Perspective-taking and responses to narrative health campaigns

Submitted by Dale Alexander Weston to the University of Exeter

as a thesis for the degree of

Doctor of Philosophy in Psychology

In June 2013

I certify that all material in this thesis which is not my own work has been identified and that no material has previously been submitted and approved for the award of a degree by this or any other University.

Signature: …………………………………………………………..

Acknowledgements

As I have moved towards the end of my PhD I have found myself reflecting more and more on my experiences over the past 4 years. In particular, I keep thinking back to that day in September 2009 when, scared and uncertain, I arrived in Exeter to begin my studies. If at that point I had been aware of the fantastic friendships I would make, and experiences I would have, I am sure that my feelings of uncertainty would have been eased. I feel truly lucky to have had the opportunity to research a subject I love among such fantastic friends and colleagues. With that in mind, I would therefore like to thank all of the staff, researchers, and PhD students within the Psychology department at the University of Exeter for providing such a friendly working environment - you have all made the University a fantastic place to work and study.

More specifically, I would like to thank my supervisors; Thomas Morton and Mark Tarrant. Over the past four years, your help and guidance has been instrumental in helping me to realise my academic potential. By taking on board your comments, suggestions, and feedback, I feel I have developed into an inquisitive and capable young researcher with a set of skills and matching expertise that will serve me well in my forthcoming career. For your support I will be forever grateful. Further thanks are due in particular to Mark Tarrant for encouraging me to make the move down to Exeter – I haven't regretted it for a moment.

In addition, I would like to take this opportunity to acknowledge some of the fellow PhD students and friends with whom I have shared my life over the past four years in Exeter. Specifically, I'd like to thank my office neighbours; Diana Onu, Kat Steentjes, Megan Birney, Niklas Steffens, David Crelley, Chris Duke, and David Gordon for making the North Tower a fun and interesting place to work. I'm also grateful to Tobias Stevens, Heike Elchlepp, Beth Nicholls, and all of the friends I have

made since moving to Exeter for the drinks, laughs, and – in one case – cinnamon, shared over the previous 4 years.

I would also like to thank my family – my mum, dad, and sister - you have always been such a valuable source of encouragement; I hope I have made you proud. Last (but certainly not least) I would also like to add very special thanks to my fiancée, Chloe Rowlatt, who has put up with me through the rough and the smooth. Without your support, this thesis would not have been possible.

Abstract

This thesis is concerned with the health-related effects of perspective-taking in response to a narrative health campaign. To begin, the thesis outlines the health promotion strategies currently in use (i.e., statistical vs. narrative), presents research discussing their relative effectiveness, and considers the potential for perspective-taking to influence the impact of narrative health campaigns (Chapter 1). The thesis then defines two types of perspective-taking, cognitive and emotional, and explores the processes underlying these (Chapter 2). Each type of perspective-taking is then considered in the context of the health promotion literature (Chapter 3). It was proposed that, whereas cognitive perspective-taking should have a relatively straightforward and positive effect on the impact of narrative health campaigns, the effects of emotional perspective-taking should be more variable. Seven studies were conducted to test this basic premise and identify mediators and moderators of the observed effects.

In Chapter 4, two studies are presented that aim to establish the effects of perspective-taking on health-related outcomes (Studies 1 & 2). A broadly consistent pattern was observed across these studies: encouraging cognitive perspective-taking led to more positive health-related outcomes than did encouraging emotional perspective-taking. Having established the basic effect, two studies are presented in Chapter 5 that explore a potential mediator: perspective-takers' self-efficacy concerning a health promoting behaviour (chlamydia testing: Studies 3 & 4). These studies found a consistent indirect effect of perspective-taking on intentions to get tested for chlamydia through self-efficacy: encouraging cognitive perspective-taking increased participants' perceived self-efficacy relative to encouraging emotional perspective-taking, which in turn positively predicted intentions to get tested in the future.

The three studies presented in Chapter 6 explore potential moderators of the effects of perspective-taking (Studies 5-7). Specifically, these studies test whether the

relative effects of perspective-taking are moderated by features of the relationship between the perspective-taker and a target presented in a narrative health campaign. The broad pattern observed across these studies suggests that the perception of a shared categorisation (or social identity) between the perspective-taker and target moderates the effect of perspective-taking on health-related outcomes. Specifically, the final study, Study 7, demonstrated that encouraging cognitive perspective-taking in response to a narrative health campaign leads to more positive health-related effects than encouraging emotional perspective-taking when perspective-takers' personal (unshared) identity is made salient; however, these effects are attenuated (and potentially even reversed) when a social (or shared) identity is made salient.

Considered as a whole, the research presented in this thesis represents the first empirical examination of the relative health-related effects of different types of perspective-taking in response to a narrative health campaign. The research demonstrates that perspective-taking is an important factor in determining whether or not narrative health promotion campaigns are likely to be effective. However, it also makes clear that the processes through, and conditions under, which cognitive and emotional perspective-taking can help to ensure the effectiveness of narrative health campaigns are not yet fully understood. Nevertheless, the studies presented herein successfully identify several such conditions and mechanisms ready for further study. Theoretical and practical implications, alongside limitations and more specific suggestions for further research are discussed.

List of Contents

List of Tables

List of Figures

List of Appendices

Chapter 1 Introduction

"There can be little doubt that health psychology interventions can have

important contributions to the area of health promotion, disease

prevention and adaptation to and management of chronic disease."

(Maes & Boersma, 2005, p.319).

In the above quote, Maes and Boersma (2005) emphasise the importance of psychology for providing a theoretically sound basis for developing effective health interventions. In their conclusion to the same Chapter, the authors call for both greater collaboration between health psychology researchers and health promotion specialists, and for greater incorporation of health psychology research and understanding into the development of future interventions. Recent research has taken up this call: for instance '*The Social Cure*', a recently published social psychological text, presented research that had applied social psychological theorising – specifically concepts from social identity and self categorisation theories – to understanding of health and wellbeing, from coping with stress (e.g., van Dick & Haslam, 2012), to coping with brain injury (e.g., Jones, Jetten, Haslam & Williams, 2012), and old age (Haslam, Jetten, Haslam & Knight, 2012) (see Jetten, Haslam & Haslam, 2012).

The research presented in this thesis has also applied social psychological theorising with the goal of enhancing the understanding and effectiveness of health promotion campaigns, in particular those campaigns that seek to engage viewer attention through the use of (first person) narratives. In this Chapter I outline some problems with existing health campaigns and discuss the potential role of 'perspective-taking' – that is, "imagining the world from another's vantage point or imagining oneself in another's shoes" (Galinsky, Ku and Wang, 2005, p.110) – as a mechanism

through which narrative campaigns influence individuals' health-related thoughts, intentions and actions. In the Chapters that follow I present a review of the literature concerning two possible types of perspective-taking – cognitive and emotional – and how perspective-taking processes can be applied to the context of health promotion. In the Chapters that follow this literature review, I present seven studies that test the rationale and hypotheses. Across these studies, I argue that differences in both the type of perspective-taking and the context in which perspective-taking is engaged can influence individual orientations following exposure to a first person narrative, and therefore may be important for determining the effectiveness of narrative campaigns.

General health in the UK

Epidemiological evidence presents a mixed picture of general health in the UK. For instance, Cancer Research UK (2012a) reports that while the overall incidence of cancer has increased by more than a third since the 1970s, this increase occurred almost entirely before the 1990s. However, the use of such aggregate statistics masks the variability in incidence of different types of cancer. For example, while stomach cancer has decreased by more than a quarter in the last decade, there have been "large increases in the incidence of many cancers strongly linked to lifestyle choices, such as kidney, liver, malignant melanoma (skin), oral and uterine (womb)" (Cancer Research, 2012a, p.1). Similarly, while Cancer Research UK (2012b) recorded a decrease in the prevalence of male lung cancer by 46% between 1975 and 2009, they also recorded a 67% *increase* in the incidence of female lung cancer over the same period (although the increase was less steep over the past decade). Research published by the British Heart Foundation reported that deaths due to coronary heart disease (CHD) dropped by more than half between 1961 and 2009; yet cardiovascular disease (CVD) remained the single largest cause of death in the UK (Scarborough, Wickramsinghe, Bhatnagar, & Rayner,

2011). The past decade has also seen a broad increase in a range of other health risks

and illnesses. Research by the University of Oxford found a year-on-year increase in

obesity-related deaths from 2000-2006 (Wilkinson, 2010) with The NHS Information

Centre, Lifestyle Statistics (2012) reporting that 26% of adults in England were

classified as obese in 2010. Finally, diagnosis of STIs in young people rose by 2% in

2012, with increased diagnoses likely reflecting both improved testing methods and

continued unsafe sex (Health Protection Agency, 2012). On the basis of this statistical

evidence it seems that, despite the decreasing incidence of some illnesses, there are still

very real threats to the general health of the UK population.

Of particular note here is how easily prevented these health threats are. As is

well known, lung cancer risk can be drastically reduced by cutting down (or never

starting) smoking (NHS Choices, 2011a), and good sexual health can be all but ensured

through frequent STI screening and use of barrier contraception (e.g., Health Protection

Agency, 2012; NHS Choices 2012a). Furthermore, obesity-related illnesses and CHD

risk can both be reduced with appropriate physical activity and change in diet (NHS

Choices, 2012b; 2012c). Simply eating 5 portions of fruit and vegetables per day can

reduce the risk of: heart disease, obesity, stroke, and type 2 diabetes (NHS Choices,

2011b). However, despite the ease of prevention, many people appear to neglect these

health promoting behaviours. In their report drawing together information concerning

obesity, physical activity and diet, The NHS Information Centre, Lifestyle Statistics

(2012, p.7) noted that 20% of respondents to the National Travel Survey (2010)

reported having a 20+ minute walk "less than once a year or never" in Britain, and that

purchases of both fruit and vegetables have fallen since 2007 (by 11.6% for fruit and

2.9% for vegetables). Similar issues with prevention avoidance can be seen in the

context of sexual health. The results of a survey on contraception and sexual health by

the Office for National Statistics in 2008/9 revealed that although 43% of men and 40%

of women considered at 'high risk' of contracting STIs reported always using condoms, 18% of high-risk men and 25% of high-risk women reported *never* using them (Lader, 2009).[1]

This snapshot of general health in the UK suggests that although improvements have been made, there are still very serious threats to the health of the population. These threats are emphasised by models that forecast the future risk or incidence of illnesses. For instance, the Cardio & Vascular Coalition (2008) projected that the number of people at risk of cardiovascular disease in the UK would increase from 2.33 to 2.41 million between 2007 and 2016 due to the increase in risk factors such as obesity. Wang, McPherson, Marsh, Gortmaker and Brown (2011) projected that there will be 11 million more obese adults in the UK by 2030, which will add: 544,000-668,000 cases of diabetes, 331,000-461,000 cases of heart disease and strokes, 87,000-130,000 cases of cancer, and the loss of 2.2-2.63 million quality-adjusted life-years (i.e., from other, not-fatal health conditions).[2] This increase in obesity-related illness is projected to cost the NHS a further £1.9-2bn /year by 2030. Consistent with the easily-preventable nature of these health threats, Wang and colleagues outline how small lifestyle changes can bring about considerable improvements in these forecasts. For instance, a 1% reduction in BMI over the population (equating to a net reduction of 20kcal per person per day over 3 years) could avoid 179,000-202,000 cases of diabetes, 122,000 of cardiovascular disease, and 32,000-33,000 of cancer with an increase in around 3 million quality adjusted life years (Wang et al., 2011). These projections serve to highlight the

---

[1] Being at 'high risk' of contracting an STI in this survey referred to having had 2 or more sexual partners in the previous year (Lader, 2009).

[2] According to the National Institute for Health and Care Excellence (NICE), quality-adjusted life years are a measure of a person's length of life weighted by a valuation of their [health-related quality of life] over that period" (NICE, 2008, p.38). Wang and colleagues (2011) calculated health-related quality of life weights as a function of BMI using existing US estimates. These weights were then multiplied by length of life aggregated over 20 years to give the forecasted quality-adjusted life years associated with the (non-) treatment of obesity.

importance of improving health promotion by understanding what works and for whom; if the population continue to embrace unhealthy or risk-taking behaviour despite the ease of health-promoting alternatives, there is likely to be a substantial cost both to individual health and to the economy. Against this backdrop, it would seem important to conduct a critical assessment of health promotion strategies that are currently used in the UK to determine how these are being implemented, and the areas in which psychological theory might be able to contribute to maximising the effectiveness of these campaigns.

What is being done? Traditional health promotion strategies

Picture this scene: You are in a GP's waiting room and so, to pass the time, you cast your eyes over the posters and leaflets scattered around. Many, if not most, of us will have been in a situation just like this and should be able to recall the usual appearance of such posters and leaflets. Most provide the reader with statistical information - including risk factors - for a given health threat/ illness, its incidence and prevalence, and any recommended health promoting action or behaviour. An example of these types of campaign materials is provided in Figure 1.

This simple, though not systematic, reflective exercise suggests that health promotion campaigns in the UK typically share a common strategic approach. However, research examining these campaigns suggests at best mixed effectiveness. On the one hand, some researchers have noted the positive effects of enhancing the 'health literacy' of individuals for improving their ability to communicate with health professionals, make appropriate use of health services, and self-manage disorders (Nielsen-Bohlman, Panzer & Kindig 2004, cited in Colledge, Car, Donnelly, & Majeed, 2008). Indeed, the relationship between health information and behaviour, though typically weak, is generally positive (Bettinghaus, 1986). A variety of studies also show that patients

recognise and remember information in waiting rooms (Montazeri & Sajadian, 2004; Ward & Hawthorne, 1994), and that exposure to information leaflets increases both knowledge (Castle, Skinner, and Hampson, 1999) and confidence in self-management of illness (Little et al., 2001). In short, some research suggests that health information leaflets and posters may be effective at encouraging greater health literacy.

On the other hand, there is also research that questions the effectiveness of these traditional forms of health campaign. For example, and in direct contrast to the above research, Wicke, Lorge, Coppin and Jones (1994) found that only 23% of patients remembered any of the topics presented on health promotion displays in a UK GP surgery, with less than 10% reading or taking further information leaflets relating to these. On the basis of these findings, the authors called into question the educational value of displaying such leaflets and displays in waiting rooms. Furthermore, even when campaigns do result in knowledge transfer, the relationship between this increased knowledge and behaviour is unclear. Although Castle and colleagues (1999) reported that presenting a skin cancer information leaflet increased women's knowledge relative to a control, the leaflet had no effect on their actual beliefs about sunbathing. Similarly, despite the positive impact of posting a summary card or information leaflet on patients' confidence in dealing with minor illnesses, Little and colleagues (2001) found no effect on patients' willingness to wait before seeing the doctor. This led the authors to question whether detailed information booklets represent enough of a beneficial return to justify further NHS investment (Little et al., 2001). Finally, Ashe, Patrick, Stempel, Shi and Brand (2006) found no effect of placing posters targeting the overuse of antibiotics in paediatric waiting rooms on parental demands for antibiotic treatment (see also Dey, Collins, Will and Woodman, 1995). Considered in tandem with the mixed evidence surrounding attendance to health promotion campaigns, these findings lead to

a rather worrying conclusion: traditional health promotion campaigns may not always

have their intended effects on actual health behaviour.

This figure has been removed by the author of this thesis for copyright reasons

Figure 1 Example of a health promotion/risk leaflet, NHS Cancer Screening Programme, n.d. Retrieved from http://www.cancerscreening.nhs.uk/breastscreen/publications/poster-risk-of-breast-cancer-increases.html

Alternative approaches to health communication: narrative campaigns

Hinyard and Kreuter (2007) recently reported a shift away from the traditional,

statistical health campaigns described above, towards more narrative health

communications. Narrative communications are defined as "any cohesive and coherent

story…that provides information about scene, characters, and conflict; raises

unanswered questions or unresolved conflict; and provides resolution" (Hinyard &

Kreuter, 2007, p.779). They often include stories and personal testimonials from at-risk individuals or current sufferers recounting their experiences. The distinction between these narrative campaigns and more traditional campaigns has been concisely summarised by Kreuter et al. (2010):

"Traditionally, health communication has used didactic and expository approaches that present information in the form of arguments or reasons designed to convince audiences to take some desired action. In contrast, narrative forms of communication use stories designed to engage audiences and demonstrate a model or action"

(Kreuter et al, 2010, p. 2).

The shift towards such narrative approaches is seen in recent NHS online resources. Written accounts (e.g., of individuals who have contracted chlamydia) and video testimonials (e.g., detailing how individuals gave up smoking) are now commonplace on NHS webpages. For instance, the NHS Choices chlamydia webpage includes a 'real stories' tab that contains two narrative accounts. One is entitled 'Sally's story', and involves Sally describing how she contracted chlamydia and didn't realise, suffering damaged fallopian tubes and an ectopic pregnancy before receiving her diagnosis (NHS Choices, 2011c). The other is entitled 'Julie's story' and similarly recounts a tale of undiagnosed chlamydia leading to complications (in this case pelvic inflammatory disease) which required repeated emergency visits to hospital, caused damage to her fallopian tubes, and led to the possibility of being unable to conceive in future (NHS Choices, 2011d). It is important to note here that although these stories mention some symptoms of chlamydia, they do not emphasise statistical incidence or prevalence rates,

instead they both share a common emphasis on the author's own negative experiences resulting from a failure to get tested for chlamydia.

In light of their increasing popularity, it seems important to inquire: are narrative campaigns any more effective than the traditional statistical campaigns? This question was examined by Hinyard & Kreuter (2007) who reviewed a range of literature examining these relative effects, and concluded that the results were ambiguous. For example, Taylor and Thompson (1982) reviewed studies that had compared case histories (similar to first-person narratives) and abstract or statistical information, and reported that case studies were more persuasive in terms of attitude change and judgemental influence in six out of the seven studies considered. De Wit, Das and Vet (2008) found that participants who were presented with the first-person narrative account of an individual with Hepatitis B subsequently reported greater intentions to get vaccinated than those given statistical information about the disease. This effect was mediated by the degree of perceived personal risk of contracting Hepatitis B. Finally, Kreuter et al. (2010) examined the relative effectiveness of narrative and informational videos about mammography and found that although there was no corresponding increase in actual screening, narrative videos were more persuasive than informational videos across a range of outcomes, including the perception of fewer barriers to mammography and greater intentions to get screened. Thus, on the one hand, there is research suggesting that narrative campaigns can be more effective than traditional, information-provision methods.

However, the picture is far from clear; other research, also reviewed by Hinyard & Kreuter (2007), suggests stronger effects of statistical campaigns. For example, Greene and Brinn (2003) found that although narrative and statistical information were both effective at reducing women's immediate intentions to use tanning beds relative to providing no information, the statistical message had a greater impact on behaviour

assessed one month later. Similarly, Allen and Preiss' (1997) meta-analysis concluded that statistical information is more persuasive than narrative information. The overall mixed effectiveness of narrative and traditional campaigns is exemplified in research by Baesler and Burgoon (1994). Although their review of thirteen relevant studies concluded that stories and case histories were more persuasive than statistical information, their own study actually found the opposite (see also Hinyard & Kreuter, 2007).

Thus, although narrative campaigns may be rising in popularity, they are not consistently more effective than traditional, statistical communications, which themselves do not appear to be particularly effective. Given the recent increase in the implementation of narrative campaigns it would also seem important to understand the processes underlying their (variable) effects. The importance of delving into underlying processes to ensure successful health promotion is emphasised in the intervention mapping approach to health education defined as "a protocol for developing effective behaviour change interventions" ("Intervention Mapping" n.d). In their article outlining the procedure involved in intervention mapping, Bartholomew, Parcel and Kok (1998) state that intervention developers must identify the factors underlying the problem behaviour in order to produce strategies that will facilitate behaviour change. By exploring the psychological processes – or factors – underlying the effects of narrative campaigns I therefore hope to identify the conditions under which these campaigns are likely to be more or less effective.

Understanding the processes underpinning narrative campaigns: The role of perspective-taking

In their theoretical overview, Hinyard & Kreuter (2007) review literature suggesting that both aspects of the perceiver and features of the narrative can influence

the success of narrative health campaigns. For example, according to the extended

elaboration likelihood model (extended ELM, e.g., Slater & Rouner, 2002; see also

Hinyard & Kreuter, 2007), the success of narrative campaigns are partly contingent

upon: a) the extent to which the narrative is consistent with the goals or motivations of

the recipient, and b) the quality of the narrative. That is, higher quality narrative

campaigns (i.e., in terms of plot) can increase recipients' engagement with the narrative,

which increases identification with the characters and opens recipients to persuasion

(Hinyard & Kreuter, 2007). Hinyard and Kreuter (2007) also cite the transportation-

imagery model (e.g., Green & Brock, 2000) in their discussion of underlying

mechanisms. This model suggests that transportation into (or engagement with) a

narrative can lead individuals to display more narrative-consistent beliefs. This

transportation is influenced by factors including the quality, realism, and imagery of the

narrative, and the recipient's ability to vividly imagine the scenario (e.g., Green, 2004;

2006; Green & Brock, 2000; see also Hinyard & Kreuter, 2007).

Along similar lines, Kreuter et al. (2007) also suggest a range of variables that

may moderate narrative campaign effectiveness. These include aspects of the narrative,

such as: its emotional intensity, the character and plot development, the level of

dramatic tension, and its realism. The authors also argue that perceived similarity of the

message source to the recipient can affect campaign success. Specifically, Kreuter et al.

(2007) suggest that perceived similarity could increase recipients' identification with

narrative characters, a process that is associated with the success of narrative messages

in terms of message believability, clarity, and perceived usefulness (see Slater, Buller,

Waters, Archibeque & Leblanc, 2003; Hinyard & Kreuter, 2007).

Despite their focus on identifying potential moderators or processes underlying

the success of narrative campaigns, neither Hinyard & Kreuter (2007) nor Kreuter et al.

(2007) explicitly consider the potential role of perspective-taking and its associated

psychological processes in the context of narrative campaigns. As noted above, perspective-taking within the social psychological literature is defined as "imagining the world from another's vantage point or imagining oneself in another's shoes" (Galinsky, et al., 2005, p.110). The basic premise of narrative campaigns seems to be that through using personalised stories, perceivers will be drawn into the campaign and apply the thoughts, feelings, and lessons learned by the narrative subject to their self—that is, to engage in perspective-taking. As an example, a recent television advertisement by the Department for Transport (2007; Figure 2) involved an actor performing to camera as a member of a variety of occupational groups (e.g., bartender, policeman, employer) charting the negative experiences of an individual who is caught drink-driving (e.g., losing their driving license and job). At the start of the advertisement, the camera moves from a focus on the drink-driver to show the bartender through the drink-driver's eyes. The underlying rationale seems to be that giving the audience a first person perspective in this way may encourage them to imagine that *they themselves* are the drink-driver, experiencing the same undesirable consequences of drunk-driving as the target other, and that as a consequence of these vicarious experiences the audience will be deterred from drink-driving themselves. It therefore seems that perspective-taking, as defined in the social psychological literature, may be central to the basic premise of narrative health campaigns.

This figure has been removed by the author of this thesis for copyright reasons

Figure 2 Screenshot from the Department for Transport (2007). Retrieved from http://www.advertolog.com/department-for-transport/adverts/moment-of-doubt-10174005

Although neither Hinyard and Kreuter (2007) nor Kreuter et al. (2007) considered the role of perspective-taking explicitly, they did acknowledge the persuasive role played by engaging (or transporting) perceivers into the narrative (e.g., Green & Brock, 2000; see above). Moreover, Hinyard and Kreuter (2007) also acknowledge the positive role of identification with a campaign character for the success of narrative campaigns, a concept that has been previously operationalised as involving an emotional construct (i.e., sharing the feelings of a character) and a cognitive construct (i.e., sharing the perspective of the character) (Cohen, 2001). Thus, the process of perspective-taking seems to be particularly relevant for understanding the success or failure of narrative-based health interventions. When combined with the importance of perspective-taking to the basic premise of narrative health campaigns, this relevance highlights the importance of a thorough exploration of how the processes and paradigms associated with perspective-taking can be applied in the context of narrative health campaigns.

Notwithstanding this relevance, however, perspective-taking has rarely been explicitly manipulated and applied within the domain of health. Instead, perspective-

taking inductions are typically studied in studies concerned with intergroup relations (e.g., Galinsky & Moskowitz, 2000) and negotiation (e.g., Galinsky & Mussweiler, 2001; Trötschel, Hüffmeier, Loschelder, Schwartz & Gollwitzer, 2011). To the extent that perspective-taking has been applied to the health context, this was often in relation to caregiver – patient relationships. For instance, Wills and Moore (1996) had participants make judgments on medication acceptance from the point of view of hypothetical others who had differing priorities for treatment (e.g., levels of trust in healthcare professionals, severity of side effects). They found that although there was some interference of participants' own preferences, perspective-taking altered participants' judgments to be more in line with the most important cue for each hypothetical other. In other words, participants were able to rate whether another individual would be likely to accept a specific type of medication on the basis of the hypothetical other's priorities concerning treatment. Similarly, Blatt, LeLacheur, Galinsky, Simmens and Greenberg (2010) found that asking medical or physician assistant students to take the perspective of a patient who they were about to see increased patient satisfaction relative to a non-perspective-taking control. Finally, Drwecki, Moore, Ward, & Prkachin (2011) had undergraduate student (Studies 1 and 2) and registered nurse (Study 3) participants view video clips of African-American and White patients and either asked them to imagine how these patients feel (a perspective-taking manipulation), or simply instructed them to make the best treatment decisions for the patients that they could. They found that while there was a racial-bias concerning recommendations for pain treatment (i.e., greater treatment was recommended for White patients), this was eliminated following perspective-taking. Overall, this research suggests that perspective-taking can represent a useful mechanism for improving the experiences of patients, and their relationship with healthcare professionals (see also Kumagai, Murphy, & Ross, 2009; Lobchuk, 2006; Wilkinson & Milne, 2003).

