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A Q-Methodology study into the stigma of substance misusers and whether inducing empathy can improve attitudes towards this group.

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ABSTRACT

Stigma is found to lead to reluctance from substance misusers to seek treatment and is a barrier to recovery from drug addiction (Ahern, Stuber & Galea, 2007). Drug addicts have been said to avoid seeking help from professionals due to the way they are made to feel in a healthcare environment and are made to feel embarrassed when being involved in treatment programmes in the community (Lloyd, 2010). Empathy has been found to be a strong factor in improving attitudes towards stigmatised groups, such as drug addicts (Batson, 2002). This study aimed to investigate whether attitudes would be more empathetic and positive towards the topic of substance misuse in a Q-Methodology study involving two conditions; high empathy (encouraged to imagine yourself in the position of the other) or low empathy (encouraged to remain objective). This idea led to the formation of the two hypotheses of this study; that high empathy participants would produce empathetic attitudes towards substance misuse and that low empathy participants would produce less empathetic responses than the high empathy condition. Q-Methodology was adopted due to its abilities in unveiling subjective perception from participants, as it was the nature of perceptions towards substance misusers that was of interest. It was found that high empathy participants offered more empathetic perception of substance misuse, where factor analysis found themes that encouraged positive treatment of this group. Conversely, the low empathy condition produced more negative perceptions. It was concluded that inducing empathy was a powerful mechanism in improving stigma towards substance misusers and it was suggested that this mechanism could be endorsed by media outlets and the health service to alter attitudes towards this group, as well as reducing feelings.

KEY WORDS:	STIGMA	EMPATHY	SUBSTANCE MISUSE	Q METHOD	ATTITUDES

Introduction

The experience of stigma attached to drug addiction leads to reluctance from drug addicts to seek treatment and creates barriers in the way of recovery and reintegration in society for substance misusers (UK Drug Policy Commission, 2010). The current study will consider the issue of stigma, and whether the use of inducing empathy towards this social issue will create more agreement with empathetic statements in regards to substance misuse.

The classic theory on stigma, originally proposed by Goffman (1963), described the process of 'stigmatisation' as society categorising people into groups and stereotypical attributions, with these becoming the connotations and attitudes towards this group as a whole. These connotations become anticipations and assumptions of a certain type of behaviour that individuals from this group will express. Goffman (1963) describes these as an individual's *virtual social identity,* where we come to expect a set of behaviours from an individual. The *actual social identity,* the category and attributes they are proved to possess, may be something completely different, meaning individuals can be tarred with a set of attributes that may be misrepresentative of their personality traits or how they actually behave in reality. Lloyd (2010) describes this as the connotations associated with ones stigmatised label becoming their 'master status', where all focus and opinion regarding that individual are focussed around one thing, such as problem drug use, and the other aspects of the individual's identity are obscured or ignored completely.

Goffman (1963) categorises three attributes which lead to stigmatisation: blemishes of individual character (which could involve traits such as dishonesty or having questionable morals, for example); abominations of the body (which can involve mental illness, such as addiction); and tribal stigma (which involve physical abnormalities). Major and O'Brien (2005) provide a more contemporary analysis of these categories, suggesting that individuals in society can be excluded when they possess attributes that suggest that they: a) are a poor partner for social exchange; b) may carry a parasitic infection; or c) they are a member of an outgroup that can be exploited. In terms of addiction, this can relate to the fact that the stigma attached to it can lead to prejudice or discrimination in many social areas, such as employment or health provision. Stigma is said to be a social construction which involves variability across time and cultures and is a mark, either physical or not, that leads to an individual becoming devalued in its social context (Major & O'Brien, 2005). Lloyd (2010) describes this idea where he interviewed drug users who described their experience in hospitals or GP surgeries where they were made to feel as though they were wasting valuable resources and treated differently from other patients.

While Goffman provided the classic theory of stigma, other theorists have built upon his ideas in more recent years. Numerous theories and descriptions of stigma share some similarities to the ideas outlined previously, but offer a different perspective. Link and Phelan (2006) describe stigma as being made up of five components, including; a process of labelling, stereotyping (where the labelling individual is linked with negative characteristics), separation (where they distinguish a difference between 'them' and 'us'), discrimination (as stereotyping and labelling has devalued their character) and, finally, loss of status (where stigmatised groups can become sub-classes). Once an individual is associated and seen to belong to a particular group,

they become devalued by society as all characteristics of this person are interpreted in terms of a flawed identity (Hinshaw, 2007).

These ideas have also been considered by Major and O'Brien (2005) who describe the psychological impact that stigmatisation has. They suggest four mechanisms through which the stigmatised can be psychologically affected. The first is negative treatment and discrimination, which is said to limit the access for the stigmatised to several important life domains such as employment, housing and education where individuals associated with stigmatised groups are discriminated against by institutions such as the criminal justice system, healthcare and the housing market. The next is expectancy confirmation processes, which could also be described as 'self-fulfilling prophecies'. Individuals internalise the assumptions of others and often underachieve in comparison to their abilities, as found by Weinstein and colleagues (2004) in their study which concluded that Black individuals in the US are still hindered in educational achievement, even fifty years after the Brown vs Board of Education case found educational segregation unconstitutional. The third mechanism, as suggested by Major and O'Brien, is automatic-stereotype activation-behaviour where, even without the presence of the discriminator, the stigmatised will behave in a way that perpetuates the stereotype they have been associated with because of their strength of the linkage between how they are treated in society and their behaviour in their memory. This leads to automaticity of expected behaviours creating stereotype-consistent behaviour (Bargh, Chen & Burrows, 1996). Finally, stigma is suggested to psychologically affect the stigmatised through its function as an identity threat. This can manifest physiologically in the individual where, in social situations, their desire to protect their self-esteem against perceived discriminatory behaviour puts a strain on their physiological resources. It is suggested that individuals who experience stigma-related discrimination will be more anxious and have a higher demand put on their physiological coping mechanisms. This is also said to have an indirect relationship with underachievement in other life areas, such as education, where their resources are otherwise occupied with reducing anxiety and protecting self-esteem in social situations (Crocker & Major, 1989).

Stigma is, therefore, inarguably a major contributor to the limitations faced by society, and substance misusers themselves, to improve the problems surrounding addiction within our society. Research suggests that, in general, drug addicts are seen more negatively than other groups in society with addictions, such as alcoholics and smokers (Room, 2005). Cunningham, Freedman and Sobell (1994) conducted a between subjects experiment with a group of 579 nineteen year olds who were given a variation of the Crawford and Heather's Attitudes and Beliefs about Alcoholism and Alcoholics questionnaire (1987), where the word alcohol was modified to a term that would describe all three conditions: alcohol, tobacco and cocaine. The study investigated participants' subjective perceptions towards the cause of the substance abuse in addition to their humanitarian attitudes towards individuals with these addictions. Results suggested that alcoholism was most likely to be seen as a disease, whereas cocaine use was viewed as a sin significantly more than alcohol or tobacco use. It was also found that people who believed that substance abuse was a sin, which was seen most often in cocaine use, were least likely to support substance misusers receiving public support or care. The disease concept (the idea that the cause of, in this case, alcoholism is due to a biological dysfunction or disorder in which the individual has little control) was most readily adopted to explain alcoholism, where

participants were the most sympathetic. This suggests that drug users are more stigmatised in our society, which may lead to a tendency for people to be less favourable to offering public support to this group, thus showing how stigma directly affects the opportunities afforded to stigmatised groups.

Other research has also found a tendency for people to see drug addicts as more blameworthy for their situation and as more dangerous than those with other mental illnesses. Corrigan, Kuwabara and O'Shaughnessy (2009), for example, found this in their study of 1141 people recruited through an online research panel made up of the entire US telephone population. This provided a representative sample of the US population. Participants were separated into three conditions (mental illness, drug addiction, or physical disorder that requires a wheelchair [as a control]) and were given a vignette to read regarding their specific group. They were then asked questions to gain information about attributions and perceived attitudes about their perceptions of dangerousness for each of the three groups. It was found that people with drug addiction problems were hypothetically less likely to be offered help to find a job, were considered to be more dangerous and people feared them the most. This research suggests that stigma can lead to a process of discrimination in many areas and can lead to a negative impact of life chances for drug addicts.

These theories suggest that substance misusers would have a negative psychological experience through the process of stigmatisation. The research discussed above, with use of large samples and carefully designed experiments to directly assess stigma towards substance misuse, found that this stigma did exist and that there is likely to be a psychological impact of stigma related to social exclusion. It is for this reason that the study of stigma towards addiction is important for both society and for drug users themselves.

At the societal level, the Centre for Social Justice (2013) suggests that drug addiction costs the taxpayer £15 billion a year. There is a possibility that, if a change of attitude towards this group occurred, it could benefit society greatly if it could lead to a chance to adapt treatment that is more effective in reintegrating this group into society via decreasing stigma and increasing access and uptake of services (Adalf, Hamilton & Noh, 2009). This, in turn, could lead to a reduction of the bill for drug addiction, and actually lead to an increase in tax contribution from this group, benefitting society massively.

It has been found that the stigma felt with substance abuse association discourages individuals to seek treatment (Lloyd, 2013) as well as hinders societal support to provide intervention programmes, such as needle exchanges, as well as effective rehabilitation facilities (Capitanio & Herek, 1999). It has also been found that the impact of substance misuse stigma can be long lasting in inhibiting life chances even after the individual has successfully recovered from their addiction (Link, Struening, Rahav, Phelan & Nuttbrock, 1997). Ahern, Stuber and Galea (2007) conducted a study to investigate the links between stigma and the health of illicit drug users. Through analysis of 1008 interviews with illicit drug users, collected through street outreach, it was found that feelings of alienation, perceived devaluation, and stigmatisation were related to levels of poor mental health and depression. It was also found that feelings of discrimination led to feelings of stress, and became a barrier to accessing care. In light of this evidence, investigating means to alleviate stigma is imperative as it offers

a chance to change the way society looks at the issue of substance misuse and addiction, which could lead to reduced stigma meaning addicts would feel more motivated to seek treatment and recover. In this way, improving attitudes to drug addiction and its causes could lead to tackling this social issue, and reducing the amount of substance dependent individuals in our society.

Public attitudes can be influenced strongly by the type of discourse that surrounds controversial areas in public media and that the shaping and position of information in the mass media has a large amount of power in shaping public agenda and position towards any political or social matter (McCombs & Shaw, 1972). It has also been found that the highest political figures and their decisions surrounding setting policy, is actively influenced by what is portrayed in the media (Edwards & Wood, 1997). This has been found specifically in relation to drug addiction. It has been noted in research in the area of substance abuse stigma that the majority of media discourse surrounding this topic presents individuals with substance misuse problems negatively (Lloyd, 2013).

A study conducted by Loughborough Media Communications (2010) for the UK Drug Policy Commission aimed to explore the nature and effect of British media coverage of the area of drug use and addiction. It was found that instances of drug use reporting in national newspapers are often associated with reporting of crime and welfare recipients (often described as 'scroungers'). Remarks used in reporting on this topic were more likely to be condemning than positive. Buchanan (2000) also reported on the public discourse on drug users and found that drug users are often presented as a threat who should be thought of derogatively. It has also been found that the UK press is minimally regulated with little quality control in relation to reporting on drugs (Coomber et al, 2000). This seems dangerous, considering that attitudes are said to be formed through the individual observing and imitating the behaviours of others, drawing information to form their attitude from their social world (Wood, 2000). This supports Goffman's (1963) original stigma theory, and other theorists such as Link and Phelan (2006), who have drawn on Goffman's ideas, who suggest that once an individual is stigmatised, through labelling, stereotyping and discrimination, they lose social status and it is difficult for them to regain it (Hinshaw, 2007).

Stigma of substance misusers leads to barriers in treatment uptake through fear of being associated with the stereotypes attached to substance misuse (Lloyd, 2013), as well as lowering life chances through stigma processes that discriminate and label individuals, leading to a 'virtual social identity' that is hard to break free from and may not be representative of this individual in reality (Goffman, 1963). This is why it is necessary to investigate ways to alleviate stigma to help drug users access services and reintegrate in our society.

1.1 Empathy
One area of research which has considered how stigmatisation can be combatted is the area of inducing empathy for a group and the effect this has over attitudes to individuals and the entire group. The definition of empathy has come from a vast body of social science research over the past century, where there is now a general consensus on the broad definition of empathy. Empathy can take two forms, cognitive or emotional. The former refers to taking the perspective of another whereas the latter refers to emotional responses to the situation another faces, where feelings are either

similar to that of the other (parallel) or a reaction to the emotional experiences of the other (reactive) (Stephan & Finlay, 1999).

Batson (1987), in his empathy-altruism hypothesis, devised when aiming to understand motivation in humans, found that an important factor in altruistic motivation for helping behaviour is the degree of empathy felt for the other. Altruism is defined as a motivational state in which the goal is to increase another person's welfare with no benefit to the self (Batson, 1987), which Batson differentiates from egoism, where people are motivated to act to improve their own welfare. Evidence for this theory of prosocial motivation was found where Batson, Duncan, Ackerman, Buckley and Birch (1981) conducted a study where participants watched a woman receiving electric shocks, and manipulated two variables; level of empathy (high or low) and ease of escaping without helping (high or low). It was found that level of help was high in the high empathy condition and was higher than the low empathy condition, and help was offered similarly when ease of escape was difficult compared to easy. Research was also conducted to investigate the generalisability of the empathy-altruism hypothesis, by conducting where participants were told the hypothetical other was either someone from their university or a member of another, rival university. Support was found to suggest that the empathy-altruism hypothesis was still powerful, even when the other belongs to another group (Batson, Sager, Garst, Kang, Rubchinsky & Dawson, 1997).

