive people who have a history of self-harm

Researcher: Sarah Olin (S.Olin@warwick.ac.uk)

Supervisors: Dr Claudie Fox (Claudie.Fox@warwick.ac.uk), & Dr Fiona MacCallum
(Fiona.MacCallum@warwick.ac.uk)

We'd like to ask you to take part in a research study on how you perceive people who self-harm and your beliefs about the general public's perception of such individuals. Before you decide if you wish to take part, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully.

This research is being conducted to examine attitudes of the general population towards people who self-harm. If you participate, you will be asked to complete a series of questionnaires and reaction time tasks which look at your perceptions of people who self-harm and public attitudes towards such individuals. You will also be asked to provide information concerning your personal history of self-harm (this study is for people with or without such experience, not just those with experience). All of these questions/tasks are optional, and you can choose to not disclose some or any information. The study should take approximately 30 minutes to complete.

Participation in this study is completely voluntary and you are under no obligation to take part. You are free to withdraw at any point during the study, without giving any reason for doing so. Due to the nature of the research, some questions may be unpleasant to think about. If you feel distressed and wish to withdraw during the study, please use the "quit" button at the top of any page and alert the researcher (you will not have to give a reason for stopping the study). Should you wish to withdraw data at a later date, please contact the researcher with the participant ID number you can see at the top of this page by the 26th March, as data will be analysed after this date. All data will be stored anonymously and will be used purely for research purposes, including as part of the researcher's PhD thesis and potential presentations/publications. In accordance with university policy, data will be stored for 10 years following publication of this study. By taking part, you will be contributing to the understanding of how people who self-harm are perceived by others, which may help to improve strategies for reducing stigma of such individuals.

If you have any questions or concerns please don't hesitate to contact the researcher or the supervisors (see e-mail addresses above) before deciding to take part. We can also be contacted after your participation at the above addresses.

If you have been affected by self-harm or other mental health issues, and would like further information or to speak to somebody, please consider using the following resources:

Samaritans: http://www.samaritans.org/ , 116 123 (free calls from landline and mobile)

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NHS self-harm information: http://www.nhs.uk/Conditions/Self-injury/Pages/Introduction.aspx

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http://www2.warwick.ac.uk/services/tutors/counselling/

Appendix 17: Chapter 6's debrief information

This study is an investigation into the prevalence of self-harm stigma, and how personal views are related to perceptions of public stigma. Previous research has concentrated on explicit measures (e.g. questionnaires) of attitudes towards people who self-harm. However, it is theorized that implicit measures (e.g. the reaction time tasks you completed) may provide a more accurate assessment of attitude due to the difficulty in altering responses. This study focused specifically on how people perceive the dangerousness of self-harm and individuals who engage in self-harmful behaviours. Previous research has failed to distinguish between the perceived dangerousness of the individual and their behaviour, so your data will help us to demonstrate the importance of making this distinction in attitude research. You also completed a self-harm measure. This will help us to understand how explicit and implicit attitudes vary among those with and without personal experience of self-harm, while also contributing to research regarding the prevalence of self-harm.

We have predicted that beliefs about public attitudes will by more negative than participants' personal attitudes. We also predict that individuals with personal experience of self-harm (as opposed to those without such experience) will have more positive personal attitudes towards such individuals, but more negative beliefs about public attitude. The experiences and perceptions of people who self-harm will be explored further in an on-going interview study. We hope that, together, these studies will help to inform interventions aiming to improve help-seeking for those who self-harm.

If you have any questions regarding this study, pleasure contact either the researcher or supervisors at the e-mail addresses below. You can also use the researcher's e-mail address should you wish to withdraw your data using the participant code you were assigned by 19th March. Removal of data after this date will not be possible due to data being analysed.

Researcher: Sarah Olin (S.Olin@warwick.ac.uk)

Supervisors: Dr Claudie Fox (Claudie.Fox@warwick.ac.uk) & Dr Fiona MacCallum (Fiona.MacCallum@warwick.ac.uk)

Thank you again for your cooperation.

If you have been affected by self-harm or other mental health issues, and would like further information or to speak to somebody, please consider using the following resources:

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If you are a student or member of staff at the University of Warwick, you can also contact the on-campus counselling service. Please find this service's information at http://www2.warwick.ac.uk/services/tutors/counselling/