Despite these interesting inroads into the health literature, to the best of my knowledge there has been no explicit application of perspective-taking manipulations and their associated social psychological processes to determining the effectiveness of narrative health promotion campaigns. However, some research does suggest that role-playing in health situations (for instance as an at-risk or ill individual) can influence health-related outcomes such as health literacy and attitudes (e.g., Matefy, 1972; Perlini & Ward, 2000). Research also suggests that perspective-taking (more specifically, empathizing) may be the "natural, 'default' response to witnessing another person in mild distress" (Davis et al., 2004, p.1634). Given that distress is often portrayed in health prevention campaigns, it is possible that individuals naturally engage in perspective-taking when they are exposed to these, regardless of whether or not they are explicitly instructed to do so. Thus, perspective-taking may be a naturally occurring phenomenon in many contexts of health behavior change.

Given the potential for narrative campaigns to elicit perspective-taking in this way, it is possible that the processes associated with such perspective-taking might determine narrative campaign effectiveness. One such associated process is perceived self-other similarity. Adopting the perspective of another person has been found to increase the degree of cognitive overlap (or similarity) between the self and that person (Davis, Conklin, Smith & Luce, 1996; Galinsky & Moskowitz, 2000). As acknowledged above, self-other similarity has been found to influence the persuasiveness of health promotion campaigns (see Hinyard & Kreuter, 2007; Kreuter et al., 2007). Further indirect support for the role of perceived self-target similarity in the success of narrative campaigns is provided by Evers, Bishop, Gerhan and Weisse (1997). These researchers presented heterosexual participants with an intervention videotape featuring an AIDS/HIV educator whose sexual orientation and HIV status was manipulated across 4 conditions. They found that the intervention was only

effective (in terms of greater perceived personal risk of contracting HIV) when the educator in the video was both HIV positive and heterosexual (i.e., when he/ she shared the participants' sexual orientation). This effect was attributed to the change in perceived similarity between the participants and educator as a function of their respective sexual orientations (Evers et al., 1997).

However, as will be discussed in Chapter 2, the processes involved in, and consequences of, perspective-taking are more complex than they might at first appear. For instance, Galinsky and colleagues suggest there are two broad sets of consequences of perspective-taking: cognitive consequences and emotional consequences (e.g., Galinsky et al., 2005; Galinsky, Maddux, Gilin & White, 2008). Just as perspective-taking might increase engagement with a narrative message and encourage overlap between representations of the self and the target campaign character (i.e., a cognitive effect), it might also amplify emotional responses to the target and their situation. It is therefore possible that the specific consequences of the perspective-taking that is elicited by narrative campaigns might further depend on the form of perspective-taking that is engaged - cognitive versus emotional - and the different processes these activate. Thus, although we do conceptualise perspective-taking as a process underlying the success of narrative campaigns (see above), there are a range of different, specific perspective-taking processes that exist (i.e., cognitive and emotional). These different processes therefore make it necessary to operationalise perspective-taking as either cognitive or emotional in order to discover the specific processes through which narrative campaigns are optimally effective. This potential for different consequences of perspective-taking to influence the effectiveness of narrative campaigns is central to the thesis and, as a consequence, is explored in detail throughout the following literature review Chapters.

Conclusion

This Chapter started with a review of research indicating that traditional, information-based health promotion campaigns have inconsistent effects on health behaviour change (e.g., Castle et al., 2006). Although campaign designers may have reacted to this by shifting away from traditional campaigns and towards more narrative-based interventions, the evidence base for these types of campaign is also mixed (e.g., Hinyard & Kreuter, 2007). Given the largely preventable nature and projected future impact of many prevalent health threats and illnesses, it seems imperative to further explore the processes which might underlie the effects of narrative health campaigns. Perspective-taking (putting oneself in another's "shoes") is a natural response to witnessing a distressing scenario (Davis et al., 2004), and results in stronger perceptions of cognitive overlap between oneself and the target person. In light of evidence suggesting that perceived similarity to, or identification with, the campaign character underlies narrative campaign effectiveness, a case can be made for further exploration of the role of perspective-taking in determining the outcomes of narrative campaigns; particularly as perspective-taking has been largely neglected in the context of health promotion to date. However, as researchers have identified distinctions between cognitive and emotion-based perspective-taking it is possible that differences in the type of perspective-taking elicited by narrative campaigns could be responsible for their inconsistent effects. That is, it is possible that the effects of any given narrative campaign may depend on the type of perspective-taking that is elicited: cognitive or emotional. Understanding the relative roles of cognitive and emotional perspective-taking in structuring responses to narrative campaigns therefore seems central to understanding the circumstances under which these campaigns are likely to be more (or less) effective for health promotion. The remainder of this literature review will

therefore examine research on cognitive and emotional perspective-taking (Chapter 2)

and its potential application to health promotion (Chapter 3). To foreshadow the

conclusions of this review, I ultimately argue that the type of perspective-taking

engaged in by recipients of narrative health communications crucially determines the

health-related outcomes of such campaigns.

Chapter 2 Perspective-taking: What it is and how it works

As outlined in Chapter 1, this thesis seeks to clarify the processes underlying narrative health campaigns. The broad aim is to identify conditions under which narrative campaigns may be optimally effective. As narrative campaigns may encourage perspective-taking (intentionally or otherwise) among their audience, perspective-taking represents a viable psychological process through which these campaigns may operate. In the previous Chapter a distinction was briefly made between two broad types of perspective-taking. Specifically, Galinsky and colleagues (2005; 2008a) acknowledge that perspective-taking can have both emotional (i.e., empathy) and cognitive consequences. On this basis, it seems possible that different forms of perspective-taking might lead to different outcomes of campaign exposure, thereby explaining their inconsistent effects. Accordingly, it is important to understand: a) the distinction between the two types of perspective-taking, b) the typical consequences, processes and effects of cognitive and emotional perspective-taking, and c) how these might connect to processes of health behaviour change. This Chapter aims to elucidate points (a) and (b) while point (c) forms the basis for Chapter 3.

Distinguishing different types of perspective-taking

"Philosophers and psychologists have described at least two

fundamentally different modes of imagining others' experience:

perspective-taking, which is the cognitive capacity to spontaneously

consider the world from another's viewpoint, and empathy, which is the

affective capacity to emotionally connect with others and experience

sympathy and concern for others (Davis, 1983)"

(Gilin, Maddux, Carpenter & Galinsky, 2013, p.3).

The above quote from Gilin and colleagues (2013) succinctly summarises the

broad distinction between cognitive perspective-taking and empathy – or emotional

perspective-taking – that is made by researchers in this field. Indeed, Oswald (1996)

notes that perspective-taking is not a unitary construct, but instead is made up of

multiple concepts including cognitive and affective (or emotional) ones (Krebs &

Russell, 1981; Underwood & Moore, 1982, cited in Oswald, 1996). Similarly, Galinsky

et al (2008a, p.378) assert that "although the terms *perspective taking* and *empathy* are

often used interchangeably, there is clear evidence of their differences" (italics in

original). They go on to suggest that while perspective-taking is a cognitive ability to

consider others' behaviour, empathy is a more emotional response that allows an

affective connection to another individual (Galinsky et al., 2008a). Thus, there is some

agreement in the field that while cognitive perspective-taking reflects a focus on the

target other's behaviour/ circumstances, emotional perspective-taking involves an

emotional response to, or engagement with, the target.

This distinction is reflected in the typical methods used to elicit these different

forms of perspective-taking. Galinsky and colleagues (2005) outline two such methods.

The typical emotional perspective-taking paradigm involves participants listening to a

'radio interview' which typically presents an individual who has experienced a

distressing event, the most common (according to Galinsky et al., 2005) being the story

of a woman who lost her parents and has to try and stay in school while caring for her

siblings. Prior to the presentation of this narrative account, participants are given

instructions for how to listen to the radio interview. These instructions generally involve participants being given either a control instruction (i.e., to remain objective) or one of two perspective-taking instructions. These can take the form of either self-focused perspective-taking (i.e., how the perceiver would feel if he/she were the person in the tape) or other-focused perspective-taking (i.e., how the interviewee feels) with a specific emphasis on the events detailed in the interview (Galinsky et al., 2005). This method is typically used by Batson and colleagues (e.g., Batson et al., 1997a) and, as should be apparent, involves asking participants to engage emotionally with the narrative. The second paradigm is more commonly used in Galinsky's cognitive perspective-taking work (e.g., Galinsky & Moskowitz, 2000) and involves presenting participants with a photograph of an individual before asking them to write a paragraph concerning a day in the life of the individual. While participants in the control condition are told simply to write this 'typical day' paragraph, those in the perspective-taking condition are told to "go through the day as if they were that person, looking at the world through their eyes" (Galinsky et al., 2005, p.115). Thus, the 'day in the life' manipulation encourages participants to imagine sequences of events and actions experienced by the target of perspective-taking. Together, these methodological differences emphasise the distinction between the affective, 'feel'-focused, emotional perspective-taking and the more behaviour-oriented, cognitive perspective-taking.

Despite these distinctions, however, researchers acknowledge the potential overlap between the forms. For instance, although Batson and Ahmad (2009) retain the broad distinction between cognitive and emotional states relating to empathy, their definitions of these cognitive states also involve emotion. Of particular interest here is the cognitive state 'imagine-self perspective', defined as "imagining how one would think and feel in another's situation" (p. 144), which Batson and Ahmad (2009) acknowledge can lead to cognitive overlap (as per Galinsky and colleagues) but also to

empathic concern. This 'distinct yet related' conceptualisation of cognitive and emotional perspective-taking is further reflected in Davis' multidimensional empathy scale, the Interpersonal Reactivity Index (IRI). In the development of this scale, four separate subscales were identified: fantasy, personal distress, empathy, and perspective-taking (Davis, 1980). Davis (1983) examined how these subscales relate to other psychological constructs, including self-esteem, sensitivity to others, emotionality, social competence/ interpersonal functioning, and intelligence. In doing this, Davis (1983) found evidence for the independence of perspective-taking and empathy, in that these displayed differing relationships with the other psychological constructs (see above), as well as the interrelations between the two, as reflected in their positive correlation. In sum, while cognitive and emotional aspects of perspective-taking might be distinguishable, they are often inter-related. In the sections that follow I outline the typical effects of cognitive and emotional perspective-taking and the processes through which these work. Following this review, I provide an example of these relative processes in the literature examining cognitive and emotional perspective-taking in the context of strategic interactions/ negotiations.

Cognitive perspective-taking

The effects of cognitive perspective-taking have been most frequently examined in the domain of intergroup relations. In one seminal article concerning cognitive perspective-taking, Galinsky and Moskowitz (2000) utilised the 'day in the life' paradigm described above to demonstrate that perspective-taking reduced stereotyping and encouraged positive evaluations of outgroup members. Similarly, Todd, Bodenhausen and Galinsky (2012) examined the effects of perspective-taking on the denial of group discrimination. They found that taking the perspective of a minority group member (Black or Latino) made participants more likely to acknowledge the

discrimination of this group than taking the perspective of a White individual. This increase in perceived discrimination was consequently found to mediate a positive effect of perspective-taking on support for affirmative action. Furthermore, Berndsen and McGarty (2012) looked at the potential for perspective-taking to influence non-indigenous Australians' support for paying reparations to indigenous Australians for historical harm suffered (specifically, the authors reference the forced relocation and abuse of the 'Stolen Generations' of indigenous Australians during the 20$^{\text{th}}$ century). In Study 1, the authors reported finding that taking the perspective of an indigenous Australian was successful in reducing anger towards financial reparations relative to participants who were told to respond from their own perspective. This effect was mediated by perspective-taking induced increases in the perceived entitlement of indigenous Australians to reparations. Thus, cognitive perspective-taking appears to have broadly positive effects on a range of intergroup outcomes including reduced stereotyping and discrimination, and increased support for affirmative action and reparations (see also Galinsky & Ku, 2004).

These positive effects of cognitive perspective-taking also seem to operate through a common mechanism. Galinsky and Moskowitz (2000) found greater reported overlap between perceptions of the self and target other following perspective-taking relative to both other conditions (a no-information control and a stereotype-suppression condition), an effect that mediated the positive effects of perspective-taking on stereotyping and intergroup evaluations. Similarly, Todd et al. (2012, Study 3) found that their effects on perceived discrimination were driven by stronger automatic associations between the self and the target outgroup (i.e., self-other overlap). These effects of perspective-taking on cognitive overlap between the self and a target are consistent with Davis and colleagues' (1996) suggestion that perspective-taking alters "the cognitive representation of the target that is held by the observer" (p. 714). Across

two studies Davis et al. (1996) found greater self-other overlap for perspective-takers relative to non-perspective-takers. Davis et al. attributed this effect to the temporarily prolonged accessibility of the self-schema following perspective-taking (which encourages a focus on how the self would feel/ think) making it more likely that these self-judgements will be ascribed to the target (Davis et al., 1996).

The importance of perspective-taking induced self-other overlap in improving intergroup relations and social bonds is emphasised by Galinsky and colleagues (2005) who developed a model for the effects of perspective-taking based on the previous literature (Figure 3, below).

This figure has been removed by the author of this thesis for copyright reasons

Figure 3 Model of the role of perspective-taking in enhancing social bonds (Galinsky et al., 2005, p. 110).

In this model, Galinsky and colleagues identify two routes through which perspective-taking can improve social relationships. One route (the bottom pathway in Figure 3) concerns the typical attribution of aspects of the self to the target which, as noted above, can lead to reduced stereotyping of others (as per Galinsky & Moskowitz, 2000). The other route concerns the inclusion of aspects of the other in the self (the top pathway in Figure 3). Here, greater other-self overlap is argued to result in the perspective-taker acting in a more stereotype-consistent fashion or, in other words, engaging in greater behavioural mimicry of the target. Galinsky and colleagues argue that this behavioural mimicry can be adaptive as it enables participants to coordinate their behaviours with

the target, which can lead to increased perceptions of closeness and, in turn, improved social bonds (Galinsky et al., 2005).

The impact of including more of the other in the self was further explored by Galinsky, Wang and Ku (2008b). Over nine studies, they found that taking the perspective of target others led to stereotypically target-relevant traits being attributed to the self. For example, in one study, taking the perspective of cheerleaders led participants to see themselves as more attractive (a stereotypical trait of cheerleaders) than those told to suppress the stereotype. Participants also behaved in a more stereotype consistent fashion following perspective taking, with those asked to take the perspective of a cheerleader (who has stereotypically poor analytical ability) performing worse on an analytic task than those instructed to remain objective (Galinsky et al., 2008b, see also Laurent & Myers, 2011). Moreover, recent research by Ku, Wang and Galinsky (2010) suggests that these two self-other overlap processes may happen in tandem. Across 3 studies the authors found that perspective-taking was associated with both reductions in stereotyping of target others and also greater stereotype-consistent self-behaviour. For example, in Study 2 participants who took the perspective of an elderly man judged an ambiguous, dependent individual as less dependent (i.e., reduced stereotyping) but also reported more conservative attitudes themselves (i.e., concerning same-sex marriage - increased stereotype-consistent behavioural tendencies), than participants instructed to remain objective. Overall, irrespective of the specific direction of transference (that is, self to other versus other to self), this literature provides comprehensive support for the positive effects of perspective-taking for improving social bonds by increasing overlap between cognitive representations of the self and target.

Unintended outcomes of cognitive perspective-taking. Despite the research that suggests a positive impact of cognitive perspective-taking, others have found that

this can sometimes backfire and lead to negative consequences. For example, and consistent with their broader analysis, Galinsky and colleagues (2005; 2008b) note that taking the perspective of a stereotypically aggressive target could lead to greater animosity resulting from the incorporation of stereotype-consistent (aggressive) behaviour into the perceiver's self. Perspective-taking might also have mixed consequences in other situations. For example, taking the perspective of a stigmatised individual or group could successfully improve relations with respect to that specific group, but this could also lead the perspective-taker to be stigmatised by association (courtesy stigma, Goffman, 1963; cited in Galinsky et al., 2005). Furthermore, in order to co-ordinate their behaviour with the stigmatised target perspective-takers could come to behave in undesirable or even illegal ways, which might in turn affect their treatment by society (Galinsky et al., 2005). Consistent with this suggestion, Laurent and Myers (2011: Study 2) found that taking the perspective of a racist individual led participants to perceive greater overlap with, and valuing of, the target, and to express more negative attitudes themselves towards African Americans. Taking the perspective of a racist individual, and consequently expressing more racist beliefs, is clearly a socially unacceptable and even dangerous consequence.

Recent research has also focused on identifying the specific conditions under which perspective-taking might backfire, largely in the context of intergroup relations. For example, Tarrant, Calitri and Weston (2012) showed that the outcomes of intergroup perspective-taking are structured by perspective-takers' concerns about their own social identity. Specifically, individuals who most positively valued their own social group (so-called high identifiers) rated the target outgroup more negatively following perspective-taking, relative to those who were less strongly invested in their group and high-identifiers in a control condition. Similarly, Zebel, Doosje and Spears (2009) found that low identifiers who took the perspective of an outgroup that had been

previously harmed by the ingroup reported stronger guilt compared to high identifiers. In contrast, when high identifiers took the perspective of a harmed outgroup they tended to avoid guilt and instead experienced enhanced compassion, an emotion with no causal relationship to feelings of responsibility or blame (e.g., Hoffman, 2000; cited in Zebel et al., 2009). Thus, in certain circumstances the positive effects of perspective-taking appear to be dependent on the perspective-takers relationship with their ingroup, and the relationship between that group and the group associated with the target of their perspective-taking.

Potential negative effects of perspective-taking have also been examined by Vorauer, Martens and Sasaki (2009). These researchers acknowledge that much of the positive perspective-taking research focuses on reactions to outgroup members with whom participants have little chance of actual contact. In their research, individuals who were low in prejudice engaged in more negative treatment of outgroup members when they were asked to take their perspective than when they did not engage in perspective-taking, with a less consistent effect in the opposite direction apparent among high-prejudice individuals. Vorauer and colleagues (2009) attributed this backfiring effect to the fact that low prejudice perspective-takers believed they would be seen positively by the outgroup members and so felt less of a requirement to display further positive behaviour during interactions. On the basis of these patterns, Vorauer et al. suggested that "caution is warranted in recommending perspective taking as a strategy for improving intergroup relations" (p.826).

Finally, Caruso, Epley and Bazerman (2006) reviewed the literature concerning the potential for perspective-taking to reduce egocentrism. When considering the positive effects of perspective-taking, Caruso and colleagues cite research such as that of Galinsky and Moskowitz (2000, above) to acknowledge that "desirable outcomes can emerge when people adopt another's perspective by putting themselves in the other

person's shoes" (Caruso et al., 2006, ps.207-208). When considering the negative consequences of perspective-taking, the authors point out that much perspective-taking involves thinking about what other individuals are thinking or their potential future actions rather than simply 'wearing their shoes'. As a consequence, these authors suggest that the effects of perspective-taking for attributions, evaluations, and behaviour could depend on what perspective-takers 'see' when they consider the thoughts and action of others. Consistent with this, in the context of competitive social negotiations Epley, Caruso and Bazerman (2006) found that while perspective-takers believed they deserved less of the resources in a competitive interaction than non-perspective-takers, they actually took more when it was possible, an effect that was not present during cooperative interactions. This pattern of effects was attributed to perspective-takers' beliefs that the other individuals would act in a selfish way, and the accompanying sense that they must act first, a phenomenon referred to throughout their paper as 'reactive egoism' (Epley et al., 2006, e.g., p.873). Accordingly, to the extent that perspective-takers 'see' the target as likely to act in a way which disadvantages them, it could lead to greater hostility or self-serving behaviour.

Summary. Three key conclusions can be drawn from the above literature. First, perspective-taking is typically applied as a method of improving relations between individuals or groups, whether through reduced stereotyping or discrimination or greater target-consistent (stereotypical) behaviour. Second, a key mechanism through which cognitive perspective-taking has an effect on these various outcomes is increased overlap between cognitive representations of the self and a target other (e.g., Davis et al., 1996; Galinsky et al., 2005; Galinsky & Moskowitz, 2000). Third, despite the evidence for the adaptive consequences of perspective-taking, this can sometimes also have negative or unintended consequences. For example under specific circumstances, perspective-taking has led to increased outgroup derogation (e.g., Tarrant et al., 2012).

There is also the potential for taking the perspective of an undesirable outgroup or individual to lead perspective-takers to become more other-like via increased inclusion of the undesirable other in the self – a clear negative consequence of perspective-taking. Overall, while the cognitive process of self-other overlap that can be triggered by perspective-taking appears to have broadly positive consequences, there are also important limits to the positive effects of cognitive perspective-taking.

Emotional perspective-taking

Most research on emotional perspective taking has focused on empathy and its effects on interpersonal and intergroup attitudes and behaviour. Batson and colleagues (1997a) found that participants instructed to empathise with a stigmatised individual (e.g., a person with HIV/ AIDS) by focusing on how that person would *feel* about what has happened to them reported more positive attitudes towards that group. Subsequent research by Batson, Chang, Orr and Rowland (2002) showed that these positive effects of emotional perspective-taking also extend to positive intentions to help members of such groups. Through this programme of research, Batson and colleagues developed an empathy-attitude (later empathy-attitude-action) model, which outlines the mechanisms through which emotional perspective-taking influences perceivers' attitudes and intentions. In particular, they argue that taking the perspective of a target in need leads to increased empathy towards them which subsequently increases the participants' valuing of the target's welfare (as per Batson, Turk, Shaw & Klein, 1995). This greater valuing of the target, in turn, generalises to the target's social group generating more positive attitudes towards, and greater intentions to help, the group (Batson et al., 1997a, 2002; see also Bagozzi & Moore, 1994; Carrera et al., 2012).

The relationship between empathy and behaviour is not restricted to helping; it can also lead to a greater commitment to equality. Batson and colleagues (2003)

examined this potential for perspective-taking to stimulate moral behaviour, specifically whether participants assigned the self or the target other to a more positive task, and whether they did this using either a coin-toss (a fair, moral method) or simply self-assignment. In Study 1 they found that inducing 'imagine-other' emotional perspective-taking, defined as "imagining the thoughts and feelings of the person in need", led to greater assignment of the target other to the task with positive consequences relative to both 'imagine-self' emotional perspective-taking, defined as "imagining what one's own thoughts and feelings would be if one were in the situation", and a no-imagination control condition (definitions from Batson et al., 2003, p. 1192). Importantly, this effect was not due to an increased desire to be fair; instead Batson and colleagues found evidence for empathy-induced altruistic motivation to improve the welfare of the target other (consistent with the empathy-attitude-action model, Batson et al., 1997a; 2002). In short, these findings further demonstrate the role of empathy in the success of emotional perspective-taking manipulations.

Although research into emotional perspective-taking has typically focused on empathic concern, it is also possible that emotional perspective-taking could elicit a broader array of emotions in perceivers. Indeed, the standard perspective-taking paradigm employed by Batson and colleagues (e.g., 1997a) asks participants to report either how they would feel or how they think the target other feels rather than specifically asking them to empathise. Moreover, Batson and colleagues' typical empathy scale constitutes just 6 items from a broader 26 item emotional concern scale (e.g., Batson et al., 1997a). While the remaining 20 items are often left out of the analysis, an impact of perspective-taking on emotions other than empathy has been demonstrated. For example, Batson, Early and Salvarani (1997c) found that imagine-self emotional perspective-taking elicited distress as well as empathy.

The potential for emotional perspective-taking to operate through emotions other than empathy was also acknowledged by Dovidio et al. (2004) in the context of prejudice reduction. Specifically, Dovidio and colleagues (2004) found that participants given perspective-taking instructions displayed reduced racial prejudice relative to participants in either an objective (i.e., "try to take an objective perspective toward what is described", p.1540) or no information control condition (see also Shih, Wang, Bucher & Stozer, 2009; Vescio, Sechrist, & Paolucci, 2003 for further research involving emotional perspective-taking and prejudice). However, and most importantly, this effect was mediated by feelings of injustice rather than self-other merging or empathic concern (the typical cognitive and emotional consequence of perspective-taking). In their discussion, Dovidio and colleagues (2004) speculated that the mediational effect of feelings of injustice may have been due to the racial-prejudice context eliciting greater injustice whereas Batson and colleagues' experimental paradigm involve situations that emphasise the target's misfortune, and so potentially encourage greater experience of empathic concern.

It therefore appears that emotional perspective-taking has the potential to elicit emotions other than empathy. Research has also demonstrated that other, non-empathic emotions can also have important consequences for helping. For instance, Isen and Levin (1972) showed that inducing positive mood in participants, for example by giving them cookies during an experiment or having them 'find' money left in a phone booth, led to greater intentions to help a target individual, an effect that was replicated by Levin and Isen (1975). The role of such non-empathic emotion in eliciting helping has also been examined directly as an alternative explanation for Batson and colleagues empathy-altruism research. Specifically researchers have examined the potential for the activation, or expectation, of either more generalised positive emotions (i.e., "empathic

joy", Smith, Keating & Stotland, 1989) or anticipated sadness (e.g., Cialdini et al., 1987) as competing explanations for the empathy-helping relationship.

Moreover, research also suggests that not all emotions have a uniformly positive effect on helping. For instance, Lamy, Fischer-Lokou and Guéguen (2012) primed participants with love, distress or solidarity while asking them to donate money to a children's hospital, and found that participants primed with love donated more frequently than those primed with either distress or solidarity. Similarly, Zemack-Rugar, Bettman and Fitzsimons (2007: Studies 2A & 2B) found that sadness and guilt have different effects on helping for individuals high in guilt-proneness. Specifically, individuals high in guilt-proneness were willing to allocate more of their time to helping a charity when they were primed with guilty adjectives than when they were primed with sadness adjectives. It therefore appears that empathy is not the only emotion that can be elicited by emotional perspective-taking; and, given that all emotions do not necessarily have the same uniformly positive effect it follows that the effects of emotional perspective-taking and emotions on helping behaviour could be quite complex and multifaceted.