This provided evidence that humans are altruistically motivated to help when they feel empathy for the other. Batson (1987) suggests that empathy can have an impact on producing positive attitudes. Past social psychological research into what improves attitudes towards stigmatised groups has found that inducing empathy by encouraging people to put themselves in the position of another can create prosocial behaviour and empathetic concern, and has been found in particular for stigmatised groups, such as people in wheelchairs or the homeless (Clore & Jeffrey, 1972; Batson et al, 1997). Empathy has also been endorsed in medical research as a means of training medical students' to overcome negative attitudes towards those with mental illness, another heavily stigmatised group (Cutler, Harding, Mozian, Wright, Pica, Masters & Graham, 2009).

The main focus and basis of the current research lies in Batson, Chang, Orr and Rowland's (2002) findings in whether empathy for one member of a stigmatised group, in this case, heroin addicts, can improve feelings towards the group as a whole, as well as research to suggest that empathy will also encourage helping behaviour towards this stigmatised group. Batson and colleagues (2002) conducted a study into the effect of inducing empathy and its impact on the attitudes participants had towards substance misusers and whether they would be more likely to encourage their council to provide social funding for an addiction charity. Fifty-four psychology students were led to believe that their decision would have a real impact on the funding of local projects and outreach programmes in their area. Each participant was assigned to either a high empathy or low empathy condition. Empathy was manipulated with a paragraph explaining what they should consider when listening to an upcoming clip. High empathy participants were encouraged to imagine how the individual felt and low empathy participants were encouraged to remain objective. They all then listened to an identical audiotape involving a character named 'Jared Briggs' describing his experience of heroin addiction, drug dealing as well as a resultant seven year jail sentence. They were then asked to assign donations to several charities, involving an

addiction counselling service. It was found that individuals in the high empathy condition would suggest a donation of almost double that of the low empathy condition ($4,333 compared to $2,667). It was also seen that self-reported empathy was higher in the high empathy condition compared to the low empathy condition (3.8 compared to 2.01 on a scale of 1 - not at all - to 7 - extremely) and similar results were found when investigating differences in attitudes between conditions (6.4 compared to 4.7 on a scale from 1 - very negative - to 9 - very positive).

The current study aims to draw on these ideas using alternative methodology, Q Methodology, to explore whether, when people are presented with more positive, empathy-inducing information to a topic, they are more likely to show empathy towards that group, in order to highlight that empathy inducement can be a method of overcoming stigma.

1.2 Aims

The aim of this study is to examine whether the information we are presented with in regards to stigmatised groups (substance misusers) can affect the way we feel towards how they should be treated. Past research strongly indicates that the stigma attached towards this group exists, and it is the aim of this study to determine whether if society as a whole was presented with a different perspective on this group, whether the way in which people feel they should be treated would change. This study involves presenting two conditions (high empathy and low empathy) with a range of statements regarding substance addiction and asking them to rate these statements based on whether they agree or disagree with them. The study will involve two hypotheses. The first is that the high empathy condition will produce empathic reactions to substance addiction. The second is that the low empathy condition will provide less empathetic responses to substance addiction than the high empathy condition.

Methodology

2.1 DESIGN

A between subjects design with two conditions, using Q-Methodology, were adopted, with a dependent variable of condition type, either high empathy or low empathy, an independent variable of level of empathy. Two conditions, high empathy (inducing empathy in respondents) and low empathy (encouraging objectivity) were used to determine whether empathy can reduce negative stigma toward a vulnerable group, in this case substance misusers, and induce a more empathetic attitude. The current research design is based on Batson and colleagues' (2002) work, described previously, However, while Batson and colleagues (2002) adopted a questionnaire method, this study will be using Q Methodology. Q Methodology was an effective method for this study as it is used to explore the connections and ideas which determine the perspectives of individuals on a topic (Ramlo, 2008). As this study was interested in uncovering opinions towards the area of substance misuse to determine whether stigma existed towards this group, and remained after empathy was induced under one condition, Q-methodology was appropriate due to its principles in uncovering subjective opinion (Stephenson, 1953).

Q Method provides a foundation for the study of subjectivity, gaining access to opinions, beliefs and attitudes (Brown, 1933). The basic premise and how to carry out Q Method is outlined by Stephenson (1953), who explains that a P-set (a group of respondents) is asked to rank-order a Q-set (a set of statements), usually on a continuum from most agree to most disagree. Subjectivity is exposed through Q Method through the idea that individuals rank the Q-sort based on opinion only – not fact. Q Method was seen as a good choice for the present study as it allows exploration of the reality of the attitudes that individuals within society has towards substance misuse, and whether we find the patterns of stigma that we expect.

The study involved 32 participants (aged 19-58, mean=29.7) of both genders (20 female and 12 male). The high empathy condition involved 16 participants (10=female, 6=male) aged between 20 and 52 (mean=27.8) and the low empathy condition involving 16 participants (10=female, 6=male) aged 19-58 (mean=31.75). This number of participants was chosen to mimic the methodology of Batson and colleagues (2002) whose study worked under similar ideas around the idea of empathy being used to influence a reduction in stigma towards drug users. Q-Methodology does not require a large sample size, as its interests do not lie in estimating population statistics. Instead it aims to sample the views expressed by participants (Cross, 2004), therefore, 32 participants was adequate for a study of this nature. The only exclusion criterion was that, due to the sensitive subject matter of drug addiction, anyone under the age of eighteen would not be included in the sample. Respondents were recruited through both social media and the Edinburgh Napier University participant recruitment pool. Q methodology literature dictates that a P-set (sample) should not be random and should be a structured sample of respondents who are relevant to the problem under consideration (Van Exel, 2005). The idea under consideration in the present study is societal stigma towards drug addiction, so this use of a random sample is useful in this case. Participants were recruited through an online convenience sample as, due to time constraints of the study, it was most appropriate.

2.2 MATERIALS
2.2.1 Pre-trial.
Full ethical approval was obtained from the university ethics board before trials began. Participants were presented with a screening sheet which explained that the study would involve thinking about the idea of substance addiction, and detailed that if they felt uncomfortable or felt that this topic may cause them any distress, that they were free to abstain from partaking, and did not have to offer an explanation as to why. Participants were also given an information sheet, containing information about what the study would involve as well as what they would be expected to do within the study. Consent forms were then provided and filled in.
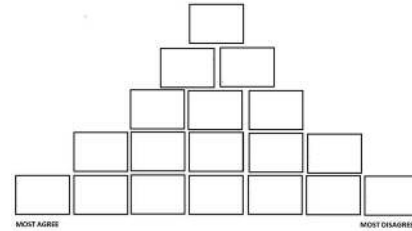
Diagram 1: Example of blank q-sort.

2.2.2 During the trial
A blank q-sort was given to participants (diagram 1) as well as eighteen small cards with the Q-set (statements) on them to use for each participants Q-sort. The blank q sort involved an A3 sheet with a pyramid shaped group of boxes with one side of the pyramid labelled 'most agree' and the other side labelled 'most disagree'. Luoma, Twohig, Waltz, Hayes, Roget, Padilla and Fisher (2007) conducted a study into the impact of the stigma of drug addiction of the addict themselves, asking questions about how the stigma of their addiction make them feel. This study was influential in the choosing of the statements for the Q-sort, however, the statements were written by the researcher. An example of these will be provided in the appendix.

Vignette sheets were also provided to respondents, provided with either the high empathy or low empathy vignette. All materials, except for vignette type, were the same for each condition. Vignettes consisted of a small paragraph explaining the situation of 'David', a heroin addict. Vignettes are stories about individuals and situations and make reference to important points in the study of perceptions, beliefs and attitudes (Hughes, 1998). The vignette given to the participant dictated which condition they would be in; either high empathy or low empathy. Each vignette had the same information on it with the difference coming from the reading instructions. The high empathy vignette instructed the reader to 'really try to imagine how you would feel if you were in David's position and whether it is possible that you would react similarly if you were put in David's situation'. Stotland (1969) suggested that encouraging people to read with an empathetic viewpoint does encourage a different point of view towards information given, so this method of reading instruction has been found to effectively encourage empathy in previous research. The low empathy reading instructions encouraged readers to 'remain objective about the factual information given'. Brown (2011) also praised the use of vignettes in studies about stigma towards substance use, which also contributed to this choice of method. Participants were given a vignette based on the order in which their meeting time falls, allowing random assignment of vignettes.

The vignettes chosen for this study were written by the researcher but were based on vignettes used by Corrigan and colleagues (2009) who conducted into a study into whether the perception of substance misusers was more negative than of other groups, with a vignette explaining the lifestyle and background of a fictional character.

Due to the similarities that can be drawn between Corrigan's study and the present, it appeared to be a useful study to base the vignettes on.

Participants were provided with a debrief sheet, explaining how the results of this study would be used and advising of contact details of who to contact if they have any concerns after completing the trial.

2.2.3 Post-trial

P.Q Method 2.11 and SPSS software were used for data analysis. Factor analysis was undertaken under both software packages to identify the underlying variables to explain the responses of each condition in the q-sorts of the whole condition.

2.3 PROCEDURE

Participants were first given the screening sheet as well as an informed consent form. They were instructed to read both of these fully, and if they were comfortable to continue based on the information given in these, to sign the informed consent form. Participants then received instructions on how to complete the q-sort, and proceeded to put all eighteen statements into three piles, agree, disagree and neutral, and fill in the q-sort. Each Q-set placement was recorded for each participant's responses and after all of the trials were complete. Statements were scored 1 to 18, where low empathy statements were scored 1-9 and high empathy statements were scored 10-18. The Q-sorts of all participants were correlated with each other to find similar rankings from participants. These findings were then put through factor analysis to find similarities between responses in terms of a holistic picture of the whole P-set (the sample) and their subjective views. Using software named PQMethod 2.11, the patterns of responses were identified and comparisons made between how empathetic people were towards the situations of the target in the vignettes, and whether this differed between the high empathy and low empathy conditions.

Results

3.1 Descriptive Statistics

Descriptive statistics were produced for all of the statements provided to participants for both the high and low empathy conditions to compare responses to high and low empathy statements. These are presented in Figures 1a-1d.

3.1.1 Means.

Mean values represent the average number of statement chosen by participants in each box, where box 18 was the statement they least agreed with and 1 was the box they most agreed with. Each box represents a position on the grid as shown in the methods section (Diagram 1). High mean results for agree boxes (with the 'most agree' being Box 1) suggests high empathy statements were more agreed with (as high empathy statements were given scores of 10-18). Low results for disagree boxes (with box 18 being most disagree) suggests participants tended to disagree with these more (as low empathy statements were given scores of 1-9).

High empathy.

Descriptive Statistics			
Grid Position	Mean	Std. Deviation	N
Box 1	14.63	2.655	16
Box 2	13.56	2.394	16
Box 3	15.25	1.770	16
Box 4	13.63	3.442	16
Box 5	12.94	3.454	16
Box 6	12.94	3.454	16
Box 7	12.56	3.966	16
Box 8	9.63	4.272	16
Box 9	11.25	4.879	16
Box 10	10.19	5.244	16
Box 11	10.56	4.163	16
Box 12	4.63	2.754	16
Box 13	4.44	2.308	16
Box 14	6.50	2.033	16
Box 15	5.31	3.591	16
Box 16	3.75	3.044	16
Box 17	5.56	3.812	16
Box 18	3.69	2.089	16

Figure 1a: Means for High Empathy Participants for all statements.

As shown in Figure 1a, the high empathy condition rated high empathy statements more favourably, and disagreed more with low empathy statements, as should be expected given the logical nature of the study design. This also indicates that the stimuli (the statements) were appropriate for their purpose, and that the intentional high/low empathy categorisation embedded in the statements was effective in this condition, where empathy was induced.

Low empathy.

Descriptive Statistics			
Grid Position	Mean	Std. Deviation	Analysis N
BOX1	9.94	5.013	16
BOX2	11.25	4.824	16
BOX3	8.94	6.277	16
BOX4	8.06	4.795	16
BOX5	9.69	3.995	16
BOX6	10.25	5.158	16
BOX7	11.81	5.010	16
BOX8	10.44	4.412	16
BOX9	12.25	5.568	16
BOX10	7.75	5.079	16
BOX11	8.56	4.501	16
BOX12	11.94	5.221	16
BOX13	8.50	4.705	16
BOX14	8.56	4.980	16
BOX15	10.19	5.799	16
BOX16	7.13	4.897	16
BOX17	6.94	5.507	16
BOX18	8.00	6.272	16

Figure 1b: Means for Low Empathy Participants for all statements.

Figure 1b highlights mean results for low empathy respondents. This highlights that this condition found little consensus among participants as there does not appear to be agreement among all participants in relation to their subjective perception of stimuli.

3.1.2 Frequencies

Frequencies represent the number of times participants chose to rate each statement in each box. Statements 1-9 are low empathy statements and statements 10-18 are high empathy. Box 1 is most agree and box 18 represents most disagree.

High empathy.

GRID NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1										1	1	3	1	1	1	4	1	3
2											4	3	3		1	3	1	1
3												1	3	1	3	2	6	
4						1				1	2	3	2		2		2	3
5					1						4	1	2		1	1	4	2
6					1						4	1	2		1	1	4	2
7						1	1		2		3	1		1	2	1	3	1
8	2							2	3									
9	1						2	2	2									
10	2							2	1									
11				1				1	6	2								
12	2	1	5	1			2	4										
13	2	1	2	3	5	1			2									
14			2	1	2	2	3	3	3									
15	2	1	3	2			4	2										
16	3	3	3	4	1				1					1				
17	1	2	1	1	4	3	3											
18		8		3	3				2									

Figure 1c: Frequencies of statements entered in each position on grid for high empathy condition.