The complex effects of emotional perspective-taking. Recent research has emphasised the complex relationship between emotional perspective-taking and helping; just as was the case for cognitive perspective-taking, social identity concerns can also structure the effects of emotional perspective-taking. For example, Stürmer, Snyder and Omoto (2005) found that the positive relationship between empathy and helping was only present when the target was also an ingroup member. When the target was instead an outgroup member, interpersonal attraction predicted helping rather than empathy. This suggests that the empathy-helping relationship only emerges when the target is an ingroup member, when they are an outgroup member helping is instead contingent on the target's personal characteristics (Stürmer et al., 2005, see also

Stürmer, Snyder, Kropp and Siem, 2006). Stürmer and colleagues (2005) argue that their findings are inconsistent with Batson and colleagues' (1997b) contention that the empathy-helping relationship persists in spite of group boundaries. Instead, they suggested a dual route of influence on helping moderated by the group membership of the target. Consequently, while the emotional experience of empathy might facilitate positive behaviour in relation to certain (ingroup) targets, alternative processes need to be activated for similar actions to be directed toward other (outgroup) targets.

Moreover, some research also cautions that eliciting empathy in response to an outgroup member can sometimes backfire and have negative consequences. For example, Vorauer and Sasaki (2009) found that empathising in intergroup contact situations failed to reduce prejudice, and for individuals who were high in prejudice empathy actually led to greater outgroup derogation. In addition to having different outcomes depending on the group membership of the target, other research has suggested that the experience of empathy may itself be dependent on the relationship between the perceiver and the target. Tarrant, Dazeley and Cottom (2009) found that participants had stronger empathic responses to, and greater intentions to help when the target in need was an ingroup member than when they were an outgroup member. Along similar lines, Brown Bradley and Lang (2006) found that participants had more exaggerated emotional responses (both positive and negative) to photos of ingroup members than photos of outgroup members (see also Xu, Zuo, Wang & Han, 2009). It seems therefore, that empathy (and other emotions), and associated behavioural responses may be experienced more strongly in response to ingroup than outgroup members.

Summary. Following this review of the typical effects of emotional perspective-taking, it should be apparent that the typical literature in this domain examines the specific effects of perspective-taking induced empathy on outcomes such as

interpersonal and intergroup attitudes/ helping and related concepts such as prejudice. However, the broad nature of the standard emotional perspective-taking manipulations leaves open the possibility that emotions other than empathy might be elicited by these. Given this, literature considering the effects of eliciting emotions more generally was also reviewed. Specifically, support was found for the positive effects of emotional experience on helping and prejudice reduction (e.g., Dovidio et al., 2004; Isen & Levin, 1972). Overall, the typical emotional perspective-taking or empathy literature suggests a broadly positive, adaptive effect of eliciting emotions. However, consistent with the effects of cognitive perspective-taking, these also appear to be both dependent upon the group membership of the target and prone to backfiring (e.g., Stürmer et al., 2005, 2006; Vorauer & Sasaki, 2009).

Cognitive and emotional perspective-taking in the context of negotiations and strategic interactions

As the above review of the literature demonstrates, although both cognitive and emotional perspective-taking can have similarly positive effects (e.g., Galinsky & Moskowitz, 2000; Batson et al., 1997a), the processes through which they achieve these effects are different. Specifically, while emotional perspective-taking typically exerts its effects through emotional experience or engagement (e.g., empathy, Batson et al., 1997a), cognitive perspective-taking works to facilitate social bonds by altering the overlap between cognitive representations of the self and target of perspective-taking (e.g., Galinsky et al., 2005). These distinct pathways of influence are clearly reflected in the strategic interaction/ negotiation literature, in which researchers explicitly compares the relative effects of cognitive and emotional perspective-taking. For example, Galinsky and colleagues (2008a) found that participants who engaged in cognitive perspective-taking were more effective at uncovering creative solutions and maximising

collective and individual gain than those who engaged in emotional perspective-taking. The authors attributed these effects to the positive impact of encouraging a cognitive focus on the interests and behaviour of others relative to encouraging an emotional engagement. As a consequence, the authors concluded that it is "more beneficial to get inside [an adversary's] head than to have them inside one's own heart" (Galinsky et al., 2008a, p.383).

However, Gilin and colleagues (2013) suggest that the effects of cognitive and emotional perspective-taking may instead depend on the context in which they are elicited. Across four studies, they found that cognitive perspective-taking was more effective than emotional perspective-taking (specifically empathy) under circumstances that required cognitive engagement (e.g., a strategic arms race war game, Study 1) while emotional perspective-taking was more effective under circumstances that required affective engagement (e.g., a relationship-focused coalition building game, Studies 2 & 3; Gilin et al., 2013, see also Cohen, 2010). Thus, cognitive perspective-taking seems to be more effective when a strategic, action focus is required whereas emotional perspective-taking is preferable in more affective, interpersonal contexts. This negotiation literature therefore serves to reinforce the distinct processes through which cognitive and emotional perspective-taking operate: either cognitive perspective-taking induced overlap between the self and target, or emotional perspective-taking induced affective responses to, or emotional engagement with, the target.

Conclusion

Overall, this review of the literature suggests that while there is some conceptual overlap between cognitive and emotional perspective-taking, they operate through distinct mechanisms. Indeed, while there are positive effects for both cognitive and

emotional perspective-taking across a range of outcomes, including prejudice reduction (e.g., Dovidio et al., 2004; Galinsky & Moskowitz, 2000), helping behaviour (e.g., Batson et al., 2002), and more effective negotiations (e.g., Gilin et al., 2013), these effects occur through different processes. Specifically, cognitive perspective-taking typically operates via an overlap between cognitive representations of the self and the target, whereas emotional perspective-taking operates by encouraging emotional experience (typically empathy) in the perceiver (e.g., Batson et al., 1997a, 2002; Galinsky and Moskowitz, 2000; Galinsky et al., 2005). This distinction is most clearly reflected in the negotiation literature: while cognitive perspective-taking was most successful in situations requiring a strategic understanding of the requirements of both parties, emotional perspective-taking works best in more interpersonal, collaborative contexts (e.g., Galinsky et al., 2008a; Gilin et al., 2013). Despite the overlap in outcomes of cognitive and emotional perspective-taking, the distinct processes through which they operate could have important implications for health promotion. To the extent that narrative health campaigns elicit perspective-taking (intentionally or otherwise), the distinction between the processes associated with these two types of perspective-taking suggests that there may be variations in campaign effectiveness depending on which type of perspective-taking is engaged.

Furthermore, while the effects of both emotional and cognitive perspective-taking are generally positive, these effects appear to be moderated by concerns about social identity and group membership of the perspective-taking target (e.g., Stürmer et al., 2005, 2006; Tarrant et al., 2009; Tarrant et al., 2012). Additionally, research has identified conditions under which both cognitive and emotional consequences of perspective-taking might have negative and unintended consequences. For example, cognitive perspective-taking may encourage participants to engage in inappropriate yet stereotype-consistent behaviour which could lead to social censure (e.g., Galinsky et al.,

2005; 2008b). Similarly, emotional perspective-taking may backfire under conditions of intergroup contact (e.g., Vorauer & Sasaki, 2009). Together, this research suggests that while the effects of cognitive and emotional perspective-taking are often positive, this does not necessarily generalise to all contexts in which perspective-taking is employed, and that sometimes the effects are negative. The complexity in perspective-taking outcomes is considered further in the following Chapter by exploring the role of perspective-taking in the context of health promotion. In exploring this, I will consider how cognitive and emotional perspective-taking may influence the effectiveness of narrative health promotion campaigns.

Chapter 3 Perspective-taking and health

In Chapter 1 several very preventable health threats to the UK population were identified. For instance, recall that 26% of adults were classified as obese in 2010 (NHS Information Centre, Lifestyle Statistics, 2012), and that there was a 2% increase in STI diagnoses in 2012 (Health Protection Agency, 2012). The economic impact of these easily prevented illnesses, if left unaddressed, were also discussed, with Wang et al. (2011) projecting that the rise in obesity related illnesses would cost the NHS a further £1.9-2bn /year by 2030. This statistical evidence suggested that health promotion campaigns may not be working. Evidence presented in Chapter 1 identified the growing popularity of narrative communications in health promotion campaigns alongside inconsistencies in the effectiveness of these communications relative to more traditional, and equally ineffective, statistical campaigns (e.g., Allen & Preiss, 1997; de Wit et al., 2008; Hinyard & Kreuter, 2007; Wicke et al., 1994). Given the importance of understanding the processes underlying behaviour change for developing effective health interventions (e.g., Bartholomew et al., 1999), Chapter 1 concluded by linking the processes underlying narrative campaigns to the social psychological phenomenon of perspective-taking.

An examination of the literature concerning the typical effects of perspective-taking in Chapter 2 revealed a clear distinction between two different forms of perspective-taking: emotional and cognitive. Both these forms have demonstrated positive effects across a range of outcomes, particularly in relation to intergroup phenomena and helping behaviour (e.g., Batson et al., 1997a; Galinsky & Moskowitz, 2000). Although the effects of perspective-taking are generally understood to be positive, some literature suggests that these effects may be structured by social identity concerns (e.g., Stürmer et al., 2006; Tarrant et al., 2012), while other work

acknowledges that both cognitive and emotional perspective-taking can backfire and lead to undesirable outcomes (e.g., Galinsky et al., 2008b; Vorauer & Sasaki, 2009).

Given the potential for perspective-taking to be elicited by narrative campaigns, and the broad distinction between emotional and cognitive consequences of perspective-taking, it is possible that differences in the type of perspective-taking elicited by narrative campaigns – and the conditions under which this occurs – could be responsible for their inconsistent effectiveness. That is, engaging in cognitive perspective-taking in response to a narrative health campaign could activate processes that impact on determinants of behaviour in a different way to those invoked by emotional perspective-taking. Along these lines, this Chapter is concerned with applying the perspective-taking literature to the context of health promotion, with a view to developing a set of predictions concerning the relative effects of cognitive and emotional perspective-taking on responses to narrative health campaigns. At the close of this Chapter the aim is to have convinced the reader that the inconsistent effects of narrative health campaigns can be, at least partially, attributed to differences in the type of perspective-taking that is elicited.

Cognitive perspective-taking and health

As discussed in Chapter 2, one of the key effects of cognitive perspective-taking is an increase in overlap between cognitive representations of the self and other, known as self-other overlap (Davis et al., 1996; Galinsky & Moskowitz, 2000), something that can also be reflected in heightened perceptions of similarity between the self and target other (Davis et al., 1996). Indeed, self-other overlap has been identified as the key mediator of the positive effects of perspective-taking on increasing social bonds through both greater inclusion of the other in the self and greater attribution of the self to the

other (Galinsky et al., 2005). It therefore follows that changes in perspective-takers'

internal representations of the self and the other are a key consequence of engaging in

cognitive perspective-taking, and something that is central to understanding the effects

of this.

Shifts in the perception of the self and other following cognitive perspective-

taking could conceivably have important implications for health behaviour. Individuals

tend to think of health risks as something that happens to "other" people and thus deny

the risk to the self (i.e., the optimistic bias: Weinstein, 1984). Such low perceptions of

personal risk are often identified as a key barrier to engaging in protective behaviour

(e.g., Brewer et al., 2007). This being the case, encouraging individuals to recognise an

overlap between themselves and an ill or at risk other may reduce this optimistic bias

and increase the perceived personal relevance of the health issue and associated actions.

Take, for instance, the Department for Transport (2007) advertisement described in

Chapter 1. To the extent that this advertisement encourages the audience to take the

perspective of an individual who has engaged in drink driving, the increased perceptions

of overlap between themselves and that individual could increase the audiences'

perceived personal risk of drink-driving related harm. Elevated risk perceptions should,

in turn, prompt positive behavioural change, for example closer monitoring of alcohol

intake or making alternative transport choices after drinking.

Support for the role of these processes in shaping individual health behaviour is

provided by Weston and Tarrant (2009). In this research, participants were exposed to a

narrative account of an individual who had contracted chlamydia. In response to this

stimulus, there was a significant positive relationship between participants' self-

reported ease of perspective-taking of the target and perceived personal risk of

chlamydia. This relationship was mediated through the perception of similarity between

the self and the target. Taken in conjunction with the literature suggesting that perceived

similarity may underlie the effects of narrative health campaigns (e.g., Evers et al.,

1997; Kreuter et al., 2007, see Chapter 1), it follows that cognitive perspective-taking

could play an important role in ensuring the success of these campaigns.

Other research discussed in Chapter 2 identified the potential for perspective-

takers to perceive more of the other in the self, a process which leads the perspective-

takers to absorb the typical orientations and behaviours of their targets, (e.g., Galinsky

et al., 2005; Galinsky et al., 2008b). Mimicry of behaviours seen as typical of a target

group (i.e., high analytic performance in professors) was found in participants following

perspective-taking (e.g., Galinsky et al., 2008b). This behavioural mimicry could also

have important, adaptive consequences for the success of narrative health campaigns.

To the extent that the narratives involve characters who either: a) engage in healthy,

risk-reducing behaviours (e.g., eating five pieces of fruit and vegetables per day), or b)

engage in recommended behaviours to rectify previous unhealthy or illness inducing

behaviours (e.g., being screened for STIs / seeking prompt treatment following unsafe

sex), taking the perspective of these target characters could lead individuals to

themselves engage in these positive, health promoting behaviours.

However, researchers in this area have also discussed the possibility of this

behavioural mimicry leading to negative consequences, particularly if the behaviour

adopted as a result of perspective-taking is personally or socially harmful (e.g.,

Galinsky et al., 2005; Galinsky et al., 2008b). The research by Laurent and Myers

(2011) exemplifies this possibility, as they found greater racist behaviour in participants

following them taking the perspective of a racist target relative to a no instruction

control. Relating this to the health context, it is possible that incorporating features of an

individual who engages in unhealthy behaviour into the self could result in mimicry of

this undesirable behaviour. This may be particularly likely when perspective-takers see

unhealthy or risk-taking behaviour as typical of the target or their group. Indeed,

Galinsky and colleagues (2005) note that perspective-taking induced inclusion of the other in the self increases social bonds through increased target-stereotype consistent behaviour, a contention supported by the empirical literature (e.g., Galinsky et al., 2008b; Ku et al., 2010). As a consequence, it seems intuitive that if risky or unhealthy behaviour is not seen as (stereo)typical of the target, or if the narrative makes explicit that the target does not typically engage in such behaviour (i.e., that the behaviour was uncharacteristic), then participants will be less likely to engage in mimicry. For instance, in their research reporting positive effects of narrative campaigns over statistical campaigns on perceived risk of hepatitis B (HBV) and intentions to get vaccinated, de Wit and colleagues (2008, see Chapter 1) presented a narrative protagonist who emphasised that he was not usually promiscuous but had nevertheless caught HBV. In other words, risky sexual behaviour was not typical of the target. This suggests that encouraging cognitive perspective-taking of narrative campaign characters should have positive effects for health promotion provided the risky behaviour is seen as atypical of the target group. As a consequence, the health promotion campaigns presented in the empirical Chapters of this thesis emphasised the atypical nature of the campaign character's risky health behaviour (see PhD rationale and thesis structure, Chapter 3).

Summary. It seems plausible that cognitive perspective-taking in response to narrative health communications should lead to greater perceived self-other overlap with the character depicted in the campaign (i.e., the narrative target) (e.g., Davis et al., 1996; Galinsky & Moskowitz, 2000). This cognitive process of perspective-taking could, in turn, have consequences for perceived risk and intentions (e.g., Evers et al., 1997; Weston & Tarrant, 2009). To the extent that risky behaviour is seen as atypical of the target, encouraging cognitive perspective-taking in response to narrative health communications could increase the likelihood of positive effects on health-related

outcomes via greater recognition of the personal relevance of health issues and recommended actions. In the next section, similar issues as they relate to the possible consequences of emotional perspective-taking in response to narrative health campaigns are considered.

Emotional perspective-taking and health

The discussion of the emotional perspective-taking literature in Chapter 2 resulted in a number of key observations. First, one of the most robust effects in this literature concerns the role of (perspective-taking induced) empathy in improving attitudes towards, and increasing intentions to help, another individual or group (e.g., Batson et al., 1997a; 2002). Second, perspective-taking instructions which induce participants to focus on their feelings (a typically used paradigm, see Batson and colleagues, e.g., 1997a) can also lead to the experience of emotions other than empathy, which should also have consequences for the outcomes of perspective-taking (e.g., Batson et al., 1997c; Dovidio et al., 2004; Isen & Levin, 1972). Third, the specific consequences of emotional engagement should depend on the emotions that are aroused (e.g., Lamy et al., 2012; Zemack-Rugar et al., 2007). Finally, as was the case for cognitive perspective-taking, engaging emotions in response to a target can backfire, leading to, for example, greater outgroup derogation (e.g., Vorauer & Sasaki, 2009). What follows below is a detailed exploration of both the positive and negative consequences of emotional experience for health promotion and how these relate to emotional perspective-taking. In contrast to the relatively simple application of cognitive perspective-taking to health promotion, this literature suggests that the implications of emotional engagement (viewed as an outcome of emotional perspective-taking) for health promotion are less clear, and therefore perhaps more variable.

Positive health effects of emotional engagement. Alongside the general

research suggesting effects of emotional perspective-taking on attitudes, helping and

prejudice explored in Chapter 2, some research also specifically suggests a role for

empathy in health promotion. Campbell and Babrow (2004) presented participants with

a public service announcement (PSA) that had previously been rated as either high or

low in empathy, and found that exposure to empathy arousing messages positively

predicted participants' empathic response to the narrative, which in turn predicted

perceived risk of AIDS.[3] Accordingly, the experience of empathy seemed to facilitate

the transfer of this health prevention message. While this research highlights the direct

role of empathy in increasing health-related outcomes, other research suggests that

empathy can also play an indirect role in facilitating health campaigns. For example,

Shen (2010) found that state empathy had a positive effect on both perceived

effectiveness of PSAs and attitudes towards the message, an effect that was partially

mediated by the effect of empathy on reducing psychological reactance. As a result,

Shen (2010) suggested that empathy-focused campaigns represent a viable alternative to

more general emotional appeals (which often elicit reactance themselves) due to both

the mitigating effect of empathy on reactance and the direct effect on persuasion. Taken

together, this research suggests an adaptive effect of empathy, a common consequence

of emotional perspective-taking, on adherence to health promotion messages.

Research has also considered the role of emotions more generally in the context

of health promotion. For instance, Biener et al. (2006) found that although over half of

the anti-tobacco advertisements broadcast in Massachusetts between 1990 and 2001

were created by pharmaceutical companies, these accounted for only 1% of the

---

[3] The high empathy PSA involved a young woman standing up in front of her peers and announcing she has HIV. This announcement was followed by a slow-motion, emotional hug from another girl. The low empathy PSA involved two young people (a man and woman), blindfolded, "becoming intimate" under a sheet while a voiceover (increasing in volume) counts down to a gunshot, at which point the couple face towards the camera (Campbell & Babrow, 2004, ps.168-169).

advertisements considered by former smokers to be effective. Instead, the most effective advertisements were those that aroused some degree of emotion (i.e., adverts depicting illnesses developed as a result of smoking). Furthermore, Brown and Basil (1995) found that simply knowing that 'Magic' Johnson (a famous American basketball player) was HIV positive was not sufficient to increase participants' perceived personal risk of HIV/AIDS, or their intentions to reduce risky sexual behaviour. Instead, a perceived emotional connection to this celebrity (i.e., the degree to which participants felt they could relate to him or thought of him as a friend, etc.) was required to positively influence risk and intentions. Relating this explicitly to emotional perspective-taking, Brown and Basil's (1995) emotional connection construct seems to closely parallel the perspective-taking induced increase in valuing of a target and their group that is central to Batson and colleagues' (1997a, 2002) empathy-attitude-action model (see Chapter 2). Thus, emotional engagement may have positive implications for health promotion through processes closely linked to those typically associated with emotional perspective-taking.

Accordingly, it seems that emotions elicited following exposure to narrative health communications should have positive effects on health-relevant outcomes (e.g., beliefs, intentions, and perhaps behaviour) parallel to the effects of cognitive processes. Dunlop, Wakefield and Kashima (2008) present a model that articulates these potentially positive effects of emotion. In this model, the authors propose that individuals can have three types of emotional response to a message, all of which can affect personal risk perceptions and persuasive outcomes (Figure 4).

This figure has been removed by the author of this thesis for copyright reasons

Figure 4 "Hypothesised pathways of influence of emotional responses to health communications" from Dunlop et al. (2008, p.55).

Of particular relevance here is the suggestion that self-referent emotional responses to campaign messages can impact on perceived personal risk, which in turn influences persuasive outcomes. Self-referent emotions are those elicited when individuals relate the content of the campaign messages to their own lives and experiences. This is something that Dunlop and colleagues (2008, p.69) suggest narrative campaigns may be especially effective at triggering as "stories allow the viewer to perceive the world from another perspective". Indeed, Dunlop and colleagues (2008, p.56) state that the act of emotional self-referencing occurs "if the message stimulates the [recipient] to reflect upon their own life, body, or behaviour in some way" (Dunlop et al., 2008, p.56). Thus there are clear parallels between emotional self-referencing and perspective-taking. Furthermore, Dunlop et al. (2008) suggest that plot-referent emotional responses can become self-referent following sufficient identification with the narrative target. These ideas are summarised by Moyer-Gusé in her theory of 'entertainment persuasion':

"Consider a viewer who identifies with a similar character who is worried about contracting a sexually transmitted infection. Because the viewer is immersed into the character's world, she or he would vicariously experience the emotions associated with the health risk as does the character. This experience may be uniquely effective at conveying perceived vulnerability to a viewer" (Moyer-Gusé, 2008. p.418).

In sum, the above literature suggests that emotional perspective-taking – or at least emotional engagement – can have positive consequences in the context of health campaigns via empathy, emotional arousal, and identification (or a sense of connection) with a target, processes that parallel those involved in the typical emotional perspective-taking literature reviewed in Chapter 2. When these findings are considered in tandem with the likely positive effects of cognitive perspective-taking explored earlier, it would appear that taking the perspective of a narrative target should have positive implications for health-related outcomes regardless of the specific type of perspective-taking elicited. However, there is also an extensive tradition of research that has identified more consistently negative health effects of emotional engagement. These are explored in detail in the following section.

Negative health effects of emotional engagement. A long tradition of research in the field of health communication has considered the more problematic side of emotional arousal during persuasion (e.g., Consedine, 2008; Consedine & Moskowitz, 2007; Janis & Feshbach, 1953; Ray & Wilkie, 1970; Ruiter, Abraham & Kok, 2001; Witte, 1992). Indeed, research has highlighted how emotions such as fear can undermine the effectiveness of health communication (Prevention First, 2008). As a result, eliciting emotions in response to health campaigns may not lead

straightforwardly to behaviour change. Instead, the decision to engage in specific health

behaviours may be associated with varied and complex emotional responses (e.g.,

Consedine & Moskowitz, 2007). For instance, Moore, Brødsgaard and Rosenberg

(2004) found that feeling embarrassment relating to having poor teeth could lead an

individual to have greater intentions to visit the dentist (or at least to engage with

therapy for dental anxiety), however embarrassment related to the act of visiting the

dentist could lead to the opposite (as, for example, this could lead to censure

surrounding the condition of your teeth). Similarly, Consedine, Magai and Neugut

(2004) found that feelings of worry about cancer increased participants' breast

screening intentions, whereas feelings of embarrassment about screening decreased

them. Other researchers have similarly found that the experience of embarrassment can

interfere with intentions to buy and use condoms (Dahl, Gorn and Weinberg, 1998;

Helweg-Larsen and Collins, 1994), and also engagement with medical practitioners

around issues of sexual health (Consedine, Krivoshekova and Harris, 2007). It therefore

follows that engaging emotional perspective-taking in response to a narrative campaign

may have variable effects on behaviour change as a consequence of the emotions

experienced by perspective-takers, and the contexts in which these are elicited. When

considered alongside the potentially straightforward effects of cognitive perspective-

taking for the success of narrative health campaigns, the complex and variable effects of

emotional experience for health promotion provide the first tentative support for the

prediction that the inconsistent effects of narrative campaigns may depend on the type

of perspective-taking elicited.

The potential for negative effects of emotional engagement are further

underscored by the literature on defensive avoidance. As Sweeny, Melnyk, Miller and

Shepperd (2010) state, receiving information about a specific health threat or illness can

cause individuals to feel reduced positive emotions or enhanced undesirable emotions.

In order to avoid these negative emotions individuals may simply ignore the information that triggered them (Sweeny et al., 2010). Empirical support for the role of emotions in exacerbating defensive avoidance is provided by Brown and Locker (2009) who examined the responses of student drinkers to either an emotive or non-emotive anti-alcohol message. They found that participants high in denial and vulnerability to alcohol related problems, as determined by responses to vulnerability and denial scales, reported lower perceived risk if exposed to the emotive message relative to the non-emotive message. This effect was mediated by the time taken to examine the message and respond to the questionnaire, a measure used by Brown and Locker (2009) to represent avoidance. Similarly, Brown and Smith (2007) presented participants with a health message containing either distressing or non-distressing images and found lower perceived risk reported by those participants who received the high distress message. Interestingly, researchers have also noted that empathy can itself lead to avoidance (albeit in the context of intergroup relations), for example due to a concern that the fate that befell the target could also happen to the self (Stephan & Finlay, 1999). Along these lines, it is therefore possible that engaging emotional perspective-taking in response to a narrative campaign could, at least sometimes, lead to maladaptive defensive avoidance.

Overall, the literature suggests that experiencing an emotional response to a health campaign can have variable effects. On the one hand, emotional experiences have been positively related to the success of health promotion campaigns (e.g., Campbell & Babrow, 2004; Dunlop et al., 2008). However, on the other hand, some research has demonstrated that experiencing undesirable emotions may inhibit this success, and potentially even lead to maladaptive avoidance (e.g., Brown & Smith, 2007; Consedine et al., 2004; Sweeny et al., 2010). To the extent that these complex and variable emotional responses occur as a consequence of emotional perspective-taking, they

contrast with the more straightforward role suggested for cognitive perspective-taking

in health promotion (albeit only for atypical risky behaviour). In other words, whereas

the consequences of cognitive perspective-taking may be expected to more reliably

predict positive responses to narrative health campaigns, the effects of emotional

perspective-taking seem less clear. It is therefore important to understand more clearly

the circumstances under which emotive health campaigns typically backfire, and the

exact role of emotions in this.

Why emotive campaigns can backfire. Witte's (1992) Extended Parallel

Processing Model (EPPM) provides a thorough exploration of these circumstances in

the context of fear appeals. In developing her theory, Witte adopted the 'danger control'

process, which induces acceptance of information, from the earlier Protection

Motivation Theory (e.g., Prentice-Dunn & Rogers, 1986) and added a parallel 'fear

control' process, which deals with conditions under which messages backfire and are

rejected. According to the resulting model, individuals begin by appraising the

perceived threat to the self. If this threat is sufficiently high then the individual will

experience fear (Easterling & Leventhal, 1989; Lang, 1984; cited in Witte, 1992). Fear,

in turn, leads to an appraisal of both the effectiveness of the response and their ability to

enact this (i.e., response-efficacy and self-efficacy). When both efficacy and threat are

high, adaptive danger control processes are engaged and the message is likely to be

accepted - the desired outcome of most persuasive appeals. Thus, when an individual

feels threatened by something but a) feels confident in dealing with it (self-efficacy) and

b) believes that the prescribed solution will be effective (response-efficacy), they can

focus on addressing the issue. However, when perceived threat and resulting fear are

high but perceived efficacy is low a different outcome follows. Under these

circumstances, the fear becomes intensified and individuals engage in fear control

processing and consequently ignore the message (i.e., defensive avoidance) to help them

cope with the negative emotion rather than the original danger (for an empirical test of

the model see Witte, 1994; see also Witte & Allen's, 2000 meta-analysis). In sum, Witte

(1992) states that fear directly causes maladaptive responses, and can indirectly cause

adaptive responses through perceived threat. The model is visually presented in Figure 5

below.

This figure has been removed by the author of this thesis for copyright reasons

Figure 5 The Extended Parallel Processing Model (EPPM), Witte (1992). Retrieved from
Witte (n.d.) http://nnlm.gov/evaluation/pub/witte/witte_fig2.gif

Thus, within the EPPM conceptualisation, the emotional responses to threat,

namely fear, are only beneficial when this emotional arousal is accompanied by feelings

of efficacy. Without efficacy, fear will instead lead to maladaptive coping. This model

parallels the previously summarised research suggesting both positive and negative

consequences of emotional engagement in the context of health campaigns (e.g., Brown

& Basil, 1995; Sweeny et al., 2010). Relating the model more specifically to narrative

health campaigns, the EPPM would suggest that the specific consequences of emotional

engagement with a narrative target will be: a) dependent on which emotions are

aroused, and b) shaped by recipients' beliefs about the effectiveness of behaviours to

address the situation in question, and about their own ability to enact these behaviours.

As discussed above, although research on emotional perspective-taking has typically focused on empathy as the relevant emotional response, a broader range of emotions are likely to be elicited via the act of perspective-taking (e.g., Batson et al., 1997c). To the extent that these emotions include fear or distress, the theoretical distinction between danger control and fear control becomes relevant. If the campaign also either a) contains no clear recommended behaviour, or b) concerns a recommended behaviour which is difficult or costly to engage in, then the emotional engagement triggered by perspective-taking might actually result in distancing rather than desired behaviour change. On the other hand, if the campaign also contains information that reinforces individual feelings of efficacy, then emotional engagement via perspective-taking is likely to be more productive.

While the above represents one possible analysis of the interplay between emotional arousal and feelings of efficacy, other research suggests that perceptions of self-efficacy can themselves be influenced by emotional experiences. For instance, Salovey, Rothman, Dettweiler and Steward (2000) suggest that unwell individuals experiencing sad mood believe that there is little that they can do to improve their situation – in other words they do not believe that they have the efficacy to rectify the situation (see also Salovey & Birnbaum, 1989). Similarly, research by Lench and Levine (2005) examined the impact of encouraging different emotions (i.e., happiness, fear, anger, or a neutral condition), by asking participants to recall a life event in which they felt, for example, afraid, on their perceived risk of, and control over, a range of outcomes (e.g., smoking, general health, terrorism). Although they found no direct effect of recall condition on control they did find, across conditions, that the more fear participants reported the less control they felt they had over the outcomes. This suggests that one further consequences of emotional perspective-taking in response to narrative campaigns might be a reduction in perceptions of self-efficacy, particularly to the extent

that the narrative is likely to arouse negative emotions. Thus, although perceptions of efficacy may determine when perspective-taking induced emotional engagement might have positive versus negative consequences for health promotion, the potential for these emotions to themselves reduce efficacy further underlines the complex relationship between emotional perspective-taking and health promotion.

Summary. There are several conclusions which can be made concerning the role of emotional perspective-taking in health promotion. Research suggests that empathy, a typical consequence of emotional perspective-taking (e.g., Batson et al., 1997a, 2002), can have adaptive consequences for health promotion (e.g., Campbell & Babrow, 2004; Shen, 2010). Moreover, although empathy is typically triggered by perspective-taking, it is unlikely to be the only emotion that is engaged under such circumstances (see Batson et al., 1997c; Dovidio et al., 2004). To the extent that a broader range of emotions is triggered by perspective-taking, a broader range of outcomes is also conceivable. Specifically, experiencing certain negative emotions (e.g., distress or fear) has been associated with defensive avoidance (e.g., Brown & Locker, 2009; Brown & Smith, 2007), particularly in the absence of sufficient efficacy to engage in a recommended behaviour (e.g., Witte, 1992). Indeed, even more positive emotions, like empathy, have been suggested to have negative implications for avoidance (albeit in the context of intergroup relations, Stephan & Finlay, 1999). Thus, depending on which specific emotions are triggered by emotional perspective-taking, this may inadvertently trigger defensive responding and minimisation of health risks, thereby undermining the effectiveness of such methods for changing behaviour. When viewed in comparison to the relatively straightforward, and generally positive, implications of cognitive perspective-taking for health promotion, this literature suggests that the relationship between emotional perspective-taking and health promotion may be more complex. The complex nature of this relationship may, in turn,

be responsible for the inconsistent effectiveness of narrative health promotion campaigns outlined in Chapter 1 (e.g., Hinyard & Kreuter, 2007).

PhD rationale and thesis structure

At this point, it is worth summarising a number of key points that have emerged across the previous 3 Chapters. First, recent years have witnessed a rise in narrative approaches to health promotion (e.g., Hinyard & Kreuter, 2007). Despite their increasing popularity, evidence concerning the value of such approaches is unclear. In order to better understand these campaigns and their possible effects, I considered the potential psychological mechanisms that might be engaged by narrative campaigns. Perspective-taking – seeing the world through the eyes of another – is the immediately relevant psychological process, but the majority of research on this concept has been conducted in domains other than health. Following a review of the extant literature, it was noted that: a) there is a broad distinction between cognitive and emotional aspects of perspective-taking, and b) both of these are assumed to be positive and functional, but also both have the capacity to backfire. In this Chapter an attempt was made to draw out the possible consequences of cognitive and emotional perspective taking for the success of narrative-based health campaigns. Here it was suggested that the cognitive aspects of perspective-taking should have relatively straightforward, positive implications for health promotion as a function of increased similarity or overlap with the target (e.g., Evers et al., 1997; Weston & Tarrant, 2009). However, the emotional consequences of perspective-taking are likely to be more complex and varied, leading to both positive and negative effects (e.g., Brown & Basil, 1995; Brown & Locker, 2009; Consedine et al., 2004; Dunlop et al., 2008). Thus, cognitive perspective-taking might be a more easily implemented tool for health promotion and less likely to inadvertently trigger maladaptive responding.

The aim of this PhD is to empirically examine these ideas. Across seven studies, an experimental paradigm is developed involving participants (Exeter university students) reading a narrative health campaign (ostensibly part of an NHS safer sex campaign) while varying the type of perspective-taking that is engaged. The narrative campaign vignette was based on those used in previous research (de Wit et al., 2008; Weston & Tarrant, 2009) and detailed the experience of an undergraduate student who had had a one night stand and caught an STI. This story was presented "in their own words" as a first person narrative. To reduce the likelihood of participants mimicking the risky-sex behaviour, unsafe sex was presented as atypical of the character in the vignette (as in both de Wit et al., 2008 & Weston & Tarrant, 2009). Sexual health was chosen as the context in this thesis as it was seen as a highly relevant health threat to university students, the target population (e.g., young adults are reported as being at highest risk of contracting an STI; AVERT, n.d., see Chapter 4 for more detail).

The type of perspective-taking participants engaged in was manipulated using instructions developed from both the typical cognitive (e.g., Galinsky & Moskowitz, 2000; Tarrant et al., 2012) and emotional (e.g., Batson et al., 1997a) perspective-taking literature. For instance, either encouraging participants to "imagine how you yourself would feel if you were the [target]" (emotional perspective-taking), or to "write a short paragraph about 'a day in the life' of the [target]…as if you had gone through a typical day in their life as them" (cognitive perspective-taking). The relative effects of cognitive and emotional perspective-taking were then assessed on a range of health-relevant outcome variables.

To determine those health-relevant outcomes, various prominent theories of health behaviour change were considered. In an article discussing the efficacy interventions for reducing HIV, Fishbein (2000) surveyed these prominent theories to develop an integrative model of health promotion. While acknowledging the vast array

of health behaviour theories, Fishbein (see also Fishbein & Yzer, 2003) noted that the majority of variance in behavioural prediction could be accounted for by a few key variables contained in three major health behaviour theories: the Health Belief Model (HBM, e.g., Janz & Becker, 1984), Social Cognitive Theory (e.g., Bandura, 1998), and the Theory of Reasoned Action (TRA, e.g., Fishbein & Ajzen, 1975). Specifically, in his integrative model, Fishbein (2000) adopted the basic assumption of the TRA, that *intentions* to engage in a specific behaviour are the most important predictors of actual behaviour. In the absence of strong behavioural intentions three key predictors were seen as crucial for increasing intentions and, by association, behaviour: *attitudes*, defined as "the person's overall feelings of favourableness or unfavourableness toward performing the behaviour"; *social norms*, defined as "perceptions of what others think one should do as well as perceptions of what others are doing", and; *self-efficacy*, defined as "one's belief that one can perform the behaviour even under a number of difficult circumstances" (Fishbein, 2000, p. 275). This integrative model of health behaviour is presented below (Figure 6).

Accordingly, these key health-related variables – attitudes, norms, efficacy and intentions – were included as dependent variables across the studies contained in this PhD thesis. To the extent that one type of perspective-taking (relative to the other) led to an increase in any of these variables it was deemed beneficial for health promotion. Nonetheless, as intentions are considered to be the most proximal predictor (Fishbein, 2000), participants' intentions to engage in a specific, health promoting behaviour was considered the most important outcome across studies. Measures of social norms, self-efficacy, and attitudes were progressively introduced, and refined, as the experimental paradigm developed over the course of the thesis.

This figure has been removed by the author of this thesis for copyright reasons

Figure 6 The integrative model, adapted from Fishbein (2000, p.274)

Following the basic premise of this thesis, the first set of studies (Chapter 4) examined the relative impact of cognitive versus emotional perspective-taking in response to a narrative health campaign on perceptions of health-related norms and individual intentions. The goal of these initial studies was simply to explore whether the different types of perspective-taking had different consequences for individual health-related outcomes.

Drawing on the EPPM (Witte, 1992) and other discussions of the interplay between emotion, modelling, and efficacy in health promotion (e.g., Bandura, 1977; 1998; Lench & Levine, 2005), the second set of studies (Chapter 5) examined the role of self-efficacy in determining the effects of perspective-taking. Here it was expected that perceptions of efficacy might vary as a result of the type of perspective-taking activated. That is, either that the behavioural-focus of cognitive perspective-taking may increase perceived efficacy or the emotion-focus of emotional perspective-taking may reduce it. Regardless of the direction, the predictive relationship between efficacy and intentions (e.g., Fishbein, 2000) suggests that efficacy perceptions may be an important

mediator of the relative impact of cognitive and emotional perspective-taking on the success of narrative health campaigns.

Finally, the third set of studies (Chapter 6) aimed to explore how the relationship between the self and target other might frame, and consequently modify, perspective-taking effects. Specifically, three studies examined the roles of: 1) perspective-taking focus, that is whether participants are instructed to imagine themselves in the situation or the situation from the target's perspective (e.g., Batson et al., 1997c); 2) group membership of the narrative target, that is whether they were portrayed as an ingroup or outgroup member, and finally; 3) altering participants' salient identity, that is either making salient a social identity that included both target and perceiver within a common categorical frame of reference, or a personal identity that consequently did not include the target.

Together, the seven studies reported in this thesis provide the first comprehensive exploration of the relative roles of cognitive and emotional perspective-taking in determining the effectiveness of narrative health campaigns. The implications of this research for both ensuring the effectiveness of future narrative health campaigns, and for the perspective-taking literature more generally are explored throughout the empirical Chapters and in more detail alongside limitations and suggestions for further research in the General Discussion (Chapter 7).

Chapter 4 Examining the effects of cognitive and emotional perspective-taking on responses to narrative health campaigns

As detailed in the preceding literature review Chapters, current efforts to encourage greater health-promoting behaviour seem inadequate. Research findings reveal the mixed effectiveness of not only traditional, statistically-based persuasion campaigns but also of more recent, narrative-based campaigns (e.g., de Wit et al., 2008; Greene & Brinn, 2003; Hinyard & Kreuter, 2007; Ward & Hawthorne, 1994; Wicke et al., 1994). Given the increased application of these narrative methods to health promotion, understanding the possible mechanisms that determine their effectiveness would seem important. Throughout the literature review a case was made for the respective roles of cognitive and emotional perspective-taking as potential facilitators and inhibitors of narrative health campaign success. More specifically, it was suggested that engaging in cognitive perspective-taking of a narrative target (i.e., campaign character) might have generally positive implications for individual health behaviour (e.g., Weston & Tarrant, 2009), whereas the effects of emotional perspective-taking are likely to be more variable and might even backfire (e.g., Brown & Locker, 2009; Sweeny et al., 2010). The research conducted for this PhD thesis aimed to test this contention.

The two studies presented in this Chapter represent the initial attempt to examine whether: a) there are differences in the relative effects of cognitive and emotional perspective-taking on individual, health-related outcomes, and b) whether these differences can shed light on the inconsistent effects of narrative health promotion campaigns. Given the exploratory nature of these studies, no firm hypotheses are proposed at this point. Instead the focus is on establishing whether there are any reliable differences between the effects of cognitive and emotional perspective-taking in

response to a narrative health campaign. However, on the basis of the literature review it seems plausible that activating the seemingly straightforward cognitive perspective-taking in response to a narrative campaign may lead to more positive health-related outcomes than activating the more complex emotional perspective-taking. These studies are therefore intended as a starting point for a more extensive exploration of the mediators and moderators of such perspective-taking in future studies. The studies presented here deliberately contrast two forms of perspective-taking in response to a narrative health campaign to observe the effects on indices of perspective-taking, emotional arousal, and socio-cognitive predictors of health behaviour in a university student population. The health context of these studies, sexual health and more specifically chlamydia infection, was selected for several reasons: Firstly, as outlined in the previous Chapter, young adults (typically 16-24) are the highest risk category for contracting a sexually transmitted disease (AVERT, n.d.). Secondly, chlamydia can often have no symptoms (NHS Choices, 2011e) and so it would be possible for our participants to be infected without realising this unless they had been tested. Thirdly, STI awareness is a prominent part of university life, with campaigns emphasising the importance of safe sex behaviour (for instance, the Safer Sex Ball at the University of Exeter). As a consequence, chlamydia infection (and associated protective behaviours) was thought to represent a real and relevant health issue for university students, our target population (see Oyserman, Fryberg & Yoder, 2007 for more on the importance of identity-relevance for enacting health behaviour).

Study 1

Method

Participants and Design

Participants were 45 students recruited on campus at the University of Exeter (36 female, 9 male; *M* age = 20.02, *SD* = 1.18). Participants were randomly assigned to one of two different conditions based on the type of perspective-taking activated (cognitive perspective-taking *n* = 22, emotional perspective-taking *n* = 23). To be included in the sample, participants had to indicate that they were *not* in a committed, monogamous relationship and must have satisfactorily completed the paragraph-writing task used for the perspective-taking induction (see below). [4,5] Participants were offered sweets as an incentive for participation.

The study was a single factor, between-subjects experiment. The independent variable was the type of perspective-taking activated (cognitive vs. emotional). The dependent variables were participants' perceived ease of perspective-taking, their empathic experience while reading the campaign, their perceptions of students' injunctive and descriptive norms relating to unsafe sex, and their intentions to both get tested for chlamydia and use condoms in future.

---

[4] We only examined participants who were not in a committed, monogamous relationship as it was thought that safe sex practices would be more relevant to them. For instance, if someone is in a committed relationship they are less likely to intend to increase their STI testing behaviour regardless of perspective-taking as they likely trust their sexual partner to be faithful.

[5] Alongside participants screened out for not writing anything during the paragraph writing task, one further participant was excluded for failing to engage as made clear through the writing task (i.e., they wrote song lyrics).

Materials and Procedure

Participants were told that the research was concerned with their perceptions of various aspects of student life including sexual behaviour. If they agreed to take part, participants were given a questionnaire pack including the manipulation and all dependent variables.

Manipulations and vignette. At the start of the questionnaire, participants were asked to read a narrative vignette concerning a university student who contracted chlamydia, presented as a real-life account ostensibly taken from the NHS Choices website (e.g., 2011c). The type of perspective-taking that participants engaged in was manipulated through the specific reading instructions. The typical emotional perspective-taking paradigm involves manipulating participants' perspective-taking in relation to a narrative account (Batson and colleagues, e.g., 1997a) whereas the typical cognitive paradigm involves asking participants to write their 'day in the life' essay/ paragraph in response to a photograph of an individual (e.g., Galinsky & Moskowitz, 2000). As a result, it was necessary to harmonise these disparate instructions (i.e., by including both reading and paragraph writing instructions in both conditions) while retaining their respective emotional and cognitive focus. In the cognitive perspective-taking condition participants were asked to:

> "…read the account below and then write a short paragraph about 'a day
> in the life' of the individual in the account…as if you had gone through a
> typical day in their life as them" (adapted from Galinsky & Moskowitz,
> 2000; Tarrant et al., 2012).

In the emotional perspective-taking condition participants were instead asked to:

> "…imagine how you *yourself* would feel if you were the person in the
> account…you should concentrate on the way *you* would feel under those

circumstances" (adapted from Batson's research, e.g. Batson et al.,

1997a).

To preserve the cognitive versus emotional focus of these manipulations, the reading instructions were framed differently across conditions. In the emotional perspective-taking condition they were framed as being in response to research suggesting that "statistics based sexual health information has a reputation for being cold and impersonal". In the cognitive perspective-taking condition they were framed in response to research suggesting that "statistical information and narratives (personal accounts) concerning STDs vary in terms of the way they are perceived by individuals". Due to the length of these reading instructions, and as it was the first time they have been used, they are presented, in full in Appendix A.

The vignette (adapted from Weston & Tarrant, 2009; de Wit et al., 2008) presented an account of a 19 year old undergraduate student named Sam (a gender neutral name) who had engaged in an out-of-character, unprotected, one night stand in his/her first year of university. The vignette stated that Sam had discovered s/he had chlamydia after taking a free and simple chlamydia test on campus and ended with Sam remarking on how stupid s/he felt about contracting the disease. In order to maximise the believability of the vignette it was presented as a screenshot from the (pre-existing) NHS real stories website (Figure 7). Following the presentation of this vignette participants were asked to write a paragraph describing a 'day in the life' of the target (as per Galinsky & Moskowitz, 2000; Tarrant et al., 2012). A further manipulation of perspective-taking type was presented in the paragraph writing instructions. Participants in the cognitive perspective-taking condition were given the following instruction:

"Please write a paragraph describing a day in the life of Sam in the space

provided below. When writing the paragraph you should **take the**

perspective of Sam. That is, go through a typical day in their shoes, as if you were them. Please take no more than 2 minutes when writing your paragraph" (adapted from Tarrant et al., 2012).

Participants in the emotional perspective-taking condition were given the instruction:

"Please write a paragraph describing a day in the life of Sam in the space provided below. When writing the paragraph you **should try to imagine how you would feel if you were Sam about what has happened and how it would have affected your life**" (developed using the language in Batson and colleagues' paradigm, e.g., 1997a).

As these instructions aimed to differentially induce cognitive and emotional consequences of perspective-taking, participants' use of emotional words/ phrases in their paragraphs was used as a manipulation check. This manipulation check was coded across all studies both by the primary researcher and one independent coder (per study) who was blind to condition. Coders were instructed to record whether the participant had used emotional language (Yes/No) and also the number of emotional words used. The coding instructions provided to the independent coder are included in Appendix B. Consistent with the manipulation, it was expected that participants given emotional perspective-taking instructions would use more emotional language in their paragraphs than participants given cognitive perspective-taking instructions.

Factor analysis strategy. Throughout this thesis, a consistent strategy for factor analysis of dependent variables was employed. Variables for which theoretical overlap might be expected (e.g., injunctive and descriptive norms, see below), as well as any new and not previously validated scales were subjected to factor analysis. In terms of the specific strategy, across all studies, principal components analysis (PCA) using direct oblimin rotation was used (as a relationship between the factors was expected;

Field, 2005). Furthermore, factors were extracted in the first instance if their

eigenvalues were greater than 1, with individual items loading on a given factor

considered substantive provided the values were > .4 (as per Field, 2005).

This figure has been removed by the author of this thesis for copyright reasons

Figure 7 Vignette adapted from Weston and Tarrant (2009), (Study 1). Template
adapted from NHS Choices (e.g., 2011e),
http://www.nhs.uk/Conditions/Chlamydia/Pages/Introduction.aspx

Measures. The rest of the questionnaire consisted of items assessing the various

dependent variables. All items were assessed using 7-point likert scales.

First, participants read items relating to their perspective-taking responses. Four items assessing ease of perspective-taking were included to examine how easy participants found it to take the perspective of the individual in the vignette. Reflecting the distinction between self-focused and other-focused perspective-taking (see Batson et al., 1997c), two items tapped participants' ease of imagining what it would be like to have chlamydia and how this would affect their lives (self-focused perspective-taking, e.g., "How difficult or easy was it for you to imagine how having chlamydia would affect your life?"; 1 *very difficult*, 7 *very easy*), whereas the other two items tapped participants' ease of imagining how Sam would feel about having chlamydia and how it would affect Sam's life (other-focused perspective-taking, e.g., "How difficult or easy was it for you to imagine how having chlamydia affects Sam's life?"; 1 *very difficult*, to 7 *very easy* (adapted from Levy, Freitas & Salovey, 2002). Given the potential overlap between these concepts, these items were subjected to a factor analysis. This revealed that all items loaded together on a single, reliable scale (4 items, $\alpha = .87$). A measure of how much participants' empathised with the target (adapted from Batson, personal communication, November 26, 2009) was also included. This involved asking participants to "indicate the degree to which [they] experienced each of these emotional reactions while reading the story"; 1 *not at all*, to 7 *extremely*. As per Batson's approach, 26 adjectives were included with the empathy scale consisting of 6 specific items from these (sympathetic, compassionate, soft-hearted, warm, tender and moved; $\alpha = .86$).

Participants were then given a range of items assessing predictors of individual behaviour. Three injunctive norm items were included as a measure of the degree to which participants perceived unprotected sex as generally approved of by students. For example, "Most students would *approve* of me having unprotected sex"; 1 *disagree very strongly*, to 7 *agree very strongly*. Three descriptive norm items were also included that

concerned how typical unsafe sex is among students. For example, "It is normal among students to have unprotected sex from time to time"; 1 *completely false*, to 7 *completely true*. Both norm scales were adapted from those used in Tarrant and Butler (2011), and Weston and Tarrant (2008). Given the potential overlap between these norm scales, factor analysis was conducted. This revealed that each scale loaded onto a distinct, reliable factor (Table 1). As a consequence, both scales were included for further analysis (injunctive norms: 3 items, α = .82; descriptive norms: 3 items, α = .93).

Finally, we measured participants' intentions to get tested for chlamydia (e.g. "If I had unprotected sex I would get tested for chlamydia"; 2 items, α = .86) and their intentions to use condoms in the future (e.g. "I intend to use barrier contraception (e.g. condoms) the next time I have sex"; 3 items, α =.95) (all responses from 1 *totally disagree*, to 7 *totally agree*, items adapted from Hagger, Chatzisarantis, Biddle & Orbell, 2001; Weston & Tarrant, 2009). Demographic information including gender and age was also recorded.

Following the completion of this questionnaire, participants were provided with a written debrief sheet alongside contact details for both the researcher and relevant support agencies' in case the participant wished to discuss the questionnaire or any related issues further. Finally, participants were also provided with the opportunity to ask the researcher any questions that may have arisen as a result of their participation.