As shown in figure 1c, high empathy statements (statements 10-18) were more frequently entered in the agree boxes in the grid (box 1, most agree), and low empathy statements (statements 1-9) more frequently entered in the disagree boxes. This suggests that participants in this condition agreed with empathetic statements, suggesting the hypothesis was proven.

Low empathy.

GRID NUMBER	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	2				1		2		2	1	3					1	1	1
2		1	1			2			1			5	1		2	1	1	1
3	4		1	1			1				2	2	1			3		1
4		2	2	1	1	1			2	1	1				2	1		
5	1			1	1		1	1	2	2	1	1	3	1		1		
6	1	1		1		1	1		2	1		2	1	1	1	1		
7		1		1		1		1	1	2		1	1	3	1	1	2	
8				1	1	3	1	1			1	2	2		1	2	1	
9		2				1			2		2			1	2	1	2	3
10	2		1	2			4	3		1		1						2
11	2				2		3	2		3		1	2			1		
12	1		1				1	1	1			5	1	1	1	1	1	1
13		1	3		1	2			3		1	1	2		1			
14	1	1	1	1	2			1	1	2	3	1					1	1
15	1	1		1	1	1	2	1			1			1	1	2	3	
16	1	1	2	3	2	1				2			1		1	2		
17	1	1	3	4		1		2			1			1				2
18		4	1		4	1		1					1			1	1	2

Figure 1d: Frequencies of statements entered in each position on grid for low empathy condition.

As shown in figure 1d, it appears there is no pattern in boxes chosen per statement, and frequencies were far more dispersed across participants q-sorts, suggesting that there was little consensus in this condition. This would suggest, that as the low empathy condition were instructed to think objectively, they were drawing on past knowledge alone. In comparison, inducing empathy in the high empathy condition seemed to have a powerful effect in creating the empathetic effect.

3.2 FACTOR ANALYSIS

Factor analysis was then undertaken on the eighteen statements, which consisted of nine high empathy and nine low empathy statements designed by the researcher, in SPSS to identify underlying variables to explain the pattern of correlations found within each condition. This was done to be able to understand whether inducing empathy had the hypothesised effect, that the high empathy group would produce more agreement responses to statements that were empathetic to substance misusers. Rotated components matrix indicate loadings of statements onto factors, with negative z-scores indicating disagreement and positive z-scores indicating agreement to statements. Z-scores are standard scores calculated to allow easy comparison of two or more scores (Gray & Kinnear, 2012).
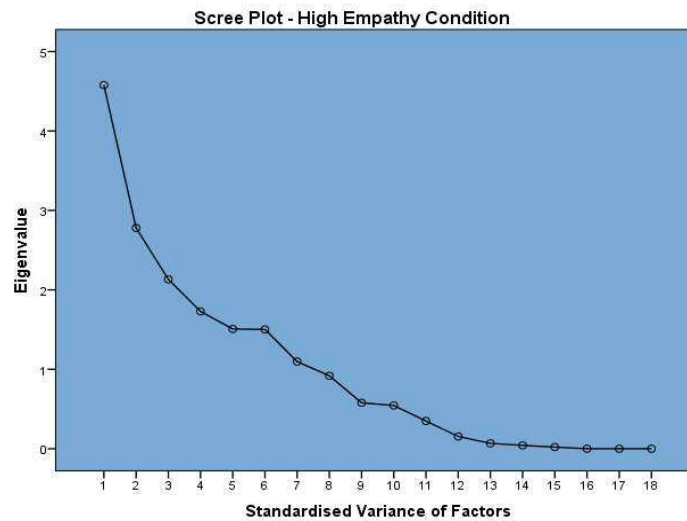
3.2.1 High empathy.

Figure 2a: Scree plot for high empathy condition.

Figure 2a highlights the eigenvalues for all factors found in the high empathy group's q-sorts, which must be at least 1 to be true factor. Factors appear to be valid until factor 7, and then fall beneath 1 from factor 8.

Total Variance Explained

Component (Factor)	Initial Eigenvalues		
	Total	% of Variance	Cumulative %
1	4.578	25.431	25.431
2	2.779	15.440	40.872
3	2.133	11.849	52.720
4	1.728	9.603	62.323
5	1.507	8.375	70.698
6	1.502	8.343	79.041
7	1.097	6.093	85.134
8	.918	5.103	90.237
9	.578	3.213	93.450
10	.545	3.026	96.476
11	.349	1.938	98.414
12	.155	.862	99.276
13	.068	.375	99.652
14	.042	.235	99.887
15	.020	.113	100.000
16	9.861E-017	5.478E-016	100.000
17	6.865E-017	3.814E-016	100.000
18	-5.210E-017	-2.894E-016	100.000

Extraction Method: Principal Component Analysis.

Figure 2b: Eigenvalues and variance of factors explaining the high empathy condition.

As shown in figure 2b, seven factors were found with an eigenvalue of >1, however, it was found that some factors had less than three valid factor loadings (with a score of >0.3), so rotation was restricted to three factors.

Rotated Component Matrix[a]

	Component		
	1 – Treatment over Punishment	2 - Responsibility	3 – Societal Help
Responsibility	-.461	.181	.015
Addicts are to blame	.190	-.769	-.396
Addicts should be avoided	.060	-.542	-.202
No help needed	-.571	-.037	.094
Jail is the best solution	-.892	-.019	-.119
Danger to society	-.892	-.019	-.119
Funding offered sparingly	.029	-.039	-.743
Methadone system works	.173	.606	-.192
Too lenient to addiction	-.692	-.160	-.189
Help to reintegrate given	-.070	-.114	-.505
Help to find a job offered	.504	-.104	-.071
Not irresponsibility	.318	.633	-.435
Illness rather than crime	.589	.444	-.048
More sympathy deserved	.011	.650	.310
Person-specific rehab is best	.876	.116	-.090
Individualistic treatment	-.145	-.038	.571
Treated as mental illness	-.151	.167	.843
Society is part of the problem	.244	.610	-.081

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

Figure 2c: Factor loadings for restricted factors for high empathy condition.

Figure 2c highlights which statements loaded best onto each factor after rotation. Results found that participants in the empathy condition gave empathetic responses to statements, providing three factors indicating empathy towards substance misusers. Factor 1, named treatment over punishment and loading eight statements, agreed most that treatment focussed on the individual instead of society was important (z-score = .876), and disagreed most with the idea that jail is the best solution to substance misuse (z-score = -.892) and that this group were a danger to society (z-scores = -.892). Factor 2, responsibility, loaded six statements, agreeing most with the idea more sympathy for this group is deserved (z-score = .650) and that society plays a role in the problem by not tackling issues, such as poverty, efficiently (z-score = .610), and disagreeing the substance misusers are to blame for their condition (z-score = -.769). Factor 3, societal help, loaded four statements and agreed most with the idea that substance addiction should be treated as sensitively as other mental health issues (z-score = .843) and treatment should be based on the individual (z-score = .571), and disagree about offering funding for treatment sparingly (z-score = -.743). Overall, high empathy participants agreed with high empathy statements and disagree with low empathy statements.
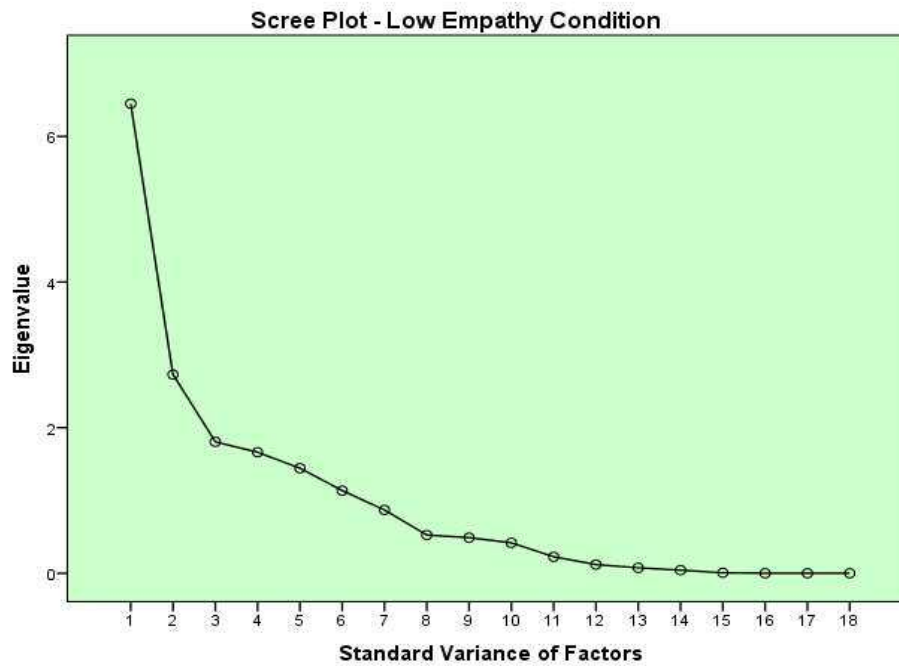
3.2.2 Low empathy.

Figure 2d: Scree plot of factors for low empathy condition.

Figure 2d highlights eigenvalues of factors found for low empathy condition participants responses to statements. It appears that factors 1 to 4 seem to explain most of the variance in this condition, with factors up to 6 having valid eigenvalues.

Total Variance Explained

Component	Initial Eigenvalues		
(Factor)	Eigenvalue	%variance	Acc. variance
1	6.449	35.830	35.830
2	2.729	15.162	50.992
3	1.806	10.031	61.024
4	1.663	9.237	70.261
5	1.443	8.017	78.277
6	1.136	6.312	84.590
7	.869	4.829	89.418
8	.525	2.919	92.338
9	.490	2.721	95.059
10	.418	2.325	97.383
11	.226	1.257	98.641
12	.120	.665	99.306
13	.075	.417	99.723
14	.043	.238	99.962
15	.007	.038	100.000
16	1.208E-016	6.712E-016	100.000
17	2.066E-017	1.148E-016	100.000
18	-3.813E-017	-2.119E-016	100.000

Extraction Method: Principal Component Analysis.

Figure 2e: Eigenvalues and variance of factors for low empathy condition.

Figure 2e shows that six factors were found that have an eigenvalue of >1, however, upon further scrutiny of factors loadings, only three factors had the acceptable minimum number of factor loadings (with a score of >0.3), so rotation was then restricted to three factors for further investigation.

Rotated Component Matrix[a]

	Component		
	1 - Blame	2 – Irresponsibility	3 – Limited help
Responsibility	.767	.205	-.408
Addicts are to blame	.903	.144	.087
Addicts should be avoided	.001	.779	.015
No Help Needed	.376	.777	.038
Jail is the Best Solution	.729	.117	-.202
Danger to Society	.532	.306	-.511
Funding offered sparingly	-.164	.160	.793
Methadone system works	.136	-.021	.018
Too lenient to addiction	-.327	.178	-.126
Help to reintegrate given	.046	.223	-.662
Help to find a job offered	.326	-.213	.727
Not irresponsibility	-.351	-.524	.376
Illness rather than crime	-.733	.174	-.260
More sympathy deserved	-.626	-.354	-.288
Person-specific rehab is best	-.425	-.680	.190
Individualistic treament	-.730	-.265	.113
Treated as mental illness	-.020	-.700	.239
Society is part of the problem	-.953	-.157	-.041

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 3 iterations.

Figure 2f: Factor loadings of restricted factors for low empathy condition

Figure 2f highlights which statements loaded on each factor after rotation. It was found that all three factors found in this condition responded with low empathy towards perceptions regarding substance misuse where most high empathy statements were disagree with and low empathy statements agreed with. Factor 1, Blame, loaded ten statements and was defined as so due to strong agreement with the idea that the fault of becoming addicted to drugs lies with the addict (z-score = .903), and strong disagreement with the idea that society plays a role in this social issue (z-score = -.953). Factor 2, Irresponsibility, found responses that agreed with the idea that no help is needed for the community and that addicts should be able to seek treatment alone (z-score = .777), and disagreed that addiction is an illness rather than a crime (z-score=-.700) and that addiction is not down to irresponsibility of breaking the law (z-score= = -.524). Factor 3, Limited Help, loaded three statements, including strong agreement with the idea that funding to help addiction services should be limited (z-score = .793), and disagreement with the idea of offering help to reintegrate back into society (z-score = -.622).

3.3 PQ Method

Factor analysis was then undertaken using PQ Method, a statistical programme designed specifically to handle the requirements of Q methodology. This method of analysis was best suited to in this study, as it is designed to cope with the nature of the data produced. This was conducted in addition to SPSS analysis as PQ Method rotates factors to consider q-sorts based on participant sorts, exploring the detail of the factor further.

3.3.1 Factor Matrix.

Factor matrix highlights the factor loadings for each factor. Under exploratory factor analysis, a minimum of 3 factors loadings is needed for a factor to be satisfactory, with a score of at least 0.3 to qualify as a loading (DiStefano, Zhu & Mindrilla, 2009).

3.3.1.1 High empathy.

PQ Method initially computes 8 factors. After analysis of the original 8 factors, it was found that only 3 factors had the satisfactory number of factor loadings to be acceptable under exploratory factor analysis. The restricted 3 factors will be presented.