Table 1 *Pattern matrix representing item loadings on both social norms factors (all loadings >.4) (Study 1)*

	1 (Descriptive norms)	2 (Injunctive norms)
"Most students would approve of me having unprotected sex"	-	.93
"Most students expect me to have unprotected sex"	-	.89
"Most students would…strongly approve/disapprove…of me having unprotected sex"	-	.72
"Most students have unprotected sex from time to time"	.96	-
"It is normal among students to have unprotected sex from time to time"	.88	-
"Unprotected sex is relatively common among students"	.95	-

Results

One participant was identified as an outlier (defined as having a value of +/- 3 on the standardised scores) on the condom use intentions measure. As per Field's (2005) recommendation, the variable was transformed (using log, square root, and reciprocal transformations) to attempt to eliminate the outlier effect. As the skew of scores was negative, the variable had to be reverse-coded prior to transformation. While neither the logarithmic nor square root transformation eliminated the outlier, the reciprocal transformation was successful in doing so. As a consequence, the results reported below include the reciprocal transformation for condom use intentions, with the untransformed analysis for this variable included as a footnote.

Manipulation checks

The manipulation check involved examining both whether or not participants used emotional words, and the number of emotional words used during the paragraph writing task. The chi-square tests found a significant association between emotional words and condition for both coders, coder 1 = $\chi^2(1) = 11.75$, $p = .001$, OR = 9.47,

coder 2 = $\chi^2(1)$ = 16.93, $p < .001$, OR = 22.34 (Tables 2 & 3). Consistent with the

manipulation, participants who received emotional perspective-taking instructions were

more likely to use emotional words in their paragraphs than those given cognitive

instructions. Similarly, participants in the emotional perspective-taking condition used

more emotional words than participants in the cognitive perspective-taking condition,

coder 1 = $t(35.52)$ = -3.21, $p < .01$, d = 0.95, equal variances not assumed; coder 2 =

$t(43)$ = -4.23, $p < .001$, d = 1.26 (inter-coder correlation = r = .91, $p < .001$) (Table 4).

As might be expected, there were no significant effects of perspective-taking

type on ease of perspective-taking across conditions, $t(43)$ = -0.99, p = .32, d = 0.29.

However there was also no significant effect on elicited empathy, $t(42)$ = -1.58, p = .12,

d = 0.48. This suggests that both the cognitive and emotional perspective-taking

instructions were equally likely to elicit perspective-taking and that although

participants in the emotional perspective condition were more emotionally engaged, this

was not specifically about empathy.

Table 2 *Contingency table for the emotional perspective-taking manipulation check,*
coder 1 (Study 1)

		Perspective-taking condition		
		Cognitive	Emotional	Total
Emotional words used?	Yes	6	18	24
	No	16	5	21
	Total	22	23	45

Table 3 *Contingency table for the emotional perspective-taking manipulation check, coder 2 (Study 1)*

		Perspective-taking condition		
		Cognitive	Emotional	Total
Emotional words used?	Yes	7	21	28
	No	15	2	17
	Total	22	23	45

Main Analysis

Means and standard deviations for all variables are presented in Table 4 below. Comparison of the two conditions revealed that there were significant effects of the perspective-taking type on perceived injunctive norms, $t(35.36) = -2.18$, $p = .04$, $d = 0.65$ (equal variances not assumed)[6], intentions to get tested for chlamydia, $t(43) = 2.15$, $p = .04$, $d = 0.64$, and condom use intentions, $t(43) = 2.11$, $p = .04$, $d = 0.51$.[7] Participants given cognitive perspective-taking instructions reported *lower* perceptions of unsafe-sex as group normative and *higher* intentions to both get tested for chlamydia and to use condoms in the future than participants given emotional perspective-taking instructions. Given the complementary nature of these effects, bootstrapping mediation analysis was conducted (as per Preacher & Hayes, 2008). However there was no evidence of mediation through perceived injunctive norms for either: chlamydia test intentions, 95% CI [-.1603, .5568], or condom use intentions, 95% CI [-.0197, .0955]. Finally, there was no significant effect of perspective-taking type on perceived descriptive norms $t(43) = -0.82$, $p = .42$, $d = 0.25$.

---

[6] The t-test revealed a significant effect for the Levine's test, and so the analysis from the 'equal variances not assumed' line of the SPSS output was examined, as per Field (2005).

[7] This effect was non-significant when the analysis was performed on the untransformed variable, $t(43) = .79$, $p = .44$, $d = 0.24$.

Table 4 *Means and standard deviations for the effect of perspective-taking type on all manipulation checks and dependent variables. Superscript used to indicate significant differences (Study 1)*

	Cognitive		Emotional	
	Mean	SD	Mean	SD
Emotional words (coder 1)	0.41^a	0.79	1.48^a	1.38
Emotional words (coder 2)	0.46^a	0.80	1.87^a	1.36
Perspective-taking	3.64	1.48	4.09	1.54
Empathy	2.29	1.09	2.82	1.12
Injunctive norms	1.67^a	0.74	2.35^a	1.29
Descriptive norms	3.71	1.37	4.06	1.45
Condom use intentions	6.58	1.31	6.30	0.99
Reciprocally transformed condom use intentions	0.85^a	0.24	0.72^a	0.27
Test intentions	5.73^a	1.34	4.72^a	1.77

Summary. Complementary effects of perspective-taking type on perceived injunctive norms and behavioural intentions (both test and condom use) suggest a difference in the effects of cognitive and emotional perspective-taking. Specifically, engaging in cognitive perspective-taking of a narrative target appears to be more beneficial than engaging in emotional perspective-taking as this led to greater intentions to get tested and use condoms, and reduced perceptions of unsafe sex as normative.

Discussion

This first study was conducted to examine the relative effects of cognitive and emotional perspective-taking on health related outcomes in response to a single campaign exposure. The results indicated that perspective-taking was equally likely across these two forms via the lack of a significant difference between conditions in reported ease of perspective-taking. In addition, participants in the emotional perspective-taking condition were more likely to use emotional language in their

paragraphs and used a greater number of emotional words than participants in the cognitive perspective-taking condition, suggesting that this manipulation was successful. However emotional perspective-takers reported no greater empathic experience than cognitive perspective-takers. This suggests that the emotional focus was not specifically about feeling empathy for the target and instead may have involved other (positive or negative) emotions. This is broadly consistent with the contention, outlined in the literature review, that emotional perspective-taking can elicit other, non-empathic emotions (e.g., Batson et al., 1997c; Dovidio et al., 2004). Given that the rationale behind this study was based on the mixed effects of emotional engagement broadly, rather than empathy specifically, the absence of empathy effects does not negate the success of the manipulation, although it would be interesting to see if this pattern holds across future studies.

Complementary significant effects of perspective-taking type on injunctive norms, intentions to get tested for chlamydia, and intentions to use condoms in future were observed. Specifically, encouraging individuals to engage in cognitive perspective-taking of a narrative campaign increased positive health-behavioural intentions and decreased perceptions of unhealthy social norms relative to encouraging emotional perspective-taking. Thus, cognitive perspective-taking seemed to be superior for promoting positive health-related outcomes relative to emotional perspective-taking in response to a narrative health campaign. Given their conceptualisation as important predictors of individual health orientations (e.g., Fishbein, 2000), perceived norms were considered a plausible mediator for perspective-taking effects on intentions. However, tests for mediation did not support this idea and instead perceived norms and individual intentions were parallel outcomes. Despite the lack of any specific hypotheses in this Study, these findings were consistent with the broad thesis rationale that cognitive-perspective-taking of a narrative campaign might be more beneficial for health-related

outcomes than emotional perspective-taking, given the established mixed effects of

emotional experience or engagement in health contexts (e.g., Brown & Basil, 1995;

Brown & Smith, 2007; Consedine et al., 2004; Dunlop et al., 2008; Sweeny et al., 2010;

see Chapter 3).

Notwithstanding these promising findings, there were some inconsistencies in

the results of the present study. Specifically, the effects of perspective-taking appeared

on injunctive norms (what people approve) rather than descriptive norms (what people

actually do). Without further evidence, it is unclear whether these different effects

reveal something more meaningful about the processes engaged in in response to

perspective-taking. Indeed, intuitively it might be expected that perceptions of what

people generally do would be more likely to shift after considering another person's

behaviour than perceptions of what is generally approved of or socially sanctioned. One

possible explanation for the observed pattern is differences in the degree to which each

type of norm is susceptible to influence. Borsari and Carey (2003) conducted a meta-

analysis of descriptive and injunctive norms for college drinking. In this they suggested

that injunctive norms could be more susceptible to misperception than descriptive

norms, as the former are based more on inferences concerning others beliefs rather than

direct observations of actual behaviour. Building on this, it is possible that the lack of an

effect on descriptive norms in Study 1 may be due to the fact that participants have a

concrete understanding of what other students do, but are less aware of what others

actually approve of, and so injunctive norms are more susceptible to influence.

Furthermore, despite the lack of a significant effect on perceived descriptive norms, an

examination of the means (Table 3) reveals a trend in the same direction. Given the

unexpected nature of this finding, however, it would seem important to collect

additional data before drawing too many conclusions about this pattern.

In sum, this study provides preliminary support for the idea that fluctuations in the utility of narrative health promotion campaigns could be due to differences in the type of perspective-taking elicited. Specifically, narrative campaigns may be more effective when they encourage perspective-taking that is based on cognitive rather than emotional processes. Despite the significant differences between the two conditions in this study, in the absence of a third control condition it is difficult to fully determine the direction of this effect. For instance, does the difference between conditions reflect the positive impact of cognitive perspective-taking or the negative impact of emotional perspective-taking? Moreover, replication was considered important to ensure the consistency of the observed effects. It was with this in mind that Study 2 was designed.

Study 2

As noted above, Study 2 was conducted in part to simply replicate and isolate the effects observed in Study 1. In addition, we sought to address some limitations of the previous study. Firstly, the paragraph writing instructions in Study 1 asked participants in the cognitive perspective-taking condition to spend no more than 2 minutes writing their paragraph, but gave no such instruction to those in the emotional perspective-taking condition. This discrepancy was because the emotional perspective-taking instructions were adapted from Batson's research which did not involve a paragraph writing task, and this specific aspect of the instruction was inadvertently overlooked when harmonising across conditions. These instructions were made equivalent in Study 2 to eliminate the potential for a difference in time spent on the paragraph writing task to influence the effects (for example, via variable engagement with the instructions and campaign across conditions). Furthermore, the vignette used in Study 1 included information that referred to the ease of chlamydia testing, mentioned explicitly that the target had taken one of these tests, and acknowledged their worry

following this. It was felt that including this information could prime participants to focus on a specific health-related outcome (i.e., testing rather than prevention), or to experience greater emotion regardless of experimental condition. To help ensure that the effects were exclusively due to differences between perspective-taking instructions, the vignette was streamlined in Study 2 and some further changes were also made, as follows. First, the context was changed from a 'real stories' account on the NHS website to an NHS poster campaign, including a photo of the perspective-taking target (as per Galinsky & Moskowitz, 2000) in an attempt to increase the ease of perspective-taking and further harmonise our manipulations with those used in previous perspective-taking research. These changes also provided the potential to observe whether the effects would translate across different presentations of narrative information.

Second, Study 1 did not provide any explicit information concerning the symptoms or consequences of chlamydia, and so perceptions of the seriousness of this condition may have varied considerably across participants. Indeed, Darroch, Myers & Cassell (2003) note that there can be a tendency to perceive chlamydia as a less severe infection relative to other STIs. To minimise the possibility for different interpretations of the disease across participants, Study 2 included explicit factual information about chlamydia in the vignette. Finally, Study 2 also included a no instruction control condition (presenting the vignette but no perspective-taking instructions) to help determine the precise nature of the competing effects of cognitive and emotional perspective-taking.

Based on the results of Study 1, significant differences between cognitive and emotional perspective-taking conditions were again expected. Specifically, it was expected that:

H1: Cognitive perspective-taking would be associated with more positive

health-related outcomes (i.e., reduced unhealthy group norms and stronger

behavioural intentions) than emotional perspective-taking.

Furthermore, given the rationale that cognitive perspective-taking should have a

positive effect on health-related outcomes (see Chapter 3) it was also hypothesised that:

H2: Cognitive perspective-taking would elicit more positive health-related

outcomes than the control condition.

No specific predictions were made about differences between the emotional

perspective-taking and control conditions.

Method

Participants and Design

Participants were 77 students at the University of Exeter (50 female, 27 male; *M*

age = 20.01, *SD* = 2.89), randomly assigned to one of 3 conditions (cognitive

perspective-taking, *n* = 33; emotional perspective-taking, *n* = 23; control, *n* = 21).[8][9] As

in Study 1, all participants had indicated that they were not in a committed,

monogamous relationship and satisfactorily completed the paragraph writing task.

Participants were recruited online and were offered either course credit or a chance to

win a £20 Amazon voucher for participation.

---

[8] The uneven distribution of participants between cells was an unexpected consequence of excluding all participants in this study who had reported being in a committed, monogamous relationship. To prevent this problem from re-occurring, an approximately equivalent number of participants who were not in a committed relationship were recruited across conditions in all further studies.

[9] Given the uneven distribution of participants across conditions, homogeneity of variance tests were conducted for all manipulation checks and dependent variables. As these were non-significant (see results section), the unequal distribution of participants across conditions was not considered to be a problem.

The design was as for Study 1, but included a control condition which involved providing participants with the same vignette as the experimental conditions but without the perspective-taking reading instructions or paragraph writing task. The independent variable was the type of perspective-taking instruction provided (cognitive vs. emotional vs. control). The dependent variables in Study 2 were the same as those used in Study 1 (ease of perspective-taking, empathy, descriptive norms, injunctive norms, intentions to get tested for chlamydia, and intentions to use condoms).

Materials and Procedure

Participants were told that the research was concerned with their perceptions of student life (as in Study 1), but were also informed that the study was examining the effects of reading perspectives on responses to health-related campaigns.

Manipulations and vignette. As noted above, changes were made to the vignette used to manipulate perspective-taking. First, it was presented as a poster from an NHS chlamydia awareness campaign targeted at university students (Figure 8). The poster also excluded information detailing the target's decision to get tested and presented an accompanying image (as per Galinsky & Moskowitz, 2000). Importantly, the narrative was presented in a thought bubble which originated from either the man or woman depending on the participant's gender. Finally, information concerning the prevalence and potential negative consequences of chlamydia was included; this information was retrieved from the NHS Choices chlamydia webpage (NHS Choices 2009). Unlike Study 1, the context was standardised across experimental conditions; participants in both the cognitive and emotional perspective-taking conditions were informed that the study was concerned with the effect of reading perspective on responses to sexual health campaigns. The reading instructions used to manipulate

perspective-taking in the experimental conditions were modified to accommodate the change of vignette from a website to a poster. Specifically, participants in the cognitive perspective-taking condition were asked to:

> "please examine the poster imagining a "day in the life" of Sam (a 19 year old university student) as if you were him/her, and then write a short paragraph about "a day in the life" of Sam".

Participants in the emotional perspective-taking condition were asked to:

> "examine the poster imagining how you *yourself* would feel if you were the person in the poster (Sam, a 19 year old university student)…you should concentrate on the way *you* would feel under those circumstances."

The paragraph-writing task instructions were the same as in Study 1, but with the instruction to "please take no more than 2 minutes when writing your paragraph" added to the emotional perspective-taking instruction in order to ensure consistency across conditions.

Although participants in the control condition did receive the narrative campaign poster, they did not receive any specific reading instructions and were not asked to write a paragraph following the presentation of the poster. Instead these participants were simply asked to "please examine the poster and then continue with the questionnaire".

This figure has been removed by the author of this thesis for copyright reasons

Figure 8 Narrative vignette poster (Study 2). Image adapted from National Chlamydia Screening Programme (2009), Initiating Conversations Leaflet, http://www.chlamydiascreening.nhs.uk/ps/resources/materials/Initiating_conversations_ Leaflet.pdf

Measures. After being exposed to the campaign, and writing the paragraph relevant to the manipulation condition, participants completed a questionnaire containing the dependent measures. As in Study 1, all responses were assessed using 7-point likert scales.

As in Study 1, measures of ease of perspective-taking and empathy were included to assess participants' perspective-taking responses. The scale used to assess ease of perspective-taking was the same as in Study 1, and, as in Study 1 loaded as a single reliable scale following factor analysis (4 items, $\alpha = .90$). However, the previous measure of empathy was replaced by a new 3 item measure adapted from Stürmer et al., (2006: Study 1). This involved asking participants the degree to which they experienced

empathy, compassion and sympathy in relation to the campaign poster from 1 *not at all*, to 7 *very much*. These three items formed a reliable scale and were averaged into a single index (α = .79).

Participants were also provided with measures assessing key predictors of individual behaviour as in Study 1. Two items were used to examine perceptions of injunctive norms. These were revised from the previous study to ensure that participants were focused on expectations of the group when giving their responses: "students generally approve of unprotected sex" and "among students it is generally expected that people will engage in unprotected sex"; 1 *disagree very strongly*, to 7 *agree very strongly*. The same 3-item measure from Study 1 was again used to assess descriptive norms in this study. Unlike the previous study, however, factor analysis revealed that the injunctive and descriptive norm items loaded onto a single factor. Accordingly, the 5 normative items were averaged into a single, reliable 'social norms' scale (α = .87).

The two items from Study 1 were again used to assess intentions to get tested following unprotected sex. One of the items used in the previous study was reworded slightly (from "if I had unprotected sex I would get tested for chlamydia" to ""if I did have unprotected sex I would get tested for chlamydia"). These two items were reliable (α = .92) and were therefore averaged into a single index.

Four items assessed condom use and intentions. Two novel items tapping participants' current self-reported condom use behaviour were included (e.g. "I always use barrier contraception (e.g., condoms) when having sex with a new partner"; 1 *completely false*, to 7 *completely true*). A further two of the future intentions items were adapted from Study 1 to explicitly refer to sex with a new partner ("I intend to use barrier contraception (e.g., condoms) the next time I have sex with a new partner" and "I plan to use barrier contraception (e.g., condoms) the next time I have sex with a new

partner"; 1 *totally disagree*, to 7 *totally agree*). Given the inclusion of two novel condom use items and the conceptual overlap between these and the intentions items, factor analysis was conducted. This revealed a single factor solution: therefore the four items were collapsed into a single general condom use scale (4 items, $\alpha = .84$).

Finally, demographic information was collected as in Study 1. Following completion of the questionnaire, participants were provided with a thorough debrief sheet as in Study 1.

Results

One participant was identified as an outlier on the condom use scale for having values of +/- 3 standard deviations from the mean on the standardised score. As in Study 1, the variable was reverse scored (to correct negative skew) and transformed. All three transformations successfully eliminated the outlier. For consistency across studies the results presented below used the reciprocal transformation with the analysis on the untransformed variable included in footnotes where relevant.

Manipulation checks

As in Study 1, chi-square analyses of whether participants used emotional words in their paragraphs were again conducted alongside t-tests comparing the number of emotional words used across perspective-taking conditions. These analyses only included the experimental conditions as the control condition did not involve a paragraph writing task. Consistent with Study 1, participants given emotional perspective-taking instructions were more likely to use emotive words than those given cognitive perspective-taking instructions, coder 1 = $\chi^2(1) = 13.23$, $p < .001$, OR = 9.5; coder 2 = $\chi^2(1) = 14.17$, $p < .001$, OR = 11.69. Similarly, participants given emotional

perspective-taking instructions used more emotional words in their paragraphs than participants given cognitive perspective-taking instructions, coder 1 = $t(54)$ = -2.02, p = .05, d = 0.57; coder 2 = $t(54)$ = -2.08, p = .04, d = 0.57 (inter-coder correlation = r = .90, $p < .001$). This confirms that the emotional perspective-taking instructions triggered greater emotional engagement with the campaign than the cognitive perspective-taking instructions (Tables 5, 6 and 7).

Table 5 *Contingency table for the emotional perspective-taking manipulation check, coder 1 (Study 2)*

| | | Perspective-taking condition | | |
		Cognitive	Emotional	Total
Emotional words used?	Yes	11	19	30
	No	22	4	26
	Total	33	23	56

Table 6 *Contingency table for the emotional perspective-taking manipulation check, coder 2 (Study 2)*

| | | Perspective-taking condition | | |
		Cognitive	Emotional	Total
Emotional words used?	Yes	12	20	32
	No	21	3	24
	Total	33	23	56

In order to determine whether the no instruction condition represented an appropriate control comparison for the perspective-taking instruction conditions, the effects of all conditions on the ease of perspective taking and empathy scales were examined using univariate analysis of variance (ANOVA). See Table 7 for relevant means and standard deviations. These revealed a significant main effect of perspective-

taking type on ease of perspective-taking, $F(2, 74) = 3.24$, $p = .05$, $\eta^2_p = 0.08$. Follow up comparisons unexpectedly revealed no significant differences between either experimental condition and the control condition: emotion vs. control, $F(1, 74) = 2.16$, p $= .15$, $\eta^2_p = 0.03$; cognitive vs. control, $F(1, 74) = .78$, $p = .38$, $\eta^2_p = 0.01$. However there was a difference between the cognitive and emotional perspective-taking conditions, $F(1, 74) = 6.46$, $p = .01$, $\eta^2_p = 0.08$. Participants given emotional perspective-taking instructions reported greater ease of perspective-taking than participants given cognitive perspective-taking instructions.

For experienced empathy there was no significant main effect of perspective-taking type, $F(2, 74) = 2.03$, $p = .14$, $\eta^2_p = 0.05$. Follow up comparisons also revealed no significant differences between the cognitive and control, $F(1, 74) = 1.22$, $p = .27$, $\eta^2_p = 0.02$, or the cognitive and emotional conditions, $F(1, 74) = 1.21$, $p = .28$, $\eta^2_p = 0.02$, however there was a significant difference between the emotional and control conditions, $F(1, 74) = 4.05$, $p = .05$, $\eta^2_p = 0.05$. Participants given emotional perspective-taking instructions reported greater empathy than participants given no instructions.

Table 7 *Means and standard deviations for the effect of perspective-taking type on number of emotional words used, ease of perspective-taking, and empathic experience. Superscript used to indicate significant effects (Study 2)*

	Cognitive		Emotional		Control	
	Mean	SD	Mean	SD	Mean	SD
Emotional words (coder 1)	0.94[a]	1.80	1.83[a]	1.30	-	-
Emotional words (coder 2)	1.19[a]	1.91	2.17[a]	1.49	-	-
Ease of perspective-taking	3.57[a]	1.48	4.58[a]	1.17	3.93	1.71
Empathy experienced	3.67	1.55	4.10[a]	1.17	3.24[a]	1.47

Main Analysis

The means and standard deviations for the main analysis are presented in Table 8. Although the variance in standard deviations in Table 8 does appear larger in the emotional and control condition than in the cognitive condition, Levine's tests found no significant difference for any dependent variable, social norms: $F(2, 74) = 0.77$, $p = .47$; test intentions: $F(2, 74) = 0.11$, $p = .89$; reciprocally transformed condom use: $F(2, 73) = 2.67$, $p = .08^{10}$. Thus the homogeneity of variance assumption was met and, as a consequence, the discrepancy in standard deviations was not considered problematic.

Table 8 *Means and standard deviations for the effect of perspective-taking type on all dependent variables. Superscript used to indicate marginally significant and significant effects (Study 2)*

	Cognitive		Emotional		Control	
	Mean	SD	Mean	SD	Mean	SD
Social norms	3.09^{ab}	1.10	3.79^{a}	1.36	3.73^{b}	1.46
Test intentions	5.50	1.83	5.33	1.74	5.00	1.92
Condom use	6.40	1.05	5.87	1.38	5.96	1.39
Reciprocally transformed condom use	0.79	0.29	0.66	0.34	0.70	0.34

ANOVAs revealed no effects of perspective-taking type on test intentions, $F(2, 74) = 0.48$, $p = .62$, $\eta^2_p = 0.01$, or condom use, $F(2, 73) = 1.36$, $p = .26$, $\eta^2_p = 0.04$.[11] Despite this, it is notable that responses on these scales were always highest in the cognitive perspective-taking condition. With respect to perceptions of social norms,

---

[10] The Levine's test for the untransformed variable was also non-significant, $F(2, 73) = 3.03$, $p = .06$.

[11] The effect was also non-significant for the untransformed condom use variable, $F(2, 73) = 1.43$, $p = .25$, $\eta^2_p = 0.04$.

there was a marginally significant effect of perspective-taking type, $F(2, 74) = 2.55$, $p = .09$, $\eta^2_p = 0.06$. Follow up comparisons revealed a significant difference between the cognitive and emotional perspective-taking conditions, $F(1, 74) = 3.96$, $p = .05$, $\eta^2_p = 0.05$. Paralleling the previous study, and as expected, participants given cognitive perspective-taking instructions reported perceiving unsafe sex as less normatively acceptable than participants given emotional perspective-taking instructions. Further follow up comparisons revealed no significant difference between the emotional perspective-taking and control conditions, $F(1, 74) = 0.02$, $p = .88$, $\eta^2_p = 0.00$, but a marginally significant difference between the cognitive perspective-taking and control, $F(1, 74) = 3.15$. $p = .08$, $\eta^2_p = 0.04$. As expected, not only did participants given cognitive perspective-taking instructions report weaker perceptions of unsafe sex as group normative than those given emotional perspective-taking instructions, they also reported weaker norms than those given no instructions. These effects provided partial support for both H1 and H2.

Summary. Although there were no significant effects on behavioural intentions, the marginal effect on social norms was both consistent with Study 1 and provided partial support for both hypotheses. In short, cognitive perspective-taking was more effective at reducing perceptions of risky social norms than either emotional perspective-taking or providing no explicit instructions.

Discussion

Study 2 included a no instruction control condition in an attempt to help determine the precise location of the perspective-taking effects. The intention was to activate perspective-taking equally in both experimental conditions (versus the control), and to activate emotions specifically in the emotional perspective-taking condition

(versus both alternative conditions). However, the manipulation checks suggested that this was only partially successful. Although there was no difference between the experimental and control conditions on ease of perspective-taking, participants given emotional perspective-taking instructions unexpectedly reported greater ease of perspective-taking than those given cognitive instructions. In addition, participants given emotional perspective-taking instructions reported more empathy in response to the narrative than those given no instructions and, as in Study 1, were more likely to use emotional words when writing their perspective-taking paragraph than participants given cognitive perspective-taking instructions. Together, these findings suggest that the emotional perspective-taking condition may have been somewhat different from the other two conditions in this study in terms of the extent to which it: a) facilitated perspective-taking (unexpectedly), b) triggered broad emotional engagement (expectedly), and c) elicited the more specific experience of empathy.

The effect on ease of perspective-taking in particular warrants additional attention. While we may have intuitively expected differences between the experimental conditions and the control (as the latter included no explicit instruction to perspective-take), no difference was expected between the experimental conditions. However, although this difference reflects the *ease* of perspective-taking it does not necessarily speak to the *amount* of perspective-taking engaged across conditions. That is, one can successfully take the perspective of another individual but still find it hard to do. As a result, this effect was not interpreted as a failure of our perspective-taking manipulation but instead is taken to reflect a weakness in this method of measuring successful perspective-taking.

Notwithstanding these issues, as in Study 1 there were more emotional words and phrases used by individuals given emotional perspective-taking instructions relative to those given cognitive instructions – a finding taken as indicative of a successful

emotional perspective-taking manipulation. Study 2 also replicated the findings of Study 1 with respect to perceptions of safe sex norms. Participants instructed to engage in cognitive perspective-taking reported lower perceptions of risky sexual behaviour as normative than participants instructed to engage in emotional perspective-taking, or those given no perspective-taking instruction. However, no effects on either condom use or intentions to get tested for chlamydia were observed. As a result, only partial support for H1 could be drawn.

Given the lack of a difference between the control and emotional perspective-taking conditions on social norms, we cannot, at this stage, claim support for the idea that engaging emotional responses (via perspective-taking) to a narrative campaign might induce defensive avoidance explored in Chapter 3 (e.g., Brown & Locker, 2009; Sweeny et al., 2010). However, this point remains ambiguous given that participants in the control condition were still presented with a narrative and so may have engaged in spontaneous perspective-taking as the natural response to witnessing another individual in distress (Davis et al., 2004). Problems with the 'ease of perspective-taking' manipulation check mean that we cannot draw clear conclusions regarding this. As a result, further research was necessary to identify appropriate comparative control conditions in future. An attempt at doing this is reported in the following Chapter (Chapter 5, Study 4).

Despite the mixed effects across dependent variables, the inclusion of a control condition did help to clarify the direction of the perspective-taking effect. Presenting participants with cognitive perspective-taking instructions seems to be beneficial - at least with respect to norms - relative to both emotional perspective-taking and the control condition. Furthermore, emotional perspective-taking instructions were no more effective than presenting no instructions at all. This suggests that explicitly instructing the recipients of narrative health campaigns to engage in cognitive perspective-taking

might enhance their effectiveness, whereas prompting more emotional forms of perspective taking might either undermine the campaigns, or at least be no better than narrative campaigns that do not encourage any form of perspective-taking from audiences.

General Discussion

The goal of the studies reported in this Chapter was to shed light on the mixed effects of narrative health campaigns by considering possible differences between the two different forms of perspective-taking that such campaigns might trigger: cognitive versus emotional. Across two studies we observed a broadly positive effect of cognitive perspective-taking relative to more emotional perspective-taking on health-relevant outcomes. In Study 1, participants who engaged in cognitive perspective-taking perceived risky sexual behaviour as less group normative, and reported greater safe-sex consistent behavioural intentions than participants who engaged in emotional perspective-taking. While Study 2 did not find an effect on behavioural intentions, the effect on perceived social norms was replicated. In addition, Study 2 included a control condition in which perspective-taking was not explicitly encouraged. Comparisons with this condition tentatively suggest that the observed differences between perspective-taking types may be more due to the positive impact of cognitive perspective-taking instructions rather than the negative effects of emotional perspective-taking. However, the potential for simply presenting a narrative to elicit perspective-taking unintentionally (as per Davis et al., 2004) suggests that our 'no instruction' condition may not represent an appropriate baseline control on which to base judgements concerning the direction of the effects. Issues with the control condition notwithstanding, the findings for social norms tell a complementary story across studies: encouraging cognitive perspective-taking leads individuals to perceive risky sex

as less group normative than either encouraging emotional perspective-taking or providing no instructions. Although Study 1 suggested that there may also be complementary effects on personal intentions, these effects were not replicated in Study 2.

The broad pattern of effects provides initial support for the rationale, outlined through the literature review Chapters, that the inconsistent effects of narrative health campaigns could be due, at least in part, to the type of perspective-taking elicited. Ineffective campaigns could simply be encouraging a greater emotional engagement with the source material when cognitive engagement would be more effective. This is consistent with the literature suggesting variable effects of emotional experience on behaviour (e.g., Brown & Smith, 2007; Dunlop et al., 2008), and our contention that cognitive perspective-taking may have more straightforwardly positive implications for the success of narrative health campaigns (see Chapter 3; e.g., Weston & Tarrant, 2009).

Although these implications highlight the contribution of these studies to current understanding, the lack of a consistent effect on behavioural intentions in Study 2 means that we should be careful not to over-interpret the reliability of these effects. However, the removal of a specific reference to getting tested for chlamydia from the narrative in Study 2 may provide a feasible explanation for the absence of an effect on test intentions relative to Study 1. Previous research suggests that experiencing negative emotions can lead individuals to engage in actions intended to alleviate these unpleasant states (e.g., the negative state relief model: Baumann, Cialdini & Kenrick, 1981; see also Consedine et al., 2004). Indeed, recall Sweeny et al. (2010) who stated that experiencing undesirable emotions can lead participants to distance themselves from whatever behaviour is perceived as the cause. As the vignette in Study 1 contained information about chlamydia testing and the emotions associated with discovering one has chlamydia, it is possible that participants associated their negative emotional

experience with the discovery of chlamydia following the test rather than with the act of contracting it.[12] As a consequence, avoiding chlamydia testing may have been seen a viable method of avoiding these emotions. This is particularly likely for emotional perspective-takers as they should have been more focused on such emotions when engaging in perspective-taking and subsequently considering their own behaviour. Removing the specific mention of chlamydia testing (and associated worry by the narrative target) from Study 2 might have dampened these negative emotion regulation strategies among participants in the emotional perspective-taking condition. Further research into the role of negative emotions and avoidance in influencing intended health behaviour would be needed to further examine this possibility.

Another potential explanation for this null effect concerns the reference to chlamydia testing being "really quick and easy" in the Study 1 campaign. Given the non-emotive, behavioural focus of the cognitive perspective-taking instructions (i.e., asking participants to focus on a typical day as Sam) it seems plausible that participants in this condition may consider the behaviours implicated in the narrative campaign more extensively than participants in the emotional perspective-taking condition. In light of the positive relationship between perceived ease (or efficacy) of engaging in a behaviour and subsequent behavioural intentions (e.g., Bandura, 1977; 1998), it seems logical that any effects on participants intentions to get tested for chlamydia would be dampened following the removal of the explicit, ease of chlamydia testing information from the Study 2 campaign. This potential for cognitive perspective-taking to influence health-related outcomes via behavioural modelling or increases in self efficacy is explored in greater detail in Chapter 5.

---

[12] Specifically, the vignette stated that the protagonist "felt so stupid for that one-night stand, and felt even worse when [they] had to call the other student and tell them to get tested too"

Despite the absence of consistent effects on intentions, previous literature emphasises the importance of perceived norms for enacting positive behaviour change. Traditionally, according to the theory of planned behaviour (TPB), perceiving supportive norms has been associated with stronger intentions to engage in the particular behaviour being supported (e.g., Ajzen, 1991; see also the integrative model of Fishbein, 2000). Similarly, Bandura (1998) suggested that, in order to maximise social acceptance, individuals tailor their behaviour to fit with group norms (see also Kelly et al., 1997). More recent research concerning social group norms also suggests that group norms can have a particularly strong impact on the intentions of those who identify highly with the group (e.g., Terry & Hogg, 1996; Louis, Davies, Smith & Terry, 2007). Thus, healthy group norms can have important implications for indirectly influencing future behaviour. From this angle then, the observed effects on normative perceptions are no less important and interesting than direct effects on intentions.

Finally, inconsistencies in the cognitive and emotional perspective-taking instructions used in these Studies were noted upon completion. First, it was noted that although the emotional perspective-taking instructions encouraged participants to focus on *the event* detailed in the narrative (i.e., "try to imagine how you would feel if you were Sam"), the cognitive perspective-taking instructions simply asked participants to imagine *a day in the life* of the target with no reference to the event (i.e., "go through a typical day in their shoes"). This disparity is also reflected in the timing and length of the perspective-taking instructions; the emotional perspective-taking instructions were longer and explicitly encouraged participants to perspective-take "as [they] read the account" (i.e., while focusing on the narrative campaign), whereas the cognitive perspective-taking instructions were shorter and encouraged perspective-taking "when writing [the] paragraph" (i.e., after reading the narrative campaign). These different foci

are reflected in the following example responses given for the paragraph writing task

across conditions in Study 1:

> "Life is harder now because I feel very ashamed about what I've done, so
>
> I wake up with a sinking feeling. I spend the day worried about
>
> symptoms and then wondering when I can do something about it"
>
> Participant 18, Study 1, emotional perspective-taking condition

> "Got up about 9am. Had breakfast. Lounged around for a while. Went to
>
> a lecture. Had lunch with some friends at uni cafe. Went to a seminar.
>
> Had dinner. Got ready to go out with some friends. Went out clubbing.
>
> Got a taxi home at 2am."
>
> Participant 20, Study 1, cognitive perspective-taking condition

On the basis of the research suggesting a positive, persuasive effect of greater

engagement with a narrative campaign (e.g., Green & Brock, 2000; see also Hinyard

and Kreuter, 2007), we might have expected to see the opposite pattern of effects to that

observed across Studies 1 and 2 if differences in engagement across condition were

responsible for the effects. However, recent research has suggested that an anticipated

need to engage in undesirable action following the receipt of health information (i.e., the

need to have a tooth removed following a dental check-up) is one motivator for

information avoidance (Sweeny et al., 2010). Thus, it is possible that the greater

engagement with the narrative campaign (or event) in the emotional perspective-taking

condition may have led participants to anticipate the unwanted consequences of testing

positive for chlamydia (i.e., having to contact the other individual, experiencing social

censure or stigma) and so distance themselves from the behaviour, whereas participants

in the cognitive perspective-taking condition may have been less focused on these avoidance-inducing experiences by virtue of a reduced engagement with the narrative campaign.

Second, although it was our intention to activate self-focused perspective-taking across conditions, it is possible that the instruction to "write from the individual's perspective" in the cognitive perspective-taking condition may have more ambiguously elicited other-focused perspective-taking than the explicitly self-focused emotional perspective-taking instructions (with their emphasis on how "you *yourself* would feel"). Although previous research has suggested that the effects of emotional perspective-taking may be contingent upon focus (Batson et al., 1997c), this is not the case for cognitive perspective-taking (Davis et al., 1996; Galinsky & Moskowitz, 2000). Thus, we would not expect the effects to differ with a more explicit emphasis on self-focused perspective-taking in the cognitive condition. Nevertheless, the potential for perspective-taking focus to moderate the effects of perspective-taking type is explored in greater detail in Chapter 6 (Study 5).

Overall, despite our best attempts to harmonise the perspective-taking instructions from the cognitive and emotional perspective-taking literatures, there are important differences across our manipulations. In order to ensure that it was the variation in type of perspective-taking and not methodological inconsistencies in their manipulation that were responsible for our effects, further research using a more standardised set of perspective-taking instructions was conducted. This research is presented in the next Chapter (Chapter 5).

Conclusion

The aim of this initial empirical Chapter was to consider possible differences in the health-related outcomes elicited by encouraging cognitive or emotional perspective-taking in response to a narrative campaign. Despite the inconsistent effects on behavioural intentions, the two studies presented in this Chapter were broadly successful in addressing this aim. Taken together, they suggest that cognitive perspective-taking might facilitate health promotion efforts to a greater degree than emotional perspective-taking. However as this research was a first attempt to experimentally examine this idea in the context of narrative health campaigns, further research is required to fill out the picture provided by this Chapter. The question is therefore no longer 'are there differences between cognitive and emotional perspective-taking for health promotion?' but, rather, '*why* do these effects occur?' (i.e., what are the psychological processes behind them?). This question formed the basis for the next phase of research detailed in the following Chapter.

Chapter 5 Establishing mediators of the effects of cognitive and emotional perspective-taking on responses to narrative health campaigns

Across the three theoretical Chapters that began this thesis (Chapters 1-3), I developed the rationale that different forms of perspective-taking elicited in response to narrative health promotion campaigns might help account for the variable effects these display. The two studies presented in Chapter 4 were designed to provide an initial test of this rationale by examining whether cognitive and emotional perspective-taking have different effects on health-related outcomes. Consistent with the rationale, both studies found that manipulations that trigger cognitive perspective-taking had a different effect on health-relevant outcomes than those that trigger more emotional perspective-taking. Specifically, participants given cognitive perspective-taking instructions (i.e., "write a short paragraph about 'a day in the life' of [the target] […] as if you had gone through a typical day in their life as them") in relation to a fictional narrative of a student who had contracted chlamydia perceived lower normative acceptability of unsafe sex and greater intentions to get tested for chlamydia than participants given emotional perspective-taking instructions (i.e., "imagine how you *yourself* would feel if you were [the target] […] you should concentrate on the way *you* would feel under those circumstances"). A follow up study including a control condition provided some evidence that these effects were driven by the superiority of the cognitive perspective taking condition, rather than the inferiority of the emotional perspective-taking condition. This suggests that there may be something about cognitive perspective-taking that enhances the effectiveness of narrative messages in shaping individual orientations to health.

Notwithstanding these promising findings, as discussed in Chapter 1 and the previous Chapter, perspective-taking may be a "natural" human tendency in response to

contemplating the misfortune of others (as per Davis et al., 2004). This raises questions about the status of Study 2's no-instruction condition (which also presented the narrative campaign) as a "pure" control, and any conclusions about the relative direction of the effects based on comparisons with this control. Unfortunately, it was not possible to develop a suitable, alternative control condition for Study 3 given the strict time constraints for its design and implementation (i.e., the need to recruit student participants prior to the end of the academic term). Instead, a more appropriate no information control was developed for use in Study 4. Moreover, the Chapter 4 General Discussion revealed inconsistencies across the manipulations of cognitive and emotional perspective-taking in Studies 1 and 2 that could potentially account for the observed effects. As a consequence, it was considered important to further refine and harmonise the manipulations in these studies, in order to test their effects free from these possible confounding factors.

Potential mediators of the perspective-taking – behaviour relationship

In addition to refining the paradigms used to examine perspective-taking effects in the context of health, having found at least some evidence for differences between cognitive and emotional perspective-taking our primary goal was to delve further into the possible processes underlying this effect. Based on Study 1, normative perceptions seemed to be a possible candidate, although direct evidence for this remained elusive across the first two studies. While normative perceptions are an important driver of individual actions (e.g., Fishbein, 2000) it seems likely that alternative processes might be responsible for perspective-taking effects on individual health orientations and outcomes. Given its general importance in shaping behaviour, especially in the context of health, as well as its relationship with emotional responses to health campaigns, self-

efficacy was considered as an alternative potential mediator (e.g., Bandura, 1977, 1998;

Witte, 1992). Indeed, Hinyard & Kreuter (2007) acknowledge the potential for narrative

campaigns to enact behaviour change through an increase in recipients perceived

efficacy via behavioural modelling, a concept central to the experience of efficacy in

Bandura's (e.g., 1977; 1998) social cognitive theory. In this remainder of this section, I

therefore briefly summarise past research on self-efficacy in relation to health behaviour

and consider how feelings of self-efficacy might be affected by different forms of

perspective-taking.

Self-efficacy is defined as "the conviction that one can successfully execute [a]

behaviour required to produce [an] outcome" (Bandura, 1977, p. 193), or as "a sense of

control over one's environment and behaviour" (Schwarzer & Luszczynska, 2007, p. 1).

Self-efficacy occupies a prominent role in several health behaviour theories. For

instance, Bandura (1998) affords self-efficacy a key role in influencing health behaviour

in his social cognitive theory of health promotion. Similarly, Maddux and Rogers

(1982) advocated that self-efficacy be included as the fourth component of protection

motivation theory. Indeed, the role of self-efficacy in influencing health behaviour is so

pervasive in the literature that it is a primary predictor of intentions in the integrative

model explored in Chapter 3 (e.g., Fishbein, 2000). The importance of self-efficacy for

fostering behaviour change is therefore well established.

In addition to its general role in supporting behaviour change, self-efficacy is

likely to interplay with other processes important to the present research, particularly

emotion. According to the Extended Parallel Processing Model (EPPM: Witte, 1992;

see Chapter 3 for a more complete summary) the degree of efficacy perceived following

a fear appeal determines whether danger control (to alleviate the threat) or fear control

(i.e., defensive avoidance) processes are engaged. If an individual perceives insufficient

efficacy to deal with a threat, they are more likely to avoid the issue to alleviate the fear. A recent meta-analysis by Witte and Allen (2000) provides support for this contention. This found that as fear appeals become stronger so do defensive responses, and the negative effects of these on individual responses are exacerbated when there is a weak efficacy message. Furthermore, these defensive responses were negatively correlated with the more adaptive danger control responses, leading the authors to conclude that fear appeals that fail to convince the recipients that the recommended response is effective (i.e., response-efficacy) or that they can enact the response (i.e., self-efficacy) will lead to stronger defensive responding (Witte & Allen, 2000). These effects both complement the role of high efficacy in supporting positive behaviour change (as per Social Cognitive Theory e.g. Bandura, 1977) and further highlight the potential for negative emotions to backfire without sufficient accompanying efficacy. In short, the above research suggests that activating emotional processes, for example via engaging in emotional perspective-taking of another, is likely to backfire under conditions of low efficacy (i.e., a moderated relationship).

In addition to the role of efficacy in moderating the outcomes of emotional processes, research also suggests that negative emotions can themselves reduce efficacy. Recall, for instance, Lench and Levine's (2005) finding that experiencing greater intensity of fear was associated with reduced perceptions of control over a variety of outcomes including health (see also Bandura, 1977; Salovey et al., 2000). Similarly, Salovey and Birnbaum (1989; Study 1) examined the impact of mood induction (happy, sad, or neutral) on cold or flu-sufferers' appraisals of their symptoms, and their perceptions concerning self and response efficacy in relation to health-promoting behaviours. Of particular importance here, the authors found a significant effect on perceived self-efficacy to engage in health promoting behaviours: individuals induced to experience sadness reported weaker perceived self-efficacy than those induced to

remain neutral or experience happiness. This potential for emotional states to influence perceptions of efficacy has also been acknowledged by Bandura in his Social Cognitive Theory. Specifically, he suggests that individuals use their tensions and feelings of stress as evidence of inefficacy concerning a behaviour, and that although positive mood can enhance perceived self-efficacy low mood can diminish it (Bandura, 1998).This relationship between mood or emotions and perceived efficacy are reflected in Pajares' (2002, no page) recommendation that "one way to raise self-efficacy beliefs is to improve physical and emotional well-being *and reduce negative emotional states*" (italics added). Thus, in addition to feelings of efficacy determining how people respond to negative emotions, negative emotions might determine people's feelings of efficacy that in turn shape their behaviour in response (i.e., a mediated relationship).

In summary, while there is a clear and well-established relationship between perceptions of efficacy and intentions to engage in a recommended behaviour, experiencing negative emotions might interplay with perceptions of self-efficacy and together determine the consequences of experiencing such emotional arousal for individual behaviour. Relating these ideas to the patterns observed in the previous studies, it is possible that when emotional perspective-taking was encouraged in Studies 1 and 2, the emotional experience was actually inhibiting participants' perceived ability to engage in chlamydia testing (i.e., their self-efficacy) relative to cognitive perspective-taking. This reduced efficacy could then in turn account for the observed difference in effect on intentions to get tested in Study 1.

While it is possible that emotional perspective-taking could inhibit efficacy, it is also possible that cognitive perspective-taking could enhance perceptions of efficacy. Given the greater action-focus of cognitive perspective-taking (i.e., imagining what you would *do* if you were the target, see Study 3 below), participants given these

instructions are likely to focus on the recommended behaviour and, consequently, may feel more prepared to engage in action (i.e., feel more efficacious). As STD testing is a relatively simple task, albeit one that is associated with negative emotions, it seems intuitive that cognitive perspective-takers adopting a greater action-focus may perceive greater efficacy than those engaging in efficacy-inhibiting emotional perspective-taking. This is consistent with Bandura's (1977; 1998) suggestion that perceived self-efficacy can be enhanced by perceiving a similar individual succeeding in a given behaviour (i.e., vicarious experience), a mechanism identified by Hinyard and Kreuter (2007) as one route through which narrative campaigns may work. To the best of my knowledge, there has been no previous, explicit consideration of the role of cognitive perspective-taking for enhancing efficacy perceptions. However, this suggestion does resonate with research concerning the relationship between cognitive rehearsal and perceived self-efficacy. Maibach and Flora (1993) demonstrated that not only did presenting videos modelling safe sex behaviours increase self-efficacy concerning AIDS prevention over presenting an information video, giving participants cognitive instructions to rehearse these behaviours (i.e., "what would you say, or do, in order to assure that any sex you have is safe sex?", Maibach & Flora, 1993, p. 525) further enhanced perceived self-efficacy over simple modelling. Regardless of the specific direction of this effect, however, the expectation remains the same: perceived self-efficacy represents a plausible mediator of the previously observed effects of perspective-taking type on intentions to get tested.

Summary

The aim of the studies presented in this Chapter was to: a) refine the manipulations used to elicit different types of perspective-taking, and; b) delve deeper

into the processes that might explain the differential effects of cognitive versus emotional perspective-taking. As acknowledged above, there were concerns about the equivalence of the perspective-taking manipulations administered in the previous studies. To address this, the cognitive perspective-taking instructions were altered to encourage a greater focus on the event while preserving the emotional versus cognitive distinction. Findings consistent with Studies 1 and 2 would help to demonstrate that the results are not due to methodological confounds, but rather stem from aspects of perspective-taking itself. In addition, the above review suggests that self-efficacy is both an important determinant of behaviour (e.g., Bandura, 1997; 1998) and something that could be compromised by emotional perspective-taking (i.e., through the experience of negative emotions or mood, e.g., Lench & Levine, 2005; Salovey & Birnbaum, 1989) or potentially enhanced by cognitive perspective-taking (i.e., through vicarious experience, e.g., Bandura, 1977; 1998). Accordingly, self-efficacy was considered a plausible mediating mechanism that might explain the patterns of effect observed in the previous Chapter, a possibility that was tested in the studies in this Chapter.

The studies reported in this Chapter made use of the same research paradigm as Studies 1 and 2. Participants were given instructions that either prompted cognitive or emotional perspective-taking while considering the same health promotion campaign as outlined in Study 2. Following this, a range of socio-cognitive health variables were assessed in these studies, including: intentions, perceived norms and self-efficacy.

Study 3

Study 3 was conducted as a preliminary examination of the potential for self-efficacy to mediate the effects of cognitive and emotional perspective-taking on health-related outcomes. Based on the results of the previous studies, it was hypothesised that:

H1: There would be greater perceptions of unsafe sex as group normative following emotional relative to cognitive perspective-taking.

H2: There would be greater intentions to get tested for chlamydia following cognitive relative to emotional perspective-taking.

Based on the rationale outlined above, it was further hypothesised that:

H3: There would be greater perceived self-efficacy relating to chlamydia testing in the cognitive condition than in the empathy condition.

H4: The previously observed effect of perspective-taking type on behavioural intentions (in Study 1) would be mediated through perceived self-efficacy.

Method

Participants and design

Participants were 79 students at the University of Exeter (31 male, 47 female, one did not report; M age = 20.49, SD = 1.97), randomly assigned to one of two conditions (cognitive perspective-taking or emotional perspective-taking). As in Studies 1-2 all participants were not in a committed, monogamous relationship and had satisfactorily completed the paragraph writing task. The participants were recruited both from around Exeter University campus (n = 47) and online via the Exeter University paid participant pool (n = 32). In order to facilitate participation, participants were offered the chance to win a £20 Amazon voucher for their participation online, and were given sweets and chocolate for their participation offline.

The study was a single factor, questionnaire-based experiment which utilised a between subjects design. The independent variable was the type of perspective-taking

instruction provided, cognitive ($n = 37$) versus emotional ($n = 42$). The dependent

variables were the same as in previous studies (measures of injunctive and descriptive

norms in relation to unsafe sex, and intentions to get tested for chlamydia) with further

measures of self and response efficacy relating to chlamydia testing. Measures of

condom use intentions were omitted from this study amidst concerns that the variables

may suffer from ceiling effects (i.e., all values for condom use intentions were above

5.87 on a 7 point scale across Studies 1 and 2). As a consequence, the primary

behavioural outcome was participants' intentions to get tested for chlamydia in the

event that they did engage in unprotected sex.

Materials and procedure

Participants were either sent an email advertising the study or were approached

on Exeter university campus and asked to take part in a study examining the effect of

reading style on responses to health campaigns. Participants were informed that they did

not have to complete the questionnaire and that they could withdraw themselves or their

data at any time. If the individuals agreed to take part they were either given or were

linked to the questionnaire pack (depending on the response format).