FACTOR MATRIX WITH DEFINING SORT (INDICATED BY X)		1	2	3
PARTICIPANT				
	1	0.8551X	0.2254	0.2278
	2	0.8215X	0.1052	0.3839
	3	0.7945X	0.3678	0.2228
	4	0.0582	0.4826	0.8028X
	5	0.6003	0.6364X	0.2489
	6	0.7245X	0.4673	0.2198
	7	0.6944X	0.3050	0.4269
	8	0.8090X	0.4275	0.1873
	9	0.4339	0.7999X	0.1076
	10	0.6389	-0.1098	0.6716X
	11	0.5554	0.5589X	0.2061
	12	0.4900	0.5738X	0.5171
	13	0.3930	0.4872	0.5082X
	14	0.8613X	0.3332	0.1595
	15	0.0913	0.8913X	0.2192
	16	0.8261X	0.2692	-0.0195
% VARIANCE		43%	24%	14%

Figure 3a: Factor matrix showing factors loadings for high empathy condition factors.

Factor Matrix results, as shown in figure 3a, highlights that 81% of variance within the high empathy factor can be explained by these three factors, with each factor having 8 factor loadings, factor 2 having 5 and factor 3 having 3.

3.3.1.2 Low empathy.

Analysis of this condition was restricted to 4 factors as it was found that this was the number out of the original 8 extracted by PQ Method to have the satisfactory minimum of 3 factor loadings. The 4 restricted factors will be presented.

FACTOR MATRIX WITH DEFINING SORT (INDICATED BY X)					
LOW EMPATHY					
PARTICIPANT	FACTOR	1	2	3	4
1		0.9163X	-0.0761	-0.0298	0.0602
2		0.2913X	-0.0771	0.0007	-0.0804
3		0.7294X	-0.0429	0.2222	-0.2776
4		0.7328X	-0.2824	0.2896	-0.2807
5		0.7585X	0.2921	0.1496	-0.2239
6		0.5282	0.7173X	-0.0712	0.0094
7		0.5031	-0.0503	0.7144X	0.0011
8		-0.1935	0.0752	-0.2162	0.8352X
9		-0.235	-0.3257	0.5243X	0.4892
10		-0.3649	0.0683	-0.0529	0.7200X
11		-0.5057	-0.0236	-0.5252	0.3906X
12		0.1329	-0.0121	0.8559X	-0.0962
13		0.0433	0.5684X	0.4614	0.4579
14		-0.3282	0.8748X	-0.0655	0.1178
15		0.6189	0.2103	0.1932	0.5153
16		0.8812X	0.056	0.1523	-0.2611
% VARIANCE		30	12	14	16

Figure 3b: Factor matrix showing factor loadings low empathy condition factors after.

As shown in figure 3b, 81% of variance within the low empathy factor can be explained in these 5 factors, with factor 1 having 6 factor loadings, and factors 2,3 and 4 having 3 each.

3.3.2 Correlations Between Factors.

Correlations between factors in each condition indicated whether subjective perception across the participants within each factor were similar.

3.3.2.1 High empathy.

CORRELATIONS BETWEEN FACTOR SCORES – HIGH EMPATHY

	FACTOR 1	FACTOR 2	FACTOR 3
FACTOR 1	1.0000	0.5469	0.4258
FACTOR 2	0.5469	1.0000	0.5778
FACTOR 3	0.4258	0.5778	1.0000

Figure 3c: Correlations between high empathy factors.

As figure 3c highlights, significant positive correlations were found between all three factors in this condition, suggesting consensus in subjective perception across participants and that inducing empathy was a powerful mechanism in producing empathetic responses in this condition.

3.3.2.2 Low empathy.

CORRELATIONS BETWEEN FACTOR SCORES – LOW EMPATHY

	FACTOR 1	FACTOR 2	FACTOR 3	FACTOR 4
FACTOR 1	1.0000	-0.1359	0.3469	-0.4417
FACTOR 2	-0.1359	1.0000	-0.1397	0.2181
FACTOR 3	0.3469	-0.1397	1.0000	-0.2609
FACTOR 4	-0.4417	0.2181	-0.2609	1.0000

Figure 3d: Correlations between low empathy factors.

Correlations between factors in the low empathy condition differ from those found in high empathy, as shown in figure 3d, finding contrasting subjective perception of statements. Factors 1 and 3 correlate positively together, but negatively with factors 2 and 4. Factors 2 and 4 correlate positively together. This suggests that a divide in subjective perception was found within this factor. The nature of these differences will be explored.

3.3.3 Factor Scores, Distinguishing and Consensus Statements.

Each factor will now be described, including which statements loaded onto each, which statements were used to define the factor, known as the distinguishing statements. Factor scores are based on normalised z-scores, which represented weighted averages of participant scores, to attribute statements to a normal distribution for easier comparison (Van Exel & de Graaf, 2005). Diagrams of each factor are presented, highlighting the 'idealised' sort for each factor, which is devised to represent a q-sort of a hypothetical respondent with a 100% loading on that factor, where high empathy statements are represented in green boxes and low empathy in red boxes.

Distinguishing statements are those which are found on factors where the participants have placed the statement on a position on the grid, which differs from the positions chosen by participants loaded on other factors. These help to define the important points within the factor (Coogan & Herrington, 2011). Consensus statements are those which there is no vast difference in subjective perception across factors, suggesting that there were similarities in opinion towards these statements across all participants within the factor. The use of these allows the researcher to define each factor, based on the patterns of statements across factor loadings, creating a narrative to explain responses from participants.

3.3.3.1 High empathy.
FACTOR 1 - RESPONSBILITY

TYPE	STATEMENT	Z-SCORE		DISTINGUISHING?
LOW EMPATHY	There is no excuse for people who become addicted to drugs – it is their fault.	1.633	DISAGREE	
LOW EMPATHY	Being put in jail for the crimes that tend to be committed in relation to drug addiction is the best way to solve the problem.	1.314	DISAGREE	
LOW EMPATHY	Substance misusers do not need the help and support of the community to get clean from drugs and should be capable to seek treatment alone.	1.244	DISAGREE	
LOW EMPATHY	Substance misusers tend to be people who should be avoided.	0.981	DISAGREE	
LOW EMPATHY	Substance misusers are a danger to society.	0.821	DISAGREE	Yes. p<0.05
LOW EMPATHY	Substance misusers are responsible for the onset of their health condition.	0.773	DISAGREE	
LOW EMPATHY	Money provided to help substance misusers in treatment should be offered sparingly.	0.721	DISAGREE	
LOW EMPATHY	The current system of treating heroin addicts – the methadone system – is effective.	0.279	DISAGREE	
LOW EMPATHY	People have too much of a lenient attitude to drug addiction nowadays.	0.099	DISAGREE	
HIGH EMPATHY	Substance abusers deserve more sympathy than they receive at present.	-0.045	DISAGREE	
HIGH EMPATHY	There is often more to people becoming a drug addict than the idea that they are irresponsible and don't care about breaking the law.	-0.590	AGREE	Yes. p<0.01
HIGH EMPATHY	A system that bases its rehabilitation on the needs of the addict rather than the needs of society is a more effective way of treating addicts, thus benefitting society in the long run.	-0.664	AGREE	
HIGH EMPATHY	Substance misusers should be offered help from the community in order to reintegrate them into society and help them stay clean from drugs.	-0.731	AGREE	
HIGH EMPATHY	Substance misusers should be treated as individuals and offered treatment that would suit their recovery.	-1.003	AGREE	
HIGH EMPATHY	Previous substance misusers should be given help to overcome the stigma attached to being an addict if they become clean, and be offered help to get back into work.	-1.116	AGREE	
HIGH EMPATHY	Drug addiction is an illness and should be treated that way rather than a criminal offence in order to create a better system of treatment.	-1.131	AGREE	Yes. p<0.01
HIGH EMPATHY	Drug addiction should be treated as sensitively as other mental health issues.	-1.202	AGREE	
HIGH EMPATHY	Drug addiction could be seen as the fault of society not addressing the issue properly and not always be blamed on the individual entirely.	-1.383	AGREE	Yes. p<0.01

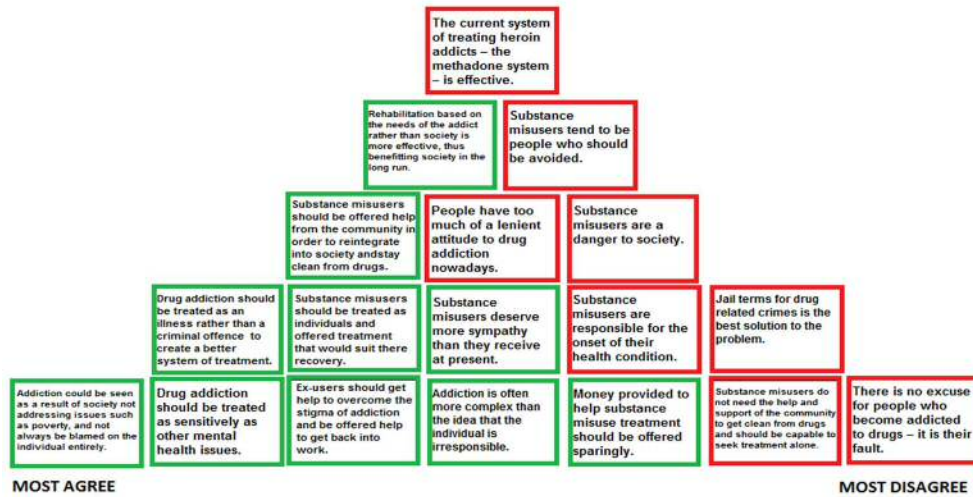Figure 3e: Factors scores and distinguishing factors for high empathy factor 1 – Responsibility.

The current system of treating heroin addicts – the methadone system – is effective.

Rehabilitation based on the needs of the addict rather than society is more effective, thus benefitting society in the long run.

Substance misusers tend to be people who should be avoided.

Substance misusers should be offered help from the community in order to reintegrate into society and stay clean from drugs.

People have too much of a lenient attitude to drug addiction nowadays.

Substance misusers are a danger to society.

Drug addiction should be treated as an illness rather than a criminal offence to create a better system of treatment.

Substance misusers should be treated as individuals and offered treatment that would suit there recovery.

Substance misusers deserve more sympathy than they receive at present.

Substance misusers are responsible for the onset of their health condition.

Jail terms for drug related crimes is the best solution to the problem.

Addiction could be seen as a result of society not addressing issues such as poverty, and not always be blamed on the individual entirely.

Drug addiction should be treated as sensitively as other mental health issues.

Ex-users should get help to overcome the stigma of addiction and be offered help to get back into work.

Addiction is often more complex than the idea that the individual is irresponsible.

Money provided to help substance misuse treatment should be offered sparingly.

Substance misusers do not need the help and support of the community to get clean from drugs and should be capable to seek treatment alone.

There is no excuse for people who become addicted to drugs – it is their fault.

MOST AGREE   **MOST DISAGREE**

Figure 3f: Diagram of Q-sort values for factor 1 high empathy - Responsibility

Factor 1 was named Responsibility (as shown in figure 3e) because distinguishing factors highlighted that this was an important theme to eight participants who loaded on this factor. Distinguishing statements in this factor included; disagreement with the idea that substance misusers are a danger to society and agreement that addiction is not due to irresponsibility, that it is an illness, and that society has responsibility for this social issue due to inadequate methods of dealing with addiction in society. This factor accounted for the most variance of this condition. Figure 3f highlights that empathetic responses in attitudes were found, with high empathy statements being placed on the agreement side of the grid, and low empathy statements being placed on the disagree end.

FACTOR 2 – SOCIETAL HELP

TYPE	STATEMENT	Z-SCORE	
LOW EMPATHY	Substance misusers do not need the help and support of the community to get clean from drugs and should be capable to seek treatment alone.	1.813	DISAGREE
LOW EMPATHY	There is no excuse for people who become addicted to drugs – it is their fault.	1.143	DISAGREE
HIGH EMPATHY	Drug addiction is an illness and should be treated that way rather than a criminal offence in order to create a better system of treatment.	1.132	DISAGREE
LOW EMPATHY	Money provided to help substance misusers in treatment should be offered sparingly.	0.912	DISAGREE
HIGH EMPATHY	Drug addiction could be seen as the fault of society not addressing the issue properly and not always be blamed on the individual entirely.	0.901	DISAGREE
LOW EMPATHY	Substance misusers tend to be people who should be avoided.	0.681	DISAGREE
LOW EMPATHY	Being put in jail for the crimes that tend to be committed in relation to drug addiction is the best way to solve the problem.	0.681	DISAGREE
LOW EMPATHY	People have too much of a lenient attitude to drug addiction nowadays.	0.231	DISAGREE
LOW EMPATHY	The current system of treating heroin addicts – the methadone system – is effective.	0.000	DISAGREE
LOW EMPATHY	Substance misusers are a danger to society.	-0.000	AGREE
LOW EMPATHY	Substance misusers are responsible for the onset of their health condition.	-0.231	AGREE
HIGH EMPATHY	Substance misusers should be offered help from the community in order to reintegrate them into society and help them stay clean from drugs.	-0.681	AGREE
HIGH EMPATHY	A system that bases its rehabilitation on the needs of the addict rather than the needs of society is a more effective way of treating addicts, thus benefitting society in the long run.	-0.681	AGREE
HIGH EMPATHY	Substance misusers deserve more sympathy than they receive at present.	-0.901	AGREE
HIGH EMPATHY	Drug addiction should be treated as sensitively as other mental health issues.	-0.912	AGREE
HIGH EMPATHY	Previous substance misusers should be given help to overcome the stigma attached to being an addict if they become clean, and be offered help to get back into work.	-0.912	AGREE
HIGH EMPATHY	Substance misusers should be treated as individuals and offered treatment that would suit their recovery.	-1.582	AGREE
HIGH EMPATHY	Drug addiction could be seen as the fault of society not addressing the issue properly and not always be blamed on the individual entirely.	-1.593	AGREE