Manipulations and vignette. The vignette was similar to that used in Study 2

and consisted of a fictional poster from the point of view of either a male or female

university student (depending on the participant's gender) who had a one night stand

and contracted chlamydia. The only change made to the vignette was the removal of a

phrase that could have implied an emotional response, consistent with the changes made

in Study 2 to further avoid priming emotions across perspective-taking conditions.

Specifically, the sentence reading "As if that weren't bad enough, the next day I had to

phone up the person I'd slept with and tell them" was modified and incorporated into

the previous sentence to leave "…I ended up getting Chlamydia and had to phone up the person I'd slept with and tell them".

The vignette also included the same factual information concerning the symptoms and consequences of chlamydia. The key change in this study was the content of the perspective-taking instructions. The emotional perspective-taking instructions were the same as in previous studies. Specifically, participants were asked to imagine "how you *yourself* would feel if you were the person in the poster […] you should concentrate on the way *you* would feel under those circumstances" when reading the narrative. However, the cognitive perspective-taking instructions were altered to more closely parallel the emotional instructions. Accordingly, participants were asked to imagine "what you *yourself* would do if you were the person in the poster […] you should concentrate on what *you* would do under those circumstances" when reading the narrative. For the paragraph writing task, participants in the cognitive perspective-taking condition were asked to "try to imagine what you would do if you were Sam" when writing their paragraph, whereas the emotional perspective-taking instructions were shortened to ask participants to "try to imagine how you would feel if you were Sam" without the subsequent "about what has happened and how it would have affected your life" to ensure consistency with the cognitive instruction. In this way we tried to remove the asymmetry in focus on the event versus broader life of the person that was present in the previous manipulations to make the cognitive and emotional perspective-taking instructions as equivalent as possible. Given the extensive modifications made to the cognitive perspective-taking instructions, these are replicated in full in Appendix C.

Factor analysis strategy. As in Studies 1 and 2, in the Studies contained in this Chapter Principal Components Analysis (PCA) with direct oblimin rotation was used on new scales and those for which overlap was expected. Factors were extracted if their

eigenvalues = 1 and item loadings were interpreted as substantive if their value was >.4 (as per Field, 2005).

Measures. As in previous studies, the questionnaire included measures concerning perspective-taking responses, and socio-cognitive predictors of individual behaviour. All items were assessed on 7-point likert scales.

The 'perspective-taking response' measures of ease of perspective-taking (4 items, $\alpha = .89$), and empathy (3 items, $\alpha = .81$) were the same as those used in Study 2. As in Study 2, the ease of perspective-taking items loaded as a single factor.

The 'socio cognitive predictors of individual behaviour' included the injunctive and descriptive norm items from Study 2. As in Study 2, the descriptive and injunctive norms were subjected to factor analysis which revealed a single factor solution. Accordingly the two sets of measures were collapsed into a single social norms index (5 items, $\alpha = .84$).

The test intentions measures were also the same as in Study 2. In addition to the basic set of measures, we also included a variety of measures of efficacy in the questionnaire. Specifically, measures of self- and response-efficacy in relation to chlamydia testing.

Test self-efficacy and response-efficacy. A 4-item scale to assess feelings of self-efficacy concerning chlamydia testing was adapted from the Preaction Breast Self-Examination (BSE) self-efficacy scale (Luszczynska & Schwarzer 2003, cited in Schwarzer & Luszczynska, 2007). This scale involved asking participants to assess their perceived ease of engaging in the target behaviour in light of three barriers. In the context of chlamydia testing, we replaced the barrier items with salient barriers to STD testing identified by Tilson et al. (2004). Specifically, participants were asked the extent

to which they agreed "I could get tested for chlamydia…" "… even if I had to attend an STD testing clinic", "…even if I would have to wait in a queue to get tested", "…even if I would have to overcome my different habit of non-testing"; 1 *definitely not*, to 7 *exactly true*. The final item on the BSE assessed participant's self-reported likelihood of rescheduling a breast self-exam. This item was modified for the context of sexual health ("Imagine that you make an appointment for a chlamydia test, do you think that you will procrastinate and reschedule it?"; 1 *definitely not*, 7 *exactly true*) and was reverse-coded. To these 4 items, a further 2 original items were added: "I feel confident that I would know where to go to get tested for chlamydia" and "I feel confident that I would know what to ask for when getting tested for chlamydia";1 *strongly disagree*, to 7 *strongly agree*.

A further two-item chlamydia testing response-efficacy scale (adapted from Lewis, Watson & White, 2010) asked participants to report both the usefulness and effectiveness of chlamydia tests ("chlamydia tests are effective in identifying chlamydia infection" and "chlamydia tests are useful for diagnosing chlamydia infection"; 1 *strongly disagree,* to 7 *strongly agree*).

Factor analysis was conducted to examine the independence of the efficacy and intention constructs (Table 9). This revealed three factors: the reverse-coded self-efficacy item loaded more strongly with the intentions items than with the other self-efficacy items, while the remaining self- and response-efficacy items loaded as independent factors. The latter two factors made clear conceptual sense and so were included in the analysis (self-efficacy, 5 items α = .82; response-efficacy, 2 items, α = .83). Although the intentions and efficacy item loadings were less clear, the efficacy item loaded highly onto this factor (.68) and the resulting scale had acceptable reliability (α = .79). Further examination of the efficacy item reveals that it seemed to focus more

explicitly on asking participants about their future intentions rather than their perceived

self-efficacy concerning the ease of getting tested. In other words, it more closely

reflects the intentions items both conceptually and in terms of factor loading. As a result

this item was left in the final intentions measure.

Table 9 *Pattern matrix representing item loadings on all efficacy and intentions factors (all loadings > .4) (Study 3)*

	1 (Self-efficacy)	2 (Response-efficacy)	3 (Intentions)
"I feel confident that I would know what to ask for when getting tested for chlamydia"	.53	-	-
"I feel confident that I would know where to go to get tested for chlamydia"	.74	-	-
"…even if I had to attend an STD clinic"	.92	-	-
"…even if I had to wait in a queue to get tested"	.90	-	-
"…even if I would have to overcome my different habit of non-testing"	.65	-	-
"Imagine that you make an appointment for a chlamydia test, do you think that you will procrastinate and reschedule it?" (R)	-	-	-.68
"Chlamydia tests are effective in identifying chlamydia infection"	-	.92	-
"Chlamydia tests are useful for diagnosing chlamydia infection"	-	.91	-
"If I did have unprotected sex I would get tested for chlamydia"	-	-	-.87
"If I did not use a condom, I would get tested for chlamydia"	-	-	-.92

Finally, demographic items were also included as in previous studies. On

completion of the questionnaire, participants were fully debriefed and were given the

chance to ask any questions.

Results

One participant was identified as an outlier on the test intentions response-efficacy scale for having values of +/- 3SDs from the standardised score on this variable. As per Field (2005), this scale was reverse coded (to correct negative skew) and transformed. All 3 transformations successfully corrected the outlier. For consistency across studies, the reciprocal transformation was used below with the analysis on the untransformed variable reported in footnotes where required.

Manipulation checks

Chi-square analyses of whether participants used emotional words in the paragraphs were again conducted alongside t-tests comparing the number of emotional words used between perspective-taking conditions. As in Studies 1 and 2, these manipulation checks were coded by both the primary researcher and an independent coder who was blind to condition for both studies in this Chapter. As expected, there were significant associations between the use of emotional words and perspective-taking type for both coders, coder 1 = $\chi^2(1) = 5.30$, $p = .02$, OR = 2.94; coder 2 = $\chi^2(1) = 4.37$, $p = .04$, OR = 2.63. Participants given emotional perspective-taking instructions were more likely to use emotional words than participants given cognitive perspective-taking instructions (Tables 10 & 11). Similarly, participants given emotional perspective-taking instructions used more emotional words than participants given cognitive perspective-taking instructions, coder 1 = $t(54.12) = -4.37$, $p < .001$, $d = 0.96$, equal variances not assumed; coder 2 = $t(56.68) = -4.14$, $p < .001$, $d = 0.92$, equal variances not assumed (inter-coder correlation = $r = .89$, $p < .01$) (Table 12).

Furthermore, as expected, there were no significant effects of perspective-taking type on either ease of perspective-taking, $t(66.79) = -0.07$, $p = .94$, $d = 0.02$ (equal

variances not assumed) or on empathy experienced, $t(74) = -0.19$, $p = .85$, $d = 0.05$. As

in Study 1, while there were no significant differences in the empathy elicited or the

ease of perspective-taking across conditions, the emotional perspective-taking

instructions appeared to elicit greater emotional engagement than the cognitive

instructions as demonstrated by the use of emotional words in the paragraph writing

task. As a result the manipulation was deemed successful.

Table 10 Contingency table for the emotional perspective-taking manipulation check,
coder 1 (Study 3)

		Perspective-taking condition		
		Cognitive	Emotional	Total
Emotional words used?	Yes	17	30	47
	No	20	12	32
	Total	37	42	79

Table 11. Contingency table for the emotional perspective-taking manipulation check,
coder 2 (Study 3)

		Perspective-taking condition		
		Cognitive	Emotional	Total
Emotional words used?	Yes	16	28	44
	No	21	14	35
	Total	37	42	79

Main analysis

The means and standard deviations for all variables are presented in Table 12

below. Comparisons between conditions revealed no significant effects of perspective-

taking type on perceived social norms concerning of unsafe sex, $t(63.36) = 0.26$, $p = $

.79, $d = 0.06$ (equal variances not assumed), or test response-efficacy, $t(75) = -0.53$, $p =$ .60, $d = 0.14$.[13] As a result, H1 was not supported.

There was also no significant effect of perspective-taking type on intentions to get tested for chlamydia, $t(77) = 1.51$, $p = .14$, $d = 0.34$. Although the direction of means was consistent with the effects on intentions in Study 1, the effect was not significant and so no support can be drawn for H2. Finally, there was a marginally significant difference between cognitive and emotional perspective-taking on perceived self-efficacy concerning chlamydia testing, $t(76) = 1.89$, $p = .06$, $d = 0.42$. In support of H3, there was a stronger perception of self-efficacy among participants given the cognitive perspective-taking instruction compared to those given the emotional instruction.

---

[13] The t-test for the untransformed variable was also non-significant, $t(75) = -.81$, $p = .42$, $d = 0.18$.

Table 12 Means and standard deviations for the effect of perspective-taking type on all manipulation checks and dependent variables. Superscript used to indicate marginally significant differences (Study 3)

	Cognitive		Emotional	
	Mean	SD	Mean	SD
Emotional words (coder 1)	0.65[a]	0.82	2.21[a]	2.15
Emotional words (coder 2)	0.59[a]	0.76	1.86[a]	1.80
Ease of perspective-taking	4.18	1.61	4.21	1.23
Empathy experienced	3.91	1.56	3.98	1.31
Social norms	3.73	1.47	3.66	1.03
Test self-efficacy	5.89[a]	1.12	5.38[a]	1.31
Test response-efficacy	6.19	0.98	6.35	0.74
Reciprocally transformed test response-efficacy	0.69	0.29	0.73	0.28
Test intentions	5.58	1.48	5.05	1.62

Although there was no significant effect on intentions, the primary outcome variable among those considered, a direct effect is not a necessary requirement for testing indirect effects (see Hayes, 2009). Given the parallel direction of means for the effect of perspective-taking type on feelings of self-efficacy and intentions, mediation between these variables was still considered a possibility, consistent with H4. To test this possibility a bootstrapping analysis was conducted (Preacher & Hayes, 2008). This analysis revealed a significant indirect effect whereby self-efficacy mediated the effect of perspective-taking type on intentions to get tested for chlamydia, 95% CI [.0194, .7871]. In short, participants given cognitive perspective-taking instructions reported greater feelings of self-efficacy concerning chlamydia testing and these indirectly

increased their intentions to get tested for chlamydia compared to participants given emotional perspective-taking instructions (Figure 9). This pattern provides support for H4.
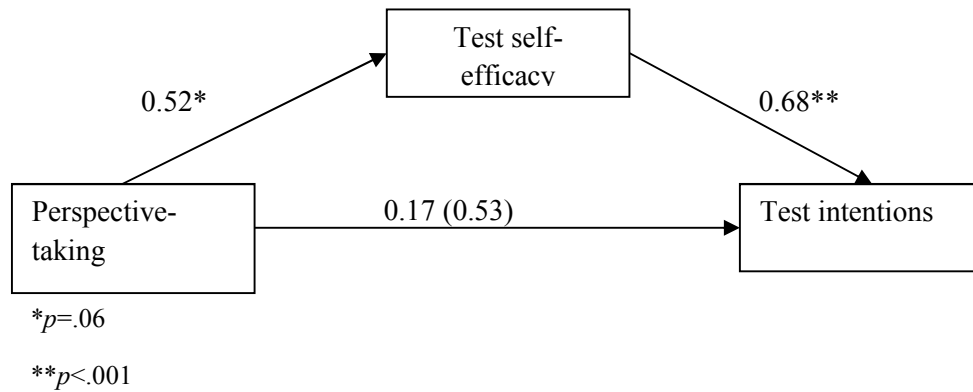
Figure 9 Indirect effect of perspective-taking type on test intentions (Study 3). Note: this figure reports unstandardised coefficients, Emotional = 0; Cognitive = 1 (Study 3).

Summary. No significant effects of perspective-taking type were found on social norms, chlamydia testing response-efficacy, or intentions to get tested for chlamydia. There was, however, a marginally significant main effect on self-efficacy concerning chlamydia test intentions. Specifically, cognitive perspective-takers perceived greater self-efficacy concerning chlamydia testing than emotional perspective-takers. This effect was consistent both with H3 and the effects on other health related outcomes (i.e., norms and intentions) in Studies 1 and 2. Finally, a significant indirect effect on intentions to get tested via perceived self-efficacy was observed: cognitive perspective-taking led to greater perceived self-efficacy concerning testing, which in turn increased participants' intentions to get tested in future. This indirect effect is consistent with the mediational role of efficacy proposed in the rationale (H4). Overall, although not strong, the direction of effects in this study was consistent with the broader pattern observed across the studies thus far: engaging

cognitive perspective-taking in response to a narrative health campaign seems more beneficial for promoting positive health-related outcomes than engaging emotional perspective-taking

.

Discussion

This study aimed to explore two research questions. Firstly it aimed to exclude an alternative explanation for the previous findings based on potential asymmetries across the previous perspective-taking manipulations. After harmonising the manipulations to remove these potential confounds, it was hypothesised that the previously observed effects on perceived social norms concerning unsafe sex and intentions to get tested for chlamydia would still be replicated. Our findings, however, demonstrate that after making the perspective-taking instructions more equivalent, the previous effects on perceived norms concerning unsafe sex and test intentions were not replicated. Thus it remains possible that the asymmetries in event focus, self-other focus, instruction length, or the timing of participants' perspective-taking (as discussed in the General Discussion of Chapter 4) may have contributed to the effects observed across Studies 1 and 2. However, notwithstanding this possibility, there was a marginal effect on feelings of self-efficacy about getting tested for chlamydia, reflecting the predicted pattern: efficacy was higher in the cognitive relative to emotional perspective-taking condition. Moreover, there was an indirect effect on intentions via self-efficacy, consistent with H4. This pattern of effects supported the predictive role of self-efficacy for influencing behavioural intentions (e.g., Fishbein, 2000), and the role of efficacy as a mechanism in the success of narrative health campaigns (Hinyard & Kreuter, 2007). Thus, there was some consistency between this study and the results presented in the previous Chapter in that cognitive perspective-taking was superior to emotional perspective-taking, albeit on different measures.

The suggestive nature of these findings makes replication important before firmer conclusions are drawn. In addition, this study did not include a control condition, meaning that the precise location of the apparent self-efficacy effect remains in question. That is, does cognitive perspective-taking increase the perception of self-efficacy (e.g., through a focus on the recommended behaviour, Maibach & Flora, 1993; see also vicarious modelling, Bandura, 1977; 1998), or does emotional perspective-taking reduce it (as predicted based on past research, e.g., Lench & Levine, 2005; Salovey & Birnbaum, 1989)? For both these reasons, a follow up study including a control condition was conducted.

Study 4

The aim of Study 4 was to replicate the patterns observed in Study 3, with the inclusion of a control condition to help determine the precise nature of the effects on perceived self-efficacy. Given the previous findings suggesting the general superiority of cognitive perspective-taking relative to emotional perspective-taking (i.e., Studies 1-3) or a no-instruction condition (i.e., Study 2), it was hypothesised that:

H1: There would be greater perceived self-efficacy about chlamydia testing for participants given cognitive perspective-taking instructions than for participants given either emotional perspective-taking instructions or no information (control).

H2: There would be stronger intentions to engage in chlamydia testing in future for participants in the cognitive perspective-taking condition than for participants in the emotional perspective-taking or control conditions.

H3: The effect of perspective-taking type on intentions to get tested for

chlamydia would be mediated by perceived self-efficacy concerning chlamydia

testing.

Although these hypotheses suggest positive effects of cognitive-perspective-

taking rather than negative effects of emotional perspective-taking, a measure of

emotion experienced when thinking about chlamydia testing was included to test the

possibility that reduced perceptions of self-efficacy in the emotional perspective-taking

condition might be due to the increased experience of negative emotions under these

conditions (as per Lench & Levine, 2005; Salovey & Birnbaum, 1989). On this

measure, it was expected that:

H4: There would be higher reported experience of negative emotions concerning

chlamydia testing in the emotional perspective-taking condition than in the

cognitive perspective-taking condition or control, and;

H5: These negative emotions would mediate the effect of perspective-taking

type on perceived self-efficacy.

Method

Participants and design

Participants were 87 students from the University of Exeter (19 men, 68 women;

M age = 19.81, *SD* = 4.32) recruited online via either the first year psychology mailing

list (*n* = 81), or the University of Exeter paid participant pool (*n* = 6). As before all

participants were not in a committed monogamous relationship, and all had completed

the paragraph writing task.[14] Individuals recruited via the first year mailing list were offered course credit for participation whereas those recruited from the paid participant pool were offered a chance to win a £20 Amazon voucher for their participation.

The design was very similar to Study 3 in which a single factor was manipulated between participants. The key independent variable was perspective-taking; however unlike the previous study a no information control condition was included alongside the experimental conditions (cognitive $n = 27$; emotional $n = 28$; control $n = 32$). To avoid the possibility that this control condition might elicit perspective-taking (see Chapter 4 Study 2 Discussion & General Discussion, & Davis et al., 2004), the control simply presented the dependent variables, with no perspective-taking instruction and no vignette. Most dependent variables were the same as in Study 3, namely: ease of perspective-taking, experienced empathy, self-efficacy concerning chlamydia testing, and intentions to get tested for chlamydia. A scale assessing participants' feelings when thinking about chlamydia testing was included as an additional dependent variable.

Materials and procedure

Participants were sent an email inviting them to take part in a study "examining people's understanding of sexual health information". They were informed that to participate they must not be in a committed, monogamous relationship. If an individual agreed to participate they were asked to click the link to be redirected to a website that randomly allocated them to a condition and presented them with the relevant questionnaire.

---

[14] As participants in the control condition did not receive a vignette, perspective-taking instructions, or a paragraph writing task, this requirement was not relevant for them.

Manipulations and vignette. The vignette and perspective-taking instructions were the same as those used in Study 3 with one change: the factual information concerning chlamydia was moved from the vignette to the consent form with a more detailed quote adapted from the NHS Choices website (2011e) presented rather than the summary used in Study 3, as poster space was no longer an issue. This quote read as follows:

> "Chlamydia is the most common sexually transmitted infection (STI)
>
> in the UK...around 50% of men and 70-80% of women who get the
>
> chlamydia infection will have no symptoms...undiagnosed chlamydia
>
> can lead to more serious long-term health problems and infertilty."

This was done so that participants in the control condition (who did not receive the vignette) still received the factual information. The perspective-taking and associated paragraph writing instructions for both experimental conditions were the same as in Study 3. Participants in the control condition simply completed the consent form and dependent variables.

Measures. As in all previous studies, participants were provided with a range of scales assessing both perspective-taking responses and socio-cognitive predictors of individual behaviour. All items were assessed on 7 point likert scales.

The perspective-taking response scales were the same as those used in Study 3, with ease of perspective-taking again loading as a single factor (ease of perspective-taking, 4 items, $\alpha = .85$; empathy experienced, 3 items, $\alpha = .67$). As the control condition did not present the narrative health campaign these items were not included in this version of the questionnaire.

Socio-cognitive predictors of individual behaviour were also taken from Study 3. These included items assessing: injunctive norms, descriptive norms, self-efficacy concerning chlamydia testing, and intentions to get tested for chlamydia. As in Study 3, factor analyses were performed to determine the independence of the norm measures (descriptive versus injunctive), and the independence of the self-efficacy and intention measures. The analysis on the norms items revealed a single factor onto which all items loaded. Accordingly, a single, averaged index of perceived social norms was created (5 items; alpha = .85).

The analysis on the self-efficacy and intention measures revealed a 3 factor solution (Table 13). The intention items loaded on a single factor (and were thus combined; 2 items, α = .98), items that referred to specific barriers to behaviour loaded onto a second factor (e.g. "I could get tested for chlamydia…even if I had to attend an STD testing clinic, named "barrier" self-efficacy; 3 items, α = .89), and the remaining, more general self-efficacy items loaded onto a third factor (e.g., "I feel confident that I would know where to go to get tested for chlamydia", named "general" self-efficacy). However, this third factor included the reverse-coded item which had previously loaded with intentions in Study 3. As a result, this item was excluded from further analysis leaving a 2 item "general" self-efficacy scale (2 items, α = .87). This item was also replaced with a less problematic self-efficacy item in future studies.

Table 13 *Pattern matrix representing item loadings on all efficacy and intentions factors (all loadings >.4) (Study 4)*

	1 ("Barrier" self-efficacy)	2 (Intentions)	3 ("General self-efficacy)
"I feel confident that I would know what to ask for when getting tested for chlamydia"	-	-	.87
"I feel confident that I would know where to go to get tested for chlamydia"	-	-	.85
"…even if I had to attend an STD clinic"	.86	-	-
"…even if I had to wait in a queue to get tested"	.94	-	-
"…even if I would have to overcome my different habit of non-testing"	.87	-	-
"Imagine that you make an appointment for a chlamydia test, do you think that you will procrastinate and reschedule it?" (R)	-	-	.79
"If I did have unprotected sex I would get tested for chlamydia"	-	.95	-
"If I did not use a condom, I would get tested for chlamydia"	-	.99	-

Finally, a new measure was created to measure participants' feelings about getting tested for chlamydia. Participants were asked "when you think about getting tested for chlamydia, how do you feel?" and were then asked to rate each of 14 emotions: dirty, regretful, disappointed, angry, annoyed, embarrassed, guilty, apprehensive, ashamed, depressed, worried, stupid, unconcerned (reverse coded), and indifferent (reverse coded); 1 not at all, to 7 very much. These emotion items include some of the most commonly occurring adjectives used by participants in the paragraph writing task in the previous studies. As this was a new scale, factor analysis was conducted to examine the loadings (Table 14). All items, excluding the two reverse-scored items, loaded together to form one negative emotional response scale (12 items, $\alpha = .95$). The remaining two items loaded together to form a concerned response scale (2 items, $\alpha = .66$). Both scales were included in the analysis.

Table 14 *Pattern matrix representing item loadings on both emotion factors (all loadings >.4) (Study 4)*

	1 (Negative emotion)	2 (Concerned emotion)
Dirty	.75	-
Regretful	.76	-
Disappointed	.85	-
Angry	.93	-
Annoyed	.82	-
Embarrassed	.79	-
Guilty	.88	-
Apprehensive	.61	-
Ashamed	.89	-
Depressed	.74	-
Worried	.76	-
Stupid	.78	-
Unconcerned (R)	-	.74
Indifferent (R)	-	.91

Demographic information was collected as before, with the addition of a sexual orientation question ("would you describe yourself as exclusively heterosexual/ straight" - Yes/ No/ Not sure). Following completion of the study, participants were redirected to a debriefing page which provided a full explanation of the study and provided contact details as in previous studies.

Results

One participant in this dataset was identified as an outlier on the "barrier" self-efficacy scale. Consistent with Field (2005) and the previous studies, this scale was reverse coded (to eliminate negative skew) and transformed. All three transformations (logarithmic, square root and reciprocal) were successful in correcting the outlier. In order to keep consistency with the previous studies the reciprocal transformation is

reported in the main text while the effect on the untransformed variable is included in a footnote where applicable.

ANCOVA analyses were conducted to examine the effects of perspective-taking type on all dependent variables. As the narrative campaign included a picture of a heterosexual couple, it was possible that homosexual/ bisexual individuals may have responded differently to it. As only a small number of participants indicated that they were not heterosexual (8 of 87 participants), it was not possible to directly test this. As a consequence, sexual orientation was recoded (to 1 = heterosexual, 0 = not-heterosexual) and included as a covariate in all analyses.

Manipulation checks

The chi-square analyses conducted on the use of emotional words by participants in their paragraphs revealed a significant association between the likelihood of participants using emotional words and perspective-taking type for both coders, coder 1 = $\chi^2(1) = 4.85$, $p = .03$, OR = 4.11; coder 2 = $\chi^2(1) = 6.06$, $p = .01$, OR = 4.8 (Tables 15 & 16). Consistent with previous studies, emotional language was more likely to be used in the emotional perspective-taking condition than the cognitive perspective-taking condition. Similarly, participants in the emotional perspective-taking condition used more emotional words than participants in the cognitive perspective-taking condition, coder 1 = $F(1, 52) = 9.19$, $p = .05$, $\eta^2_p = 0.07$; coder 2 = $F(1, 52) = 6.19$, $p = .02$, $\eta^2_p = 0.11$ (inter-coder correlation = $r = .86$, $p < .001$) (Table 17).