Figure 3g: Factors scores and distinguishing factors for high empathy factor 2 – Societal help.
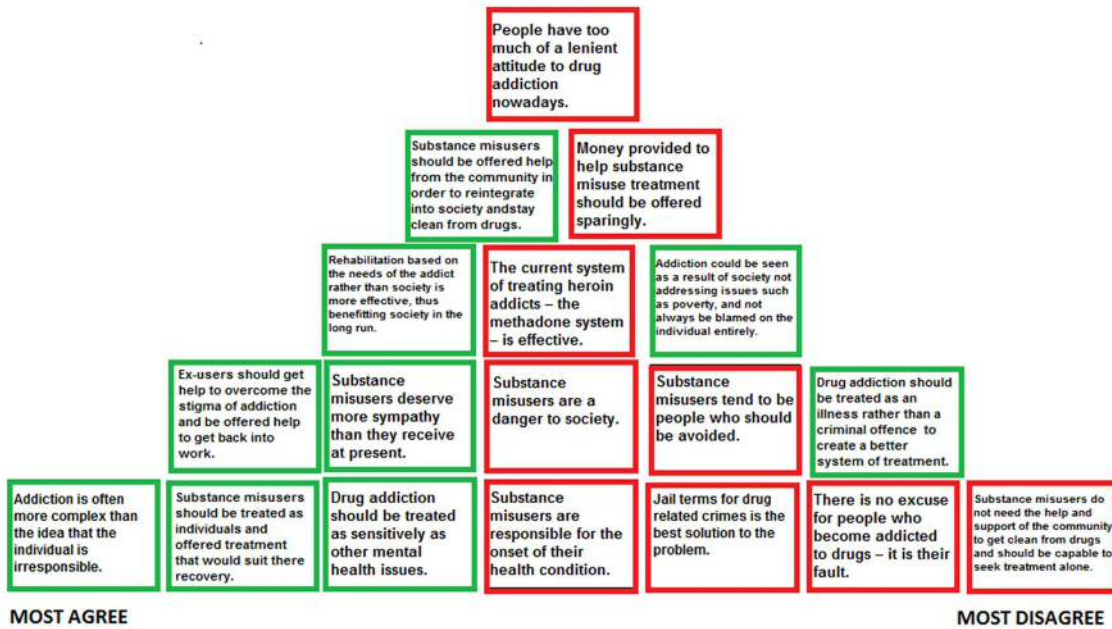
Figure 3h: Diagram of Q-sort values for factor 2 high empathy – Societal Help.

Factor 2 was named Societal Help (as shown in figure 3g) as the five participants who loaded onto this factor disagreed most with the idea that substance misusers do not need the help of the community to recover successfully. It was agreed that treatment should address the needs of the individual and that recovered drug addicts should be offered help to find work. This suggested that opinion in this factor focused on the idea that substance misusers should be empathised with, as they have an illness. This factor agreed most with high empathy statements and disagree most with low empathy statements as shown in figure 3h.

FACTOR 3 – TREATMENT

TYPE	STATEMENT	Z-SCORE		DISTINGUISHING?
LOW EMPATHY	The current system of treating heroin addicts – the methadone system – is effective.	1.909	DISAGREE	Yes – p<0.01
LOW EMPATHY	There is no excuse for people who become addicted to drugs – it is their fault.	1.272	DISAGREE	
LOW EMPATHY	Being put in jail for the crimes that tend to be committed in relation to drug addiction is the best way to solve the problem.	1.272	DISAGREE	
LOW EMPATHY	Substance misusers do not need the help and support of the community to get clean from drugs and should be capable to seek treatment alone.	0.636	DISAGREE	
LOW EMPATHY	Substance misusers tend to be people who should be avoided.	0.636	DISAGREE	
HIGH EMPATHY	Previous substance misusers should be given help to overcome the stigma attached to being an addict if they become clean, and be offered help to get back into work.	0.636	DISAGREE	
HIGH EMPATHY	Drug addiction is an illness and should be treated that way rather than a criminal offence in order to create a better system of treatment.	0.636	DISAGREE	
LOW EMPATHY	Substance misusers are responsible for the onset of their health condition.	0.000	DISAGREE	
HIGH EMPATHY	Substance misusers should be offered help from the community in order to reintegrate them into society and help them stay clean from drugs.	0.000	DISAGREE	
HIGH EMPATHY	Substance misusers deserve more sympathy than they receive at present.	0.000	DISAGREE	
HIGH EMPATHY	Drug addiction could be seen as the fault of society not addressing the issue properly and not always be blamed on the individual entirely.	-0.000	AGREE	
LOW EMPATHY	Money provided to help substance misusers in treatment should be offered sparingly.	-0.636	AGREE	Yes – p<0.01
LOW EMPATHY	People have too much of a lenient attitude to drug addiction nowadays.	-0.636	AGREE	
HIGH EMPATHY	Drug addiction should be treated as sensitively as other mental health issues.	-0.636	AGREE	
LOW EMPATHY	Substance misusers are a danger to society.	-0.636	AGREE	
HIGH EMPATHY	Substance misusers should be treated as individuals and offered treatment that would suit their recovery.	-1.272	AGREE	Yes – p<0.01
HIGH EMPATHY	A system that bases its rehabilitation on the needs of the addict rather than the needs of society is a more effective way of treating addicts, thus benefitting society in the long run.	-1.272	AGREE	
HIGH EMPATHY	There is often more to people becoming a drug addict than the idea that they are irresponsible and don't care about breaking the law.	-1.909	AGREE	

Figure 3i: Factors scores and distinguishing factors for high empathy factor 3 – Treatment.
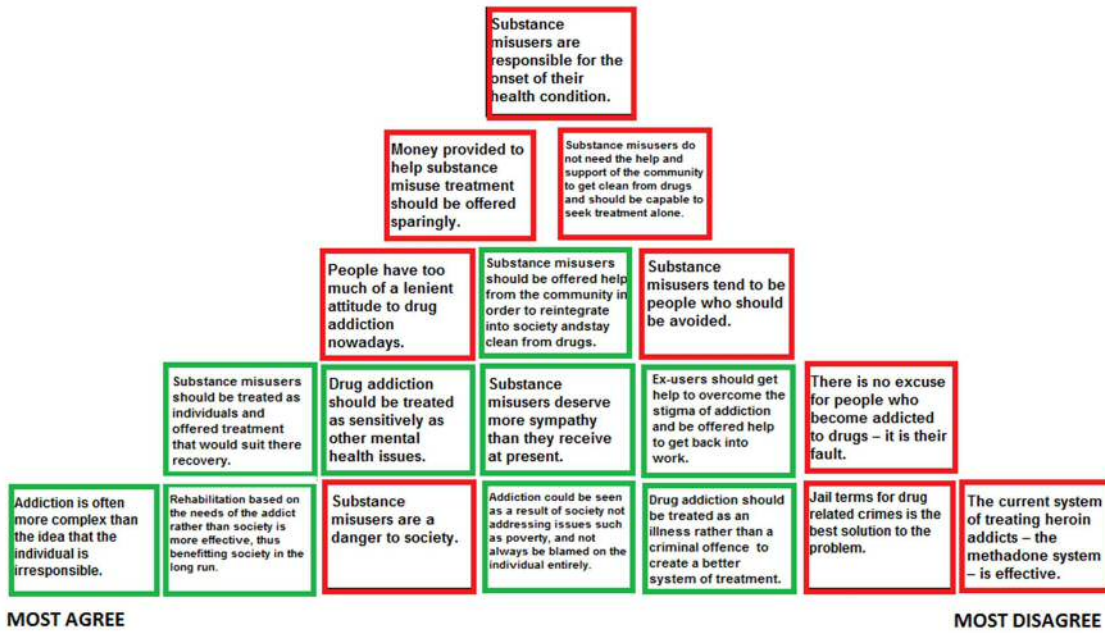
Figure 3j: Diagram of Q-sort values for factor 3 high empathy – Treatment.

Factor 3 was named Treatment (as shown in figure 3i), as distinguishing factors highlighted that this was an important theme to three participants who loaded on this factor. Distinguishing statements focused on the idea that the current system of treatment is ineffective and that treatment should be more individualistic to best suit recovery. Figure 3j highlights that empathetic responses in attitudes were found, where the statements most agreed with were high empathy statements and the statements most disagreed with were low empathy statements.

3.3.3.2 Consensus statements for high empathy factors.

Statement	Type	Factor 1 Z-score	Factor 2 Z-score	Factor 3 Z-score
There is no excuse for people who become addicted to drugs – it is their fault.	Low	1.63	1.14	1.27
Substance misusers tend to be people who should be avoided.	Low	0.98	0.68	0.64
Substance misusers do not need help and support from the community to get clean from drugs and should be able to seek treatment alone.	Low	1.24	1.18	0.64
Being put in jail from crimes that tend to be committed in relation to drug addiction is the best way to solve the problem.	Low	1.31	0.68	1.27
People have too much of a lenient attitude to drug addiction nowadays.	Low	0.10	0.23	0.64
Substance misusers should be offered help from the community in order to reintegrate with society and help them stay clean from drugs.	High	-0.73	-0.68	-0.00
Drug addiction is an illness and should be treated that way rather than a criminal offence to create a better system of treatment.	High	-0.04	-0.90	-0.00
A system of rehabilitation that focuses on the needs of the addict rather than the needs of society is a more effective system of treatment, thus benefitting society in the long run.	High	-0.66	-0.68	-1.27
Substance misusers should be treated as individuals and offered treatment that would best suit their personal recovery.	High	-1.00	-1.50	-1.27
Drug addiction should be treated as sensitively as other mental health issues.	High	-1.20	-0.91	-0.64

Figure 3k: Consensus statements amongst high empathy participants. These statements highlight statements that did not different in agreement or disagreement across factors.

Ten consensus statements were found across all factors (figure 3k), suggesting that there was consensus in subjective attitudes across the condition. This suggests that inducing empathy was a powerful mechanism to evoke empathetic opinions as, across consensus statements, all low empathy statements were disagreed with and all high empathy statements were agreed with.

3.3.3.3 Low empathy.
FACTOR 1 – REINTEGRATION

TYPE	STATEMENT	Z-SCORE		DISTINGUISHING?
LOW EMPATHY	There is no excuse for people who become addicted to drugs – it is their fault.	1.999	DISAGREE	
LOW EMPATHY	Substance misusers do not need the help and support of the community to get clean from drugs and should be capable to seek treatment alone.	1.357	DISAGREE	
LOW EMPATHY	Being put in jail for the crimes that tend to be committed in relation to drug addiction is the best way to solve the problem.	1.346	DISAGREE	
LOW EMPATHY	Substance misusers tend to be people who should be avoided.	0.883	DISAGREE	
LOW EMPATHY	Substance misusers are a danger to society.	0.438	DISAGREE	
LOW EMPATHY	Substance misusers are responsible for the onset of their health condition.	0.425	DISAGREE	
LOW EMPATHY	The current system of treating heroin addicts – the methadone system – is effective.	0.369	DISAGREE	
LOW EMPATHY	Money provided to help substance misusers in treatment should be offered sparingly.	0.193	DISAGREE	
LOW EMPATHY	People have too much of a lenient attitude to drug addiction nowadays.	0.155	DISAGREE	
HIGH EMPATHY	Substance abusers deserve more sympathy than they receive at present.	0.086	DISAGREE	
HIGH EMPATHY	Drug addiction should be treated as sensitively as other mental health issues.	-0.241	AGREE	
HIGH EMPATHY	There is often more to people becoming a drug addict than the idea that they are irresponsible and don't care about breaking the law.	-0.708	AGREE	
HIGH EMPATHY	Drug addiction could be seen as the fault of society not addressing the issue properly and not always be blamed on the individual entirely.	-0.718	AGREE	
HIGH EMPATHY	A system that bases its rehabilitation on the needs of the addict rather than the needs of society is a more effective way of treating addicts, thus benefitting society in the long run.	-0.805	AGREE	
HIGH EMPATHY	Substance misusers should be offered help from the community in order to reintegrate them into society and help them stay clean from drugs.	-0.871	AGREE	Yes – $p<0.01$
HIGH EMPATHY	Substance misusers should be treated as individuals and offered treatment that would suit their recovery.	-1.009	AGREE	
HIGH EMPATHY	Drug addiction is an illness and should be treated that way rather than a criminal offence in order to create a better system of treatment.	-1.066	AGREE	
HIGH EMPATHY	Previous substance misusers should be given help to overcome the stigma attached to being an addict if they become clean, and be offered help to get back into work.	-1.832	AGREE	

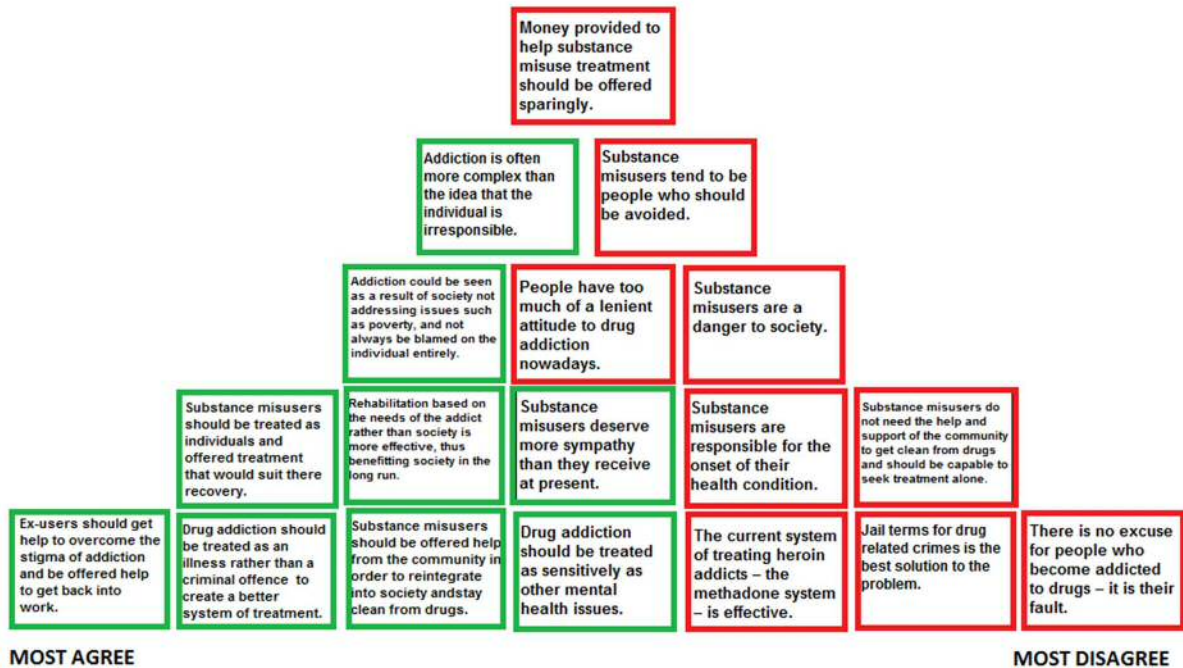Figure 3l: Factors scores and distinguishing factors for low empathy factor 1 – Reintegration.

Figure 3m: Diagram of Q-sort values for factor 1 low empathy – Reintegration.

Factor 1, Reintegration (as shown in figure 3l), produced empathetic attitudes (as shown in figure 3m highlighting the 'idealised' q-sort) from participants who loaded onto this factor. Definition of this factor was due to agreement with the idea that recovered addicts should be offered help to integrate to stay clean from drugs was a distinguishing factor across participants who loaded onto this factor. Of the five participants who loaded onto this factors, the idea that recovered addicts should be offered help to reintegrate into the workforce was agreed with most.

FACTOR 2 – RESPONSIBILITY

TYPE	STATEMENT	Z-SCORE		DISTINGUISHING?
HIGH EMPATHY	Drug addiction could be seen as the fault of society not addressing the issue properly and not always be blamed on the individual entirely.	1.985	DISAGREE	Yes – p<0.01
LOW EMPATHY	Substance misusers tend to be people who should be avoided.	1.669	DISAGREE	
HIGH EMPATHY	Drug addiction is an illness and should be treated that way rather than a criminal offence in order to create a better system of treatment.	1.047	DISAGREE	
HIGH EMPATHY	Substance abusers deserve more sympathy than they receive at present.	0.731	DISAGREE	
HIGH EMPATHY	Drug addiction should be treated as sensitively as other mental health issues.	0.731	DISAGREE	
HIGH EMPATHY	There is often more to people becoming a drug addict than the idea that they are irresponsible and don't care about breaking the law.	0.316	DISAGREE	
LOW EMPATHY	Money provided to help substance misusers in treatment should be offered sparingly.	0.000	DISAGREE	
LOW EMPATHY	The current system of treating heroin addicts – the methadone system – is effective.	0.000	DISAGREE	
HIGH EMPATHY	A system that bases its rehabilitation on the needs of the addict rather than the needs of society is a more effective way of treating addicts, thus benefitting society in the long run.	0.000	DISAGREE	
HIGH EMPATHY	Previous substance misusers should be given help to overcome the stigma attached to being an addict if they become clean, and be offered help to get back into work.	-0.099	AGREE	
LOW EMPATHY	Substance misusers do not need the help and support of the community to get clean from drugs and should be capable to seek treatment alone.	-0.108	AGREE	
LOW EMPATHY	Being put in jail for the crimes that tend to be committed in relation to drug addiction is the best way to solve the problem.	-0.207	AGREE	
LOW EMPATHY	Substance misusers are a danger to society.	-0.316	AGREE	
HIGH EMPATHY	Substance misusers should be offered help from the community in order to reintegrate them into society and help them stay clean from drugs.	-0.731	AGREE	
LOW EMPATHY	People have too much of a lenient attitude to drug addiction nowadays.	-0.731	AGREE	
LOW EMPATHY	There is no excuse for people who become addicted to drugs – it is their fault.	-0.839	AGREE	
HIGH EMPATHY	Substance misusers should be treated as individuals and offered treatment that would suit their recovery.	-1.462	AGREE	
LOW EMPATHY	Substance misusers are responsible for the onset of their health condition.	-1.985	AGREE	

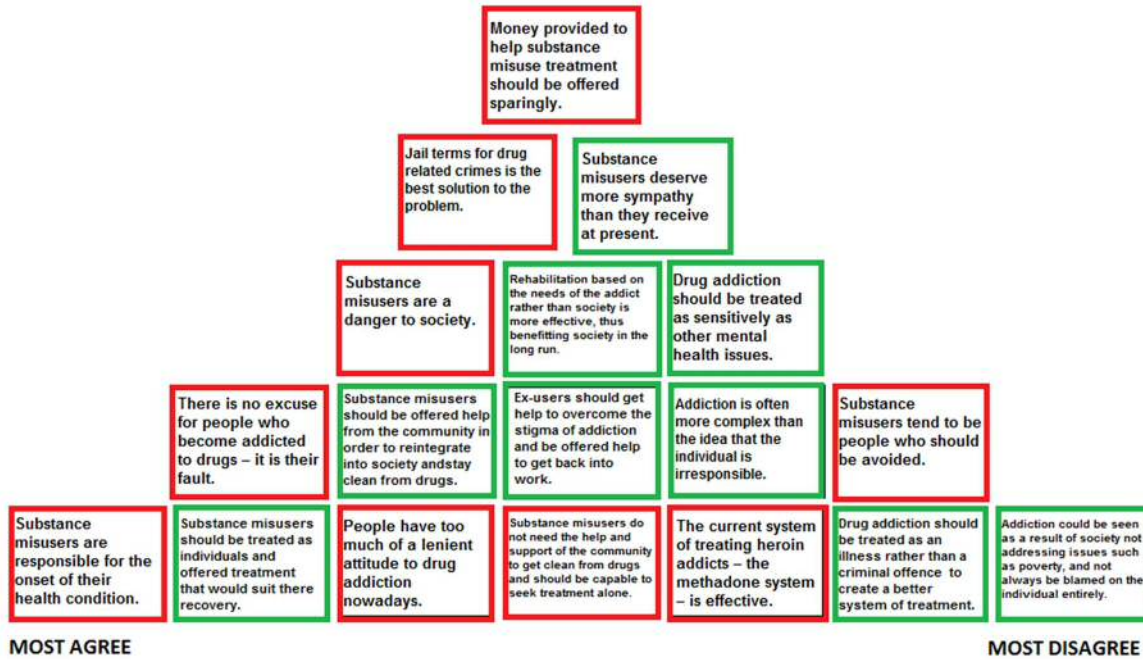Figure 3n: Factors scores and distinguishing factors for low empathy factor 2 – Responsibility.

Figure 3o: Diagram of Q-sort values for factor 2 low empathy – Responsibility.

Factor 2, Responsibility (as shown in figure 3n), produced non-empathetic attitudes (as shown in figure 3o highlighting the 'idealised' q-sort) from participants who loaded onto this factor. This factor was distinguished by the fact that participants in this factor disagreed most strongly with the idea that responsibility for addiction was partially down to the way that society deals with addiction and agreed most that substance misusers are responsible for their health condition.

FACTOR 3 – ADDICTION AS AN ILLNESS

TYPE	STATEMENT	Z-SCORE	
LOW EMPATHY	Substance misusers are a danger to society.	1.641	DISAGREE
LOW EMPATHY	There is no excuse for people who become addicted to drugs – it is their fault.	1.383	DISAGREE
LOW EMPATHY	Substance misusers tend to be people who should be avoided.	1.383	DISAGREE
LOW EMPATHY	Being put in jail for the crimes that tend to be committed in relation to drug addiction is the best way to solve the problem.	1.125	DISAGREE
HIGH EMPATHY	A system that bases its rehabilitation on the needs of the addict rather than the needs of society is a more effective way of treating addicts, thus benefitting society in the long run.	0.692	DISAGREE
HIGH EMPATHY	Substance misusers should be offered help from the community in order to reintegrate them into society and help them stay clean from drugs.	0.475	DISAGREE
HIGH EMPATHY	Previous substance misusers should be given help to overcome the stigma attached to being an addict if they become clean, and be offered help to get back into work.	0.475	DISAGREE
LOW EMPATHY	Substance misusers are responsible for the onset of their health condition.	0.217	DISAGREE
HIGH EMPATHY	Drug addiction could be seen as the fault of society not addressing the issue properly and not always be blamed on the individual entirely.	0.000	DISAGREE
LOW EMPATHY	The current system of treating heroin addicts – the methadone system – is effective.	-0.217	AGREE
HIGH EMPATHY	Substance misusers should be treated as individuals and offered treatment that would suit their recovery.	-0.217	AGREE
HIGH EMPATHY	Substance abusers deserve more sympathy than they receive at present.	-0.258	AGREE
LOW EMPATHY	Substance misusers do not need the help and support of the community to get clean from drugs and should be capable to seek treatment alone.	-0.692	AGREE
LOW EMPATHY	People have too much of a lenient attitude to drug addiction nowadays.	-0.908	AGREE
LOW EMPATHY	Money provided to help substance misusers in treatment should be offered sparingly.	-1.950	AGREE
HIGH EMPATHY	Drug addiction is an illness and should be treated that way rather than a criminal offence in order to create a better system of treatment.	-1.125	AGREE
HIGH EMPATHY	There is often more to people becoming a drug addict than the idea that they are irresponsible and don't care about breaking the law.	-1.383	AGREE
HIGH EMPATHY	Drug addiction should be treated as sensitively as other mental health issues.	-1.641	AGREE

Figure 3p: Factors scores and distinguishing factors for low empathy factor 3 – Addiction as an illness.
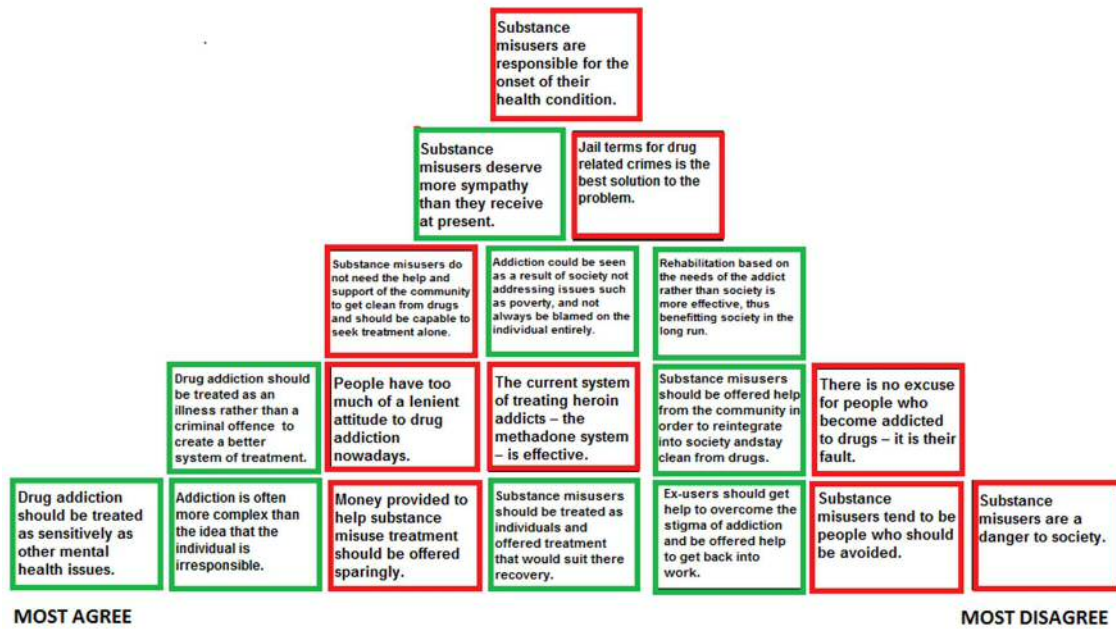
Figure 3q: Diagram of Q-sort values for factor 3 low empathy – Addiction as an illness.

Factor 3, Addiction as an illness (figure 3p), and the participants that loaded on this factor expressed empathetic attitudes in relation to statements suggesting that addiction is an illness rather than a crime, and disagreed that drug addicts should be criminalized for drug related crimes. Instead agreed that there was more to addiction than the idea that addicts do not care about breaking the law. As shown by figure 3q, the statements that were most agreed with were high empathy statements and the statements that were most disagreed with were low empathy statements.