As in Study 3, there were no significant effects of perspective-taking type on ease of perspective-taking, $F(1, 52) = 0.48$, $p = 0.49$, $\eta^2_p = 0.01$, or empathy

experienced, $F(1, 51) = 0.29$, $p = .59$, $\eta^2_p = 0.01$. This suggests that both conditions

involved perspective-taking, and although the emotional condition elicited a stronger

focus on emotions (as revealed by the language used in the paragraphs written) this was

not specifically about empathy. As a result, the broad manipulation of emotional (versus

cognitive) perspective-taking was considered to be a success.

Table 15 *Contingency table for the emotional perspective-taking manipulation check, coder 1 (Study 4)*

| | | Perspective-taking condition | | |
		Cognitive	Emotional	Total
Emotional words used?	Yes	16	24	40
	No	11	4	15
	Total	27	28	55

Table 16 *Contingency table for the emotional perspective-taking manipulation check, coder 2 (Study 4)*

| | | Perspective-taking condition | | |
		Cognitive	Emotional	Total
Emotional words used?	Yes	15	24	39
	No	12	4	16
	Total	27	28	55

Main Analysis

Marginal means and standard errors controlling for sexual orientation are

reported in Table 17. ANCOVAs revealed that there were no significant effects of

perspective-taking type on either perceived social norms concerning unsafe sex, $F(2, 83) = 0.09$, $p = .92$, $\eta^2_p = 0.00$, or intentions to get tested for chlamydia, $F(2, 82) = 0.21$,

$p = .81$, $\eta^2_p = 0.01$. As a consequence, H2 was not supported. There were also no

significant effects of perspective-taking type on the emotions experienced in relation to

the target behaviour of getting tested: negative emotion, $F(2, 82) = 0.99$, $p = .38$, $\eta^2_p =$

0.02; concerned emotions, $F(2, 82) = 0.18$, $p = .84$, $\eta^2_p = 0.00$. As a result, H4 and H5

were also not supported.

Table 17 *Marginal means and standard errors for the effect of perspective-taking type on all manipulation checks and dependent variables (controlling for sexual orientation). Superscript used to indicate marginally significant and significant effects (Study 4)*

	Cognitive		Emotional		Control	
	Mean	S.E	Mean	S.E	Mean	S.E
Emotional words (coder 1)	1.37[a]	0.29	2.22[a]	0.29	-	-
Emotional words (coder 2)	1.14[a]	0.29	2.19[a]	0.29	-	-
Perspective-taking	3.94	0.27	4.22	0.26	-	-
Empathy	4.44	0.23	4.26	0.23	-	-
Social norms	3.41	0.24	3.51	0.25	3.54	0.23
"General" self-efficacy	4.51	0.39	4.13	0.41	4.65	0.37
"Barrier" self-efficacy	5.98[a]	0.25	5.35[a]	0.25	5.88	0.23
Reciprocally transformed "barrier" self-efficacy	0.70[a]	0.06	0.52[a]	0.06	0.61	0.06
Test intentions	5.79	0.28	5.75	0.28	5.56	0.26
Negative emotions	4.89	0.29	5.09	0.30	4.53	0.27
Concerned emotions	5.30	0.30	5.36	0.31	5.53	0.28

There were also no significant effects of perspective-taking type on "general" self-efficacy, $F(2, 81) = 0.47$, $p = .63$, $\eta^2_p = 0.01$, or "barrier" self-efficacy, $F(2, 82) = 2.08$, $p = .13$, $\eta^2_p = 0.05$. [15] However, in light of the hypothesis-consistent direction of means on the latter measure, and the effects of perspective-taking type observed in Study 3, follow up comparisons were conducted on the "barrier" self-efficacy measure to explore whether the expected (and previously observed) differences between experimental conditions were retained, but possibly masked by the presence of the control condition in the omnibus analysis. These comparisons revealed a significant difference in the "barrier" self-efficacy reported between the cognitive and emotional perspective-taking conditions, $F(1, 82) = 4.14$, $p < .05$, $\eta^2_p = 0.05$, but no differences between either experimental condition and the control, Fs$(1, 82) < 1.23$, $ps > 0.27$, η^2_ps < 0.02. [16] Consistent with Study 3, there were greater perceptions of "barrier" self-efficacy concerning chlamydia testing for participants given cognitive perspective-taking instructions than for participants given emotional perspective-taking instructions. This finding provides partial support for H1.

Given the difference between experimental conditions on perceived "barrier" self-efficacy, possible indirect effects through these on intentions were again considered. Consequently, bootstrapping analysis to test for an effect of perspective-taking type on intentions via "barrier" self-efficacy (controlling for sexual orientation) consistent with H3 was conducted (Preacher & Hayes, 2008). In order to eliminate the effects of the control condition from this analysis, the independent variable was recoded

---

[15] This effect was also non-significant on the untransformed variable ($F(2, 82) = 1.77$, $p = .18$, $\eta^2_p = 0.04$).

[16] A marginally significant difference was found between the cognitive and emotional perspective-taking conditions for the untransformed variable, $F(1, 82) = 3.06$, $p = .08$, $\eta^2_p = 0.04$. No significant differences were found between either experimental condition and the control, Fs$(1, 82) < 2.36$, $ps > .13$, η^2_ps < 0.03.

such that -1 represented emotional perspective-taking, 1 represented cognitive

perspective-taking, and 0 represented the control. This analysis revealed a significant

indirect effect of perspective-taking type on intentions via "barrier" self-efficacy, 95%

CI [.0129, .3787].[17] Similar to Study 3, cognitive perspective-taking (relative to

emotional perspective-taking) had a positive effect on intentions to get tested indirectly

through the effect on perceived self-efficacy (Figure 10).

*p<.05

**p<.01
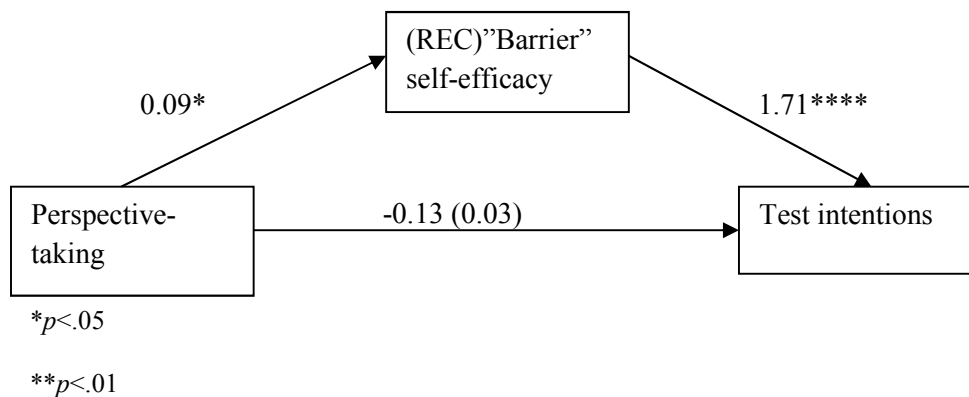
Figure 10 Indirect effect of perspective-taking type on test intentions (including sexual orientation as a covariate) (Study 4). Note: this figure reports unstandardised coefficients, emotional perspective-taking = -1; control = 0; cognitive perspective-taking = 1

Supplementary Analysis

As noted in Chapter 3, previous research has suggested that emotional

experience can have a positive effect on behaviour (e.g., Brown & Basil, 1995; Dunlop

et al., 2008). However to this point we have no evidence of these adaptive effects.

Further, research has suggested that the discrete emotions and the context in which

these are experienced can have more specific effects on behaviour (Consedine &

Moskowitz, 2007). For instance, recall Consedine et al. (2004) who found that feelings

of worry about cancer increased breast cancer screening intentions whereas feelings of

---

[17] This indirect effect was not significant on the untransformed variable using the 95% CI [-.0259, .3292], but was significant using a 90% CI [.0121, .3025].

embarrassment about screening decreased them (see also Moore et al., 2004). As this study included items measuring how participants feel when thinking about STIs, it gave us an opportunity to examine whether the emotions experienced in this context may influence the effectiveness of emotional perspective-taking. Specifically, we examined the moderating effect of emotion elicited (using the concerned and negative emotion measures) on the perspective-taking type – intentions relationship. We expected that experiencing broadly negative emotions (such as worry, guilt and apprehension) when thinking about STI testing might reduce the effectiveness of emotional perspective-taking for health promotion (consistent with the avoidance resulting from the experience of negative emotions, e.g. Sweeny et al., 2010). However, experiencing concern (an intuitively more constructive than negative emotion) about STI testing could have a positive impact on the effectiveness of emotional perspective-taking.

To test this, analyses examining the moderating effect of both emotional scales (concerned and negative) on the effect of perspective-taking type on behavioural intentions were conducted using PROCESS (Hayes, 2013). As for the mediational analysis, the control condition was removed from the analysis by recoding it as 0, with cognitive perspective-taking coded as 1 and emotional perspective-taking coded as -1. Both emotion scales were mean-centred prior to analysis. The addition of the interaction between perspective-taking type and concerned emotion explained a significant increase in variance in intentions to get tested for chlamydia, $R^2 = .32$, $\Delta R^2 = .08$, $F(1, 81) = 7.13$, $p = .01$. However the interaction between perspective-taking and negative emotions was not significant, $R^2 = .13$, $\Delta R^2 = .01$, $F(1, 81) = 0.96$, $p = .33$. Thus only concerned emotion represented a significant moderator. Conditional effects analysis was conducted to deconstruct the interaction (Figure 11).
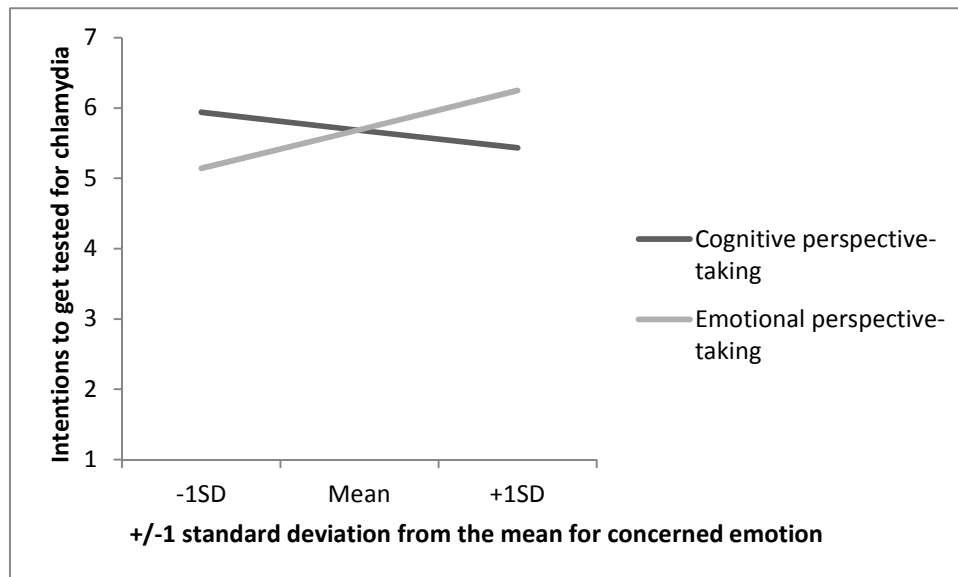
Figure 11 Conditional effects of perspective-taking type on intentions at values of mean-centred concerned emotion (controlling for sexual orientation) (Study 4)

When concern was low, cognitive perspective-taking resulted in marginally greater intentions to get tested for chlamydia than emotional perspective-taking (B = .49, *SE* = .26, *p* = .06 at -1 SD from the mean for concerned emotion). However when concern was high, this effect was reversed: emotional perspective-taking resulted in marginally greater intentions than cognitive perspective-taking (B = -.52, *SE* = .28, *p* = .07 at +1 SD from the mean for concerned emotion). This provides the first tentative support for the suggestion that engaging emotional perspective-taking in response to a narrative campaign can have positive effects on behavioural intentions consistent with the literature (e.g., Brown & Basil, 1995; Dunlop et al., 2008). However these positive effects seem to be contingent on the actual emotions that are being experienced in response to perspective-taking, consistent with the research suggesting differing effects of discrete emotions in specific contexts (e.g., Consedine et al., 2004; Consedine & Moskowitz, 2007; Moore et al., 2004).

Summary. Despite the lack of significant main effects on any dependent variable, planned follow up comparisons again revealed a difference between the two experimental conditions on feelings of self-efficacy. Consistent with Study 3 and H1, cognitive perspective-takers perceived greater self-efficacy than emotional perspective-takers to overcome the barriers that might stand in the way of them getting tested. Furthermore, these feelings of self-efficacy indirectly flowed through to stronger intentions to get tested, consistent with H3. However, the lack of any significant differences between either experimental condition and the control limit any conclusions as to the relative direction of the effects. Finally, the first tentative evidence for a positive effect of emotional perspective-taking was found. Specifically, supplementary analyses suggest that the effects of emotional (versus cognitive) perspective-taking on intentions may depend on the emotions associated with the target behaviour. When getting tested for STIs was associated with a higher degree of concern, emotional perspective-taking increased intentions relative to cognitive perspective-taking. However, when concern was low, the effect was reversed.

Discussion

The aim of Study 4 was to replicate Study 3 with the inclusion of a no information control condition to help determine the precise nature of the effect of perspective-taking type on self-efficacy. In particular, we were interested in examining whether the effect of perspective-taking type on self-efficacy was due to reduced self-efficacy following emotional perspective-taking or increased self-efficacy following cognitive perspective-taking. Although there were no significant omnibus effects on "general" or "barrier" self-efficacy, there was a significant difference between the cognitive and emotional perspective-taking conditions. Participants given cognitive instructions reported greater "barrier" self-efficacy than participants given emotional

instructions, reflecting the same pattern as observed in Study 3. However, the lack of a difference in perceived self-efficacy between both experimental conditions and the control means that no conclusions can be drawn as to the specific direction of effects. That is, this study does not aid our understanding of whether cognitive perspective-taking increases perceived self-efficacy or emotional perspective-taking decreases it. As a result, H1 was only partially supported.

Despite these effects on self-efficacy, there was no direct effect of perspective-taking type on intentions to get tested (and so no support for H2). Nonetheless, an indirect effect of perspective-taking type on intentions via "barrier" self-efficacy was still found, again reflecting the same pattern as Study 3: cognitive perspective-taking led participants to perceive greater self-efficacy concerning chlamydia testing relative to emotional perspective-taking, which in turn increased participants' intentions to get tested. This pattern of effects provided support for H3, and added further weight to the contention that the relative effects of emotional and cognitive perspective-taking in response to a narrative campaign are at least partly due to differences in the self-efficacy elicited. This mediational role of perceived self-efficacy is consistent with the predictive role afforded to efficacy in theories of health behaviour change (e.g., Bandura 1977, 1998; Fishbein, 2000; Maddux and Rogers, 1982), and further supports the status of efficacy as a mechanism through which narrative campaigns positively influence health-related behavioural intentions (e.g., Hinyard & Kreuter, 2007). However, it must be acknowledged that the effects in this and the previous study are generally weak and suggestive, at best. As a consequence, we recommend against over-interpretation of our findings.

Finally, although there were no effects of perspective taking type on emotions experienced about testing (and so no support for H4 & H5 or the proposed suppression

effect of emotional perspective-taking on efficacy, based on Bandura, 1977; 1998; Lench & Levine, 2005; Pajares, 2002; Salovey & Birnbaum, 1989; Salovey et al., 2000), supplementary analyses revealed an interesting interaction between perspective-taking type and emotions. Specifically, the effects of emotional (versus cognitive) perspective taking on intentions to get tested for chlamydia depended on the degree of concern felt in relation to STI testing. When concern was low, cognitive perspective taking was more consequential for intentions – reflecting the general pattern across studies reported so far. However when concern was high, emotional perspective-taking was superior. This finding, although not hypothesised, provides some support for the research suggesting that eliciting emotional responses to a narrative health campaign can have positive effects (e.g., Campbell & Babrow, 2004; Dunlop et al., 2008), but that the positive or negative effects may depend upon the specific emotion and the context in which it is elicited (e.g., Consedine & Moskowitz, 2007; Consedine et al., 2004; Moore et al., 2004). Moreover, the conditional nature of perspective-taking effects, as suggested by this interaction, could help to explain the inconsistent main effects on intentions. Specifically, one reason why weak and inconsistent effects have been observed thus far could be because other factors are necessary to reveal the outcomes of different forms of perspective-taking. This idea is consistent with the rationale that the positive effects of emotional perspective-taking on the success of narrative campaigns may be complex and variable (see Chapter 3). If this is the case, then it would seem important to start considering the moderators (rather than mediators) of perspective taking effects. It is to this issue that we turn in the next Chapter.

General Discussion

This research was conducted to examine two central research questions arising from the previous studies on the effects of cognitive versus emotional perspective-

taking. First, we sought to examine whether the previously observed differences between cognitive and emotional perspective-taking instructions were due to inconsistencies in the instructions used in previous studies (i.e., a methodological artefact rather than a perspective-taking effect). Second, we sought to examine the role of perceived-self efficacy as a mediator of the effects of perspective-taking type on behavioural intentions.

To address the first issue, the focus of the cognitive perspective-taking instructions was altered to more closely mirror the emotional instructions. Although the results suggest that some of the previously observed effects may have been due to an asymmetry in the perspective-taking instructions, other effects emerged (i.e., on self-efficacy) and there continued to be consequences for intentions, albeit indirectly. Despite the weak nature of these effects, the broader consistency of pattern – whereby cognitive perspective-taking resulted in better outcomes than emotional perspective-taking – was consistent with Studies 1 and 2. Thus, although the absence of any effects on intentions or social norms in Studies 3 and 4 do suggest that the results of Studies 1 and 2 may have been due to confounds within the initial manipulation, the effects on perceived-self efficacy (and indirectly on intentions) across Studies 3 and 4 serve to highlight the theoretical importance of exploring different perspective-taking processes in relation to narrative health campaigns.

Although modifying the cognitive perspective-taking instructions was necessary to eliminate methodological confounds, it is important to acknowledge that the revised cognitive perspective-taking instructions did deviate from the established conceptualisation of cognitive perspective-taking. Whereas the instructions used in Studies 3 and 4 focused explicitly on doing, cognitive perspective-taking has typically had a broader conceptualisation than this. For instance, recall Galinsky and colleagues'

(2005, p. 110) definition of perspective-taking as "the process of imagining the world from another's vantage point or imagining oneself in another's shoes". Moreover, Galinsky and colleagues' (2008, p. 380) manipulated cognitive perspective-taking by asking participants to "try to understand what [the target is] thinking". The decision to focus explicitly on behaviour (rather than thoughts) in our cognitive perspective-taking manipulation was taken in an attempt to strengthen the distinction between cognitive and emotional perspective-taking (as a focus on thoughts could also invoke emotions, thus contaminating the cognitive perspective-taking condition). This does, however, mean that our conceptualisation of cognitive perspective-taking does not map exactly on to that used in the previous literature. As a consequence, caution is recommended when generalising these findings beyond the context of these studies.

To address the second issue, both studies included measures of perceived self-efficacy and tested for mediational patterns involving this variable. Consistent with this idea, Study 3 found an indirect effect of perspective-taking on intentions through perceived self-efficacy: cognitive perspective-taking produced stronger feelings of self-efficacy that in turn produced stronger intentions than emotional perspective-taking. This same pattern was apparent in Study 4. Although there was no omnibus effect on self-efficacy, a planned comparison revealed that cognitive and emotional perspective taking conditions again differed in terms of the self-efficacy they produced, which again had an indirect effect on intentions. However, Study 4 failed to shed light on the direction of the effects of perspective-taking on self-efficacy. As a result we were unable to support either the suppressing effect of perspective-taking induced emotion (e.g., Lench & Levine, 2005; Salovey & Birnbaum, 1989), or the enhancing effect of the cognitive perspective-taking instructions on self-efficacy (for example, similar to vicarious experience, e.g., Bandura, 1998; or cognitive rehearsal, e.g., Maibach & Flora, 1993) . Nevertheless, the consistent effects across studies provide support for the

contention that the different effects of cognitive and emotional perspective-taking are at least partly due to differences in the levels of self-efficacy elicited following emotional perspective-taking. This is consistent with the positive relationship between self-efficacy and behavioural intentions outlined in models of health behaviour (e.g., Bandura, 1998; Fishbein, 2000).

At the same time, it is clear that self-efficacy is only part of the story. Indeed, there must be additional processes that are reducing intentions as much as feelings of self-efficacy are increasing these, resulting in the absence of a clear direct effect (as per Hayes, 2009). One alternative process that was briefly considered in Study 4 was the specific emotion aroused in relation to the target behaviour. There was some evidence that emotions, specifically those associated with concern, interact with perspective-taking type and determine whether emotional (under high concern) or cognitive (under low concern) forms of perspective-taking produce stronger intentions. This moderation was consistent with the literature suggesting that different emotions (or at least the contextually specific nature of emotions) can have variable effects on behaviour (e.g., Consedine et al., 2004; Consedine & Moskowitz, 2007; Moore et al., 2004). This significant pattern of moderation, alongside the consistent indirect effects observed across studies, combine to suggest that both cognitive and emotional perspective-taking might have adaptive health consequences but under different conditions. Considering the additional factors that might moderate these perspective-taking effects is the primary goal of the next Chapter.

Conclusion

Overall, the results of the studies contained in this Chapter are somewhat mixed. On the one hand, they replicate the broad pattern of effects observed in Studies 1 and 2

whereby engaging cognitive perspective-taking in response to a narrative health campaign seems to be more beneficial for health promotion than engaging emotional perspective-taking. Given this consistency, it seems clear that the difference in the effects of perspective-taking type represents a real, theoretically-important finding. On the other hand, the search for mediating mechanisms was less conclusive. There was some evidence that self-efficacy indirectly supported intentions, and that this was more likely to be experienced in response to cognitive perspective-taking. However, it appears that other factors may complicate perspective-taking effects. Indeed, it seems likely that multiple paths of influence exist such that both cognitive and emotional perspective-taking can have variable effects on individual health-related outcomes in response to a narrative health campaign. The task for the final phase of research was therefore to identify the conditions under which both cognitive and emotional perspective-taking exert their most positive effects.

Chapter 6 Exploring moderators of the effects of cognitive and emotional perspective-taking on responses to narrative health campaigns

To this point, the research presented in this thesis suggests that adopting the cognitive perspective of targets in narrative health campaigns may lead to more positive, health-relevant outcomes than engaging emotional perspective-taking. Although this general pattern has been observed in one way or another in most of the studies reported in this thesis, the effect is often indirect, and the processes through which it is carried seem variable. For example, Studies 1 and 2 found significant effects of perspective-taking type on perceived social norms and behavioural intentions but no mediation, whereas studies 3 and 4 found an indirect effect of cognitive perspective-taking on behavioural intentions through self-efficacy. This pattern of weak direct effects and suggestive mediation indicates that there might be multiple indirect paths between types of perspective taking and behavioural intentions (as per Hayes, 2009).

The research summarised in the literature review (Chapter 3) speaks to these multiple paths. Specifically, while the studies reported thus far suggest adaptive effects of cognitive perspective-taking relative to more emotional perspective-taking, some research conducted within the health domain has emphasised positive consequences of emotional engagement for health promotion. Recall, for instance, Dunlop and colleagues' (2008) model, which suggests that individuals' emotional responses to a message can positively influence both their perceptions of personal risk and the likelihood of persuasive outcomes. Similarly, recall the positive effects of empathy-arousing messages on perceived risk of HIV (Campbell & Babrow, 2004). In Study 4, the first tentative support for these ideas in the context of the present research was found. When participants reported high concern when thinking about STI testing,

emotional perspective-taking led to marginally greater intentions to get tested for chlamydia than cognitive perspective-taking – an effect inconsistent with the general pattern in Studies 1-4. This suggests that there are circumstances under which emotional perspective-taking might have positive consequences for health promotion.

Up to this point, the research in this thesis has been concerned with identifying possible differences between different forms of perspective-taking – cognitive and emotional – and their effects on health promotion. What has yet to be considered are the moderators of these effects, that is, the conditions under which the relative effects of cognitive and emotional perspective-taking may vary. Specifically, if the health effects of emotional perspective taking are variable, it seems possible that the type and nature of the emotions experienced, as well as the consequences they have, will depend upon *whose* perspective is being taken. For instance, it was shown in Chapter 2 that the positive effects of emotional perspective-taking (or, more specifically, empathy) on helping, and even the intensity of the emotions experienced, can depend upon the group membership of the target (i.e., ingroup vs. outgroup, Tarrant et al., 2009; Stürmer et al., 2005, 2006). Indeed, research has also demonstrated that emotional experiences and emotion-consistent behavioural responses may vary depending on whether a target is categorised as an ingroup or outgroup member (e.g., Dumont, Yzerbyt, Wigboldus and Gordijn, 2003; Yzerbyt, Dumont, Wigboldus, Gordijn, 2003). Thus, to the extent that emotional perspective-takers perceive a narrative target as an ingroup member, this may elicit different emotional and associated behavioural responses than when they see the target as belonging to an outgroup.

As a consequence, the studies reported in the current Chapter examined features of the target that may moderate the effects of cognitive and emotional perspective-taking on responses to health promotion materials. The first study here explored

whether varying participants' perspective-taking focus – whether they considered the perspective of the other or the perspective of themselves in the other's situation – influences the experience of personal distress (Batson et al., 1997c), an emotion with links to avoidance behaviour (e.g., Brown & Locker, 2009), following emotional perspective-taking. Two subsequent studies then explored the moderating effect of perceiving (un)shared group