FACTOR 4 - AVOIDANCE

TYPE	STATEMENT	Z-SCORE		DISTINGUISHING?
HIGH EMPATHY	Substance misusers should be treated as individuals and offered treatment that would suit their recovery.	1.652	DISAGREE	
HIGH EMPATHY	Substance abusers deserve more sympathy than they receive at present.	1.438	DISAGREE	
HIGH EMPATHY	Drug addiction is an illness and should be treated that way rather than a criminal offence in order to create a better system of treatment.	1.224	DISAGREE	
LOW EMPATHY	The current system of treating heroin addicts – the methadone system – is effective.	0.972	DISAGREE	
HIGH EMPATHY	Substance misusers should be offered help from the community in order to reintegrate them into society and help them stay clean from drugs.	0.933	DISAGREE	
HIGH EMPATHY	Drug addiction should be treated as sensitively as other mental health issues.	0.719	DISAGREE	
HIGH EMPATHY	Previous substance misusers should be given help to overcome the stigma attached to being an addict if they become clean, and be offered help to get back into work.	0.253	DISAGREE	
HIGH EMPATHY	Drug addiction could be seen as the fault of society not addressing the issue properly and not always be blamed on the individual entirely.	0.214	DISAGREE	
HIGH EMPATHY	A system that bases its rehabilitation on the needs of the addict rather than the needs of society is a more effective way of treating addicts, thus benefitting society in the long run.	-0.214	DISAGREE	
LOW EMPATHY	Being put in jail for the crimes that tend to be committed in relation to drug addiction is the best way to solve the problem.	-0.253	AGREE	
LOW EMPATHY	Substance misusers do not need the help and support of the community to get clean from drugs and should be capable to seek treatment alone.	-0.253	AGREE	
LOW EMPATHY	There is no excuse for people who become addicted to drugs – it is their fault.	-0.466	AGREE	
LOW EMPATHY	Money provided to help substance misusers in treatment should be offered sparingly.	-0.466	AGREE	
HIGH EMPATHY	There is often more to people becoming a drug addict than the idea that they are irresponsible and don't care about breaking the law.	-0.505	AGREE	
LOW EMPATHY	Substance misusers are a danger to society.	-0.933	AGREE	
LOW EMPATHY	Substance misusers tend to be people who should be avoided.	-0.972	AGREE	Yes – p<0.01
LOW EMPATHY	People have too much of a lenient attitude to drug addiction nowadays.	-1.652	AGREE	
LOW EMPATHY	Substance misusers are responsible for the onset of their health condition.	-1.690	AGREE	

Figure 3r: Factors scores and distinguishing factors for low empathy factor 4 – Avoidance.
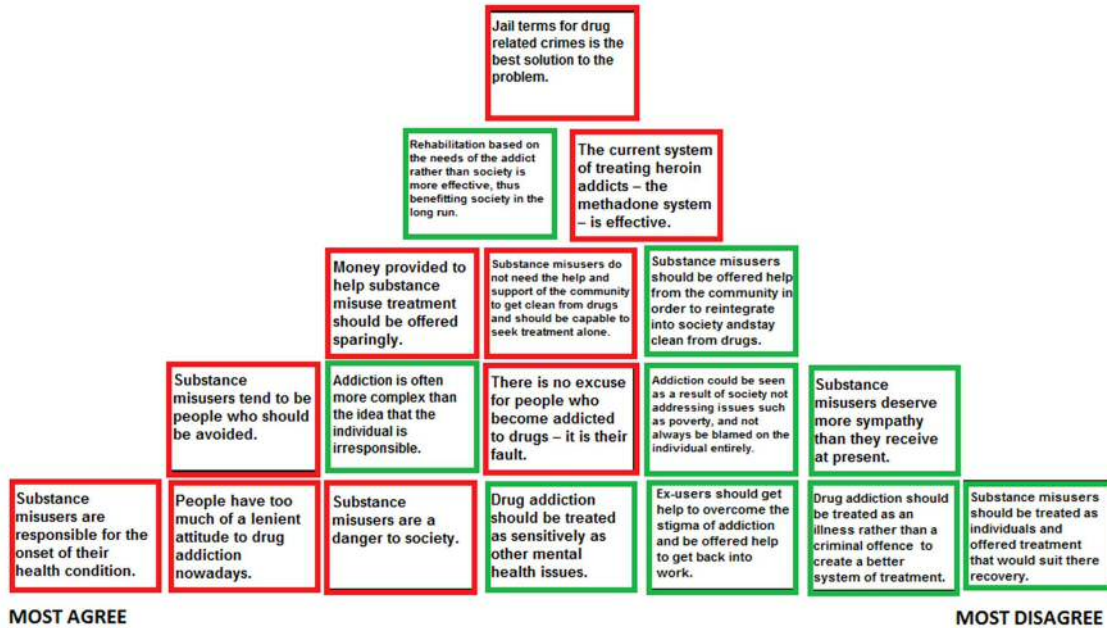
Figure 3s: Diagram of Q-sort values for factor 4 low empathy – Avoidance.

Factor 4, Avoidance (figure 3r) found non-empathetic subjective attitudes in the three participants which loaded onto this factor. As shown in diagram 3s, low empathy statements were mostly agreed with and high empathy statements were mostly disagreed with, with the distinguishing statement being that substance misusers are individuals should be avoided.

3.3.4 Factor scores with corresponding ranks.

These results highlight agreement or disagreement with statements based on standardised z-scores. Positive z-scores indicate disagreement with statements (as these were positioned on the positive end of the q-sort grid) and negative scores indicate agreement with statements (as these were positioned at the negative end of the q-sort grid).

3.3.4.1 High empathy.

**FACTOR SCORES WITH CORRESPONDING RANKS –
HIGH EMPATHY CONDITION**

STATEMENT	TYPE	RESPONSIBILITY	SOCIETAL HELP	TREATMENT AND REINTEGRATION.
Substance misusers are responsible for the onset of their health condition.	LOW EMPATHY	0.77	-0.23	0.00
There is no excuse for people who become addicted to drugs – it is their fault.	LOW EMPATHY	1.63	1.14	1.27
Substance misusers tend to be people who should be avoided.	LOW EMPATHY	0.98	0.68	0.64
No help need – seek treatment alone.	LOW EMPATHY	1.24	1.81	0.64
Jail terms are the best solution to drug-related crime.	LOW EMPATHY	1.31	0.68	1.27
Substance misusers are a danger to society.	LOW EMPATHY	0.82	0.00	-0.64
Money provided for treatment should be offered sparingly.	LOW EMPATHY	0.72	0.91	-0.64
The Methadone system is effective.	LOW EMPATHY	0.28	0.00	1.91
People have too much of a lenient attitude to drug addiction nowadays.	LOW EMPATHY	0.10	0.23	-0.64
Help to reintegrate and stay clean should be given.	HIGH EMPATHY	-0.73	-0.68	0.00
Help back into work should be provided.	HIGH EMPATHY	-1.12	-0.91	0.64
There is often more to addiction than irresponsibility.	HIGH EMPATHY	-0.59	-1.59	-1.91
Drug addiction should be considered an illness.	HIGH EMPATHY	-1.13	1.13	0.64
Substance abusers deserve more sympathy than they receive at present.	HIGH EMPATHY	-0.04	-0.90	0.00
Present specific rehabilitation is the best.	HIGH EMPATHY	-0.66	-0.68	-1.27
Individualistic treatment is the best method of treatment.	HIGH EMPATHY	-1.00	-1.58	-1.27
Drug addiction should be treated as sensitively as other mental health issues.	HIGH EMPATHY	-1.20	-0.91	-0.64
Society may contribute to this issue.	HIGH EMPATHY	-1.38	0.90	0.00

Figure 3t: Factor scores for high empathy factors – highlighting agreement and disagreement to statements within factors. Negative scores indicated placement of statements in the agree side of the grid, and positive results in the disagree positions of the Q-sort grid.

Figure 3t highlights that participants in the high empathy condition tended to position high empathy statements on the agree side of the grid, and low empathy statements on the disagree end on the grid. This provides evidence to suggest that inducing was an effective stimuli to produce more favourable responses towards substance misuse.

3.3.4.2 Low empathy.

FACTOR SCORES WITH CORRESPONDING RANKS - LOW EMPATHY CONDITION					
STATEMENT	TYPE	REINTEGRATION	RESPONSIBILITY	ADDICTION AS AN ILLNESS	AVOIDANCE
Substance misusers are responsible for the onset of their health condition.	LOW EMPATHY	0.43	-1.98	0.22	-1.69
There is no excuse for people who become addicted to drugs – it is their fault.	LOW EMPATHY	2.00	-0.84	1.38	-0.47
Substance misusers tend to be people who should be avoided.	LOW EMPATHY	0.88	1.67	1.38	-0.97
No help need – seek treatment alone.	LOW EMPATHY	1.36	-0.11	-0.69	-0.25
Jail terms are the best solution to drug-related crime.	LOW EMPATHY	1.35	-0.21	1.12	-0.25
Substance misusers are a danger to society.	LOW EMPATHY	0.44	-0.32	1.64	-0.93
Money provided to help substance misusers in treatment should be offered sparingly.	LOW EMPATHY	0.19	0.00	-0.95	-0.47
The current system of treating heroin addicts – the methadone system – is effective.	LOW EMPATHY	0.37	0.00	-0.22	0.97
People have too much of a lenient attitude to drug addiction nowadays.	LOW EMPATHY	0.16	-0.73	-0.91	-1.65
Help to reintegrate and stay clean should be given.	HIGH EMPATHY	-0.87	-0.73	0.47	0.93
Help back into work should be provided.	HIGH EMPATHY	-0.71	-0.10	0.47	0.25
There is often more to addiction than irresponsibility.	HIGH EMPATHY	-1.07	0.32	-1.38	-0.51
Drug addiction should be considered an illness.	HIGH EMPATHY	0.09	1.05	-1.12	1.22
Substance abusers deserve more sympathy than they receive at present.	HIGH EMPATHY	-0.81	0.73	-0.26	1.44
Present specific rehabilitation is the best.	HIGH EMPATHY	-0.81	0.00	0.69	-0.21
Individualistic treatment is the best method of treatment.	HIGH EMPATHY	-1.01	-1.46	-0.22	1.65
Drug addiction should be treated as sensitively as other mental health issues.	HIGH EMPATHY	-0.24	0.73	-1.64	0.72
Society may contribute to this issue.	HIGH EMPATHY	-0.72	1.98	0.00	0.21

Figure 3u: Factor scores for low empathy factors highlighting agreement and disagreement to statements within factors. Negative scores indicated placement of statements in the agree side of the grid, and positive results in the disagree positions of the Q-sort grid.

Figure 3u highlights, as suggested by correlations between factors for this condition (figure 3d), there was little consensus in this condition across factors. 2 factors; responsibility and addiction as an illness produced more empathetic responses, whereas responsibility and avoidance produce negative attitudes towards substance misuse.

Discussion

Previous research has found that stigma exists towards substance misusers in society (Luoma et al, 2007). It has also been found that inducing empathy can create motivation to help members of this stigmatised group, substance addicts (Batson et al, 2002). The current study was undertaken to investigate whether inducing empathy would have an effect over the subjective opinions of a condition compared to those asked to think objectively towards the subject, to identify whether empathy was a powerful tool in tackling stigma.

4.1 Summary
These results, from SPSS and q-factor analysis provide support for the first hypothesis of this study, that inducing empathy in the high empathy condition would produce empathetic responses to statements regarding substance misuse. Results also support the second hypothesis, as factor analysis through SPSS of low empathy responses, and q-factor analysis found both high and low empathy responses, that were less empathetic than the high empathy condition, proving the hypothesis that the low empathy condition will provide less empathetic responses to substance addiction than the high empathy condition.

Results found that the high empathy condition q-sorts found factors that showed empathetic responses towards the topic of substance addiction and misuse. The impact of inducing empathy was profound, as there was consensus across all factors and participants in this factor. Factor analysis in SPSS found three empathetic factors, treatment over punishment, responsibility and societal help (Figure 2c).

Empathetic results were also found for the high empathy condition in q-factor analysis. Factor 1 (Figure 3e), responsibility, highlighted factor loadings to suggest participants were empathetic to the idea that addicts may not be fully blameworthy for their situation and that society may hold some responsibility for this widespread social issue. This factor highlights that empathy inducing was powerful in reducing ideas of blameworthiness, found to be a component of the stigma attached to drug addiction (Corrigan et al, 2009). Factors 2 (Figure 3g) and 3 (Figure 3i), societal help and treatment, also found empathetic responses focusing on the idea that society has a duty to offer help to addicts who are willing to present for treatment, as well as help to rebuild their life after successful recovery.

Conversely, factor analysis in SPSS found all three factors, blame, irresponsibility and limited help (Figure 2f) to have produced low empathy responses. The blame factor found that participants loading on this factor did not think that addiction was an illness, and that individuals were to blame for their condition. Participants that loaded onto the irresponsibility factor agreed most with the idea that substance misusers should be avoided and also disagreed that with statements suggesting addiction was *not* caused by irresponsibility about breaking the law. Factor 3, limited help had strong attitudes against the idea that substance misusers deserve help to reintegrate into society and agreed that funding should be offered to help this social issue sparingly. These factors all produced non-empathetic responses from low empathy participants.

Furthermore, there was little consensus found between participants and factors in the low empathy condition in q-factor analysis, highlighting that encouraging participants

to think objectively about the statements, rather than thinking about themselves in the position of the target produced more negative factors to the topic of substance misuse. Results from factors 1, reintegration (Figure 3l) and 3, addiction as an illness (Figure 3p) differ vastly from those found by factors 2, responsibility (Figure n) and 4, avoidance (Figure 3r). Factors 2 and 4 produces responses that suggested low empathy, where it was agreed that substance misusers have a responsibility for the onset of their health condition and should be avoided. However, factors 1 and 3, reintegration and addiction as an illness provided empathetic responses, where it was agreed that this group deserve help to reintegrate into society as well as their condition being treated as a health condition, and treated as sensitively as other mental health conditions.

These results support the hypotheses suggested by the study. High empathy participants provided empathetic responses, with a strong consensus across the condition, to statements regarding substance misuse, as factor analysis and q-factor analysis found empathetic factors, supporting hypothesis one. Results from low empathy participants produced less empathetic responses to statements than the high empathy condition, as low empathy factors were found in factor analysis, and a combination of low empathy and high empathy factors were found in q-factor analysis. This suggests that inducing empathy in the high empathy condition was powerful in inducing prosocial attitudes relating to substance misuse.

4.2 Relation to past work
Low Empathy
These results support past research and theory. Low empathy condition participants were instructed to remain objective when considering the placement of statements. This means they would have been drawing on past knowledge regarding the topic of substance misuse (Batson, 1997) rather than imagining themselves in the position of the target, as instructed to the high empathy condition. Results from this condition found attitudes towards substance misusers to involve factors involving ideas that substance misusers are blameworthy (Figure 2f), irresponsible (Figure 3n) and should be avoided (Figure 3r). This relates to ideas presented by Goffman (1963), who suggested that stigmatisation creates a 'virtual social identity', where individuals in this group are labelled, and these labels become assumptions and anticipations about the characteristics of these individuals (Yang et al, 2007).

High Empathy
Results from the current study were based on the ideas presented by Batson and colleagues (2002), where it was found that inducing empathy through instructing participants to imagine themselves in the position of the target – a substance addict – promoted more positive attitudes towards the stigmatised group of substance misusers and motivated participants to endorse the idea of offering support to this group. Batson and colleagues (2002) based their study on theory by Batson (1987) who theorised that there was a relationship between empathy and altruistic motivation, where feeling empathetic towards an individual would lead to motivation to want to improve the others situation, regardless of personal reward. The current study found results in support of these findings, where high empathy participants were involved in factors that agreed with the idea of societal help for drug addiction (Figure 3f), and offering treatment that is best suited to the individual (Figure 3h). This suggests that

inducing empathy in this condition was powerful in creating prosocial attitudes towards ideas relating to substance misuse, supporting ideas presented by Batson.

4.3 Implications of findings.

The current study found results to suggest that inducing empathy is a powerful mechanism to reduce the negative attitudes towards substance misusers that is faced due to the stigma towards this group. By creating more prosocial opinions towards the group and increasing empathetic feelings towards individuals within the group, attitudes improve. In finding this, the implications of these findings will now be discussed in terms of how this tool could be used to improve the situation of drug addicts in society by reducing stigma and reducing the barriers this stigma put in the way of recovery.

It has been said that the approach taken by the government, through its governmental policies in the UK and Europe is based around a 'war on drugs' (Buchanan & Young, 2000). Legislation put in place by the United Nations, the UN Single Convention on Narcotic Drugs 1961, demonises drug use, where addiction is described as 'an evil' for the individual and a 'threat' to humanity, which is 'fraught with social and economic dangers to mankind' (Crick, 2012). The UN Office on Drugs and Crime has identified serious negative 'unintended consequences' of the 'war on drugs' where some of the most vulnerable populations in society are stigmatised and discriminated against further, due to the fact that these populations, such as the most poverty-stricken and homeless, are no more likely to use drugs, but are more likely to become drug-dependent (Daniel, Hickman, Macleod, Wiles, Lingford-Hughes, Farrell, Araya, Skapinakis, Hayes & Lewis, 2009).

4.3.1 Empathy and the media

It is said that the punitive-enforcement nature of the 'war on drugs' which, by its very nature, criminalises addiction and creates stigma and discrimination by using the criminal justice system to treat a health problem. This approach has also been criticised due to the fact that there is little evidence to suggest that it is an effective approach in reducing drug use, in fact, it has been found that use of opiates, cocaine and cannabis increased between 1998 and 2008 (United Nations Office on Drugs and Crime, 2010). For this reason it has been suggested that there should be an end to stigmatisation of drug users that do not harm others, challenging common misconceptions of this group (Global Commission on Drug Policy, 2011).

Taylor (2008) suggests that media and governmental beliefs are a mirror of each other, and the media produces discourse to instil ideas that drug users are outsiders in society and suggests that the media normalises ideas that problem drug users are a threat. Coomber, Morris and Dunn (2000) carried out a study to investigate the level of quality control mechanisms endorsed by the UK media, and found that there was little control in place to promote accurate and responsible reporting, resulting in a portrayal of substance misusers as a 'danger class' (Boyd, 2002). The Press Complaints Commission (2009) set out standards that the press must avoid prejudiced reference to individual's race, religion, gender, sexual orientation or disability. It could be suggested that by changing the way that addiction is seen, by promoting the idea of drug addiction as an illness, this group would be protected against discrimination in the media. This may create more empathetic reporting of this group. This research has provided support for the idea that empathy is effective in improving attitudes and

as the media is a major contributor to the population's access to discourse regarding this subject, reducing discrimination and stigma in the media could work towards decreasing stigma to this group.

It has been said that we should encourage a change of approach towards this problem, treating it as an illness, and offering compassion to this group, rather than a crime (Global Commission on Drug Policy, 2011). Results from the present study have found empathy to be powerful in creating a change in attitudes towards this group, and this mechanism could be applied to areas within society to improve the approach used to improve levels of substance misuse, as well as improving the health of this group.

4.3.2 Empathy in the treatment process

Stigma still has an impact on those living with drug addiction whilst in the treatment system. The UK Drug Policy Commission (2010) looked at the responses of a focus group of drug addicts in treatment discussing the stigma felt in treatment and how this led to lack of belief in recovery and low self-esteem. It was found that health professionals (such as GP's, pharmacies, hospital staff and dentists) attitudes reinforced negative aspects of recovery, and did not reward positive achievements. Examples of good practice praised simple rights being offered such as 'being treated like a human being'. It is suggested, on the basis of the findings of this study, that endorsing empathy in the practice of professionals may improve stigma for recovering addicts.

The use of empathy in ensuring and measuring quality of care in Scotland has been endorsed by the Healthcare Quality Strategy for NHS Scotland (2010). This strategy sets out guidelines to achieve their goal of delivering the highest quality of healthcare services in Scotland, by aiming to offer caring, compassionate and effective services. One method endorsed to ensure these goals was the Consultation and Relational Empathy (CARE) Measure, a tool to measure the empathy felt by patients in the context of the therapeutic relationship between clinician and patient. This measure has been found to be endorsed by both clinicians and patients across many different health conditions, where 76% of 3044 patients involved in the study considered the measure to be very important in their consultation (Mercer, McConnachie, Maxwell, Heaney & Watt, 2005). The CARE Measure has also been found to be reliable and valid across high and low socio-economic deprivation areas (Mercer, Maxwell, Heaney & Watt, 2004). It is suggested that empathy is effective in improving attitudes towards substance misusers and it would be recommended that implementation of an effective measure of how the patient feels during treatment would improve the treatment process for addicts. Measuring the empathy felt from the healthcare professional by the patient, such as use of the CARE Measure, would be effective in reducing barriers to seeking treatment and accomplishing recovery for this group, as professionals would be aware of the impact of the level of empathy felt by the patient, and would lead to a measurable way of ensuring discrimination through non-empathetic attitudes towards substance misusers in treatment was reduced.

4.3.3 Impact of reducing stigma

It has been found by NHS research of the National Drug Treatment Monitoring System that there are 293,879 opiate/crack cocaine dependent adults in England, however, the number of people successfully completing drug treatment and becoming free from dependency is 29,150 (less than 10% of the total number of dependents) (Public

Health England, 2014). It is suggested that using tools to increase empathy from the general populations by creating more sympathetic discourse in the media, as well as in the healthcare profession, by using measures of empathy such as the CARE measure, towards substance misuse will reduce barriers to treatment and recovery through reducing the stigma attached the this condition. It has been found that the health of individuals within the groups living with conditions such as mental health issues and HIV have improved through reduction of stigma towards these groups.

Batson, Polycarpou, Harmon-Jones, Imhoff, Michener, Bednar, Klein and Heidberger found evidence for the empathy-altruism hypothesis for individuals living with HIV/AIDS, another stigmatised group (1997). It has been found that interventions to reduce the stigma towards individuals living with HIV/AIDS in both developing and developed countries have been effective, although not eliminated, in improving attitudes towards this illness (Pulerwitz, Michaelis, Weiss, Brown, Vaishali & Mahendra, 2010). It has also been found that the health of this group has improved as stigma has been combatted. Heijnders and Van Der Meij (2006) found that the prognosis of this condition has significantly improved over the last two decades by improving barriers to treatment through implementing stigma-reducing strategies, where patients are being diagnosed earlier and given the appropriate treatment.

Reducing stigma towards mental health has also been seen to improve the health of this group significantly. According to the National Attitudes to Mental Illness survey (Department of Health, 2014) attitudes towards mental illness were more favourable in 2013 than they were in 2008, with less agreement with statements such as 'people with mental illness are a burden on society' being found in 2013. Results for the Healthy Young Minds project 2009 has also found that stigma has reduced for mental illness and found that this has resulted in greater access to treatment for young people living with mental illness such as depression, anxiety and others, as they free more comfortable in talking about their symptoms without fear of stigma and discrimination (Mehta, Williams, Butskiy, Swanson & Dosani, 2011).

As empathy has been found to be a powerful mechanism in improving the attitudes and reducing stigma towards individuals living with drug addiction, as well as the fact that the health of other stigmatised groups have improve by implementing strategies to reduce stigma, it is suggested that using empathy as a tool to improve this social issue could be useful.

4.4 Limitations and future recommendations.
There were limitations in this study. It is suggested that, where possible, a short, open interview should be conducted with each participant after q-sorting (Brown, 1993), to allow the participant time to explain the placement of statements. This allows participants to elaborate on their views and reasons for their sort, allowing for further investigation of the nature of the subjective perception of the individual. It would be suggested that in any future studies investigating the impact of empathy on stigma towards substance misusers using Q-Methodology should include short interviews. This would allow for insight into the reasons given for negative q-sorts, offering support for stigma theory. Further information from positive, empathetic responses would allow for further understanding of whether this can support the empathy-altruism hypothesis (Batson, 1987), by revealing whether empathy really did induce altruism or whether there were egoistic reasons behind empathy.

A further limitation lay in the data gathering method. Participants were recruited through a convenience sampling method due to the time constraints of the study. It may be more useful to reach a sample of wider geographical locations, to determine whether the impact of stigma and empathy is seen in the wider population. The study originally was meant to be undertaken by using an online q-sorting software, which would have allowed a wider geographical sample, however, the software was outdated. Although Q-Methodology is interested in subjective perception of individuals, meaning a large sample is not required, it would be suggested that future research would involve a methodology intended to draw conclusions and generalisations about the wider population, to further support the idea that empathy is powerful in reducing stigma and encouraging more positive attitudes to substance misusers.

It could also be suggested that the vignettes used in this study were relatively neutral, involving factual information about a hypothetical, drug dependent male giving details about his current situation. As argued previously, public opinion is hugely influenced by the media (Gunther, 1998), and the media provide largely negative portrayals of substance misusers, using derogatory language (Lloyd, 2010) and inaccurate reporting (Orcutt & Turner, 1993) to demonise this group. Future research should consider the adoption of a genuine media abstract, making the vignettes used in this study more representative of the information provided in society.

This study found results to support the idea that empathy leads to less stigma and more positive attitudes towards substance misusers. Future research using similar methodology could look into this idea further, by investigating the ideas presented by Batson (1987) that empathy can lead to altruistic *action*, as well as attitudes. Future research could involve statements indicating whether participants would actually endorse ideas relating to implementing reforms in the area of substance abuse treatments, to investigate whether the empathy-altruism hypothesis for altruistic action applies to the area of addiction, indicating further whether this method could be applied to efforts to improve stigma towards addiction and improve this social issue.

Final Conclusion

The aim of this study was to investigate whether the idea of inducing empathy towards an individual from a stigmatised group would improve attitudes towards the group as a whole, leading to reduction of discriminatory or negative attitudes towards the group. By comparing the q-sorts of thirty-two participants in a Q-Methodology study across two conditions (high empathy and low empathy), it was found that inducing empathy by encouraging participants in the high empathy condition to imagine themselves in the position of the perceived other, that responses were more empathetic towards substance misusers. High empathy participants produced factors which endorsed the idea of encouraging reintegration of substance misusers after recovery, as well agreeing that drug addiction is an illness rather than a crime, highlighting the power of empathy inducement as a way of improving attitudes towards stigmatised groups. These results were in contrast to responses from low empathy participants, from which factors which agreed with ideas of blameworthiness and limiting help provided by society for substance abuse treatment.

These results provided support of the hypotheses of this study, where the high empathy condition produced empathetic responses to statements during q-sorting, and low empathy participants provided less empathetic responses than the high empathy condition. It was suggested that empathy could be utilised to improve the social issues around substance misuse, where individuals are discriminated against, leading to barriers to treatment resulting in continued use and expense for the tax payer, where addicts are spending time in jail due to drug related crime, as well as being involved in sustained use of the methadone system.

It was suggested that empathy could be a tool used to improve stigma for substance misusers in two areas; through encouraging more empathetic reporting in the media around the area of addiction, encouraging endorsement of the illness concept rather than criminalisation of this group, as well as implementing the use of standardised measures of empathy in therapeutic practice, such as the CARE measure, to decrease feelings of discrimination felt by drug users when they present for treatment to improve recovery rates. The limitations of this study were used to advise for future studies who wish to emulate the results found in the present study.

Vignettes used were relatively neutral, which are not representative of the abrasive nature of media representations of substance misuse. It was suggested that future studies would use genuine media abstract, to be able to investigate the level of influence actual media portrayals have over opinion. Short interviews with participants to allow further explanations of their q-sort have also been advised for future studies, to allow for a deeper understanding of the reasons behind q-sorts.

Overall, this research has provided powerful evidence to support the idea that empathy improves attitudes towards substance misusers. To be able to tackle this health issue more efficiently in society, it is suggested that these results are used implement policies in the media and healthcare to reduce barriers in the way of accessing treatment and successfully reintegrating substance misusers back into society after successful recovery.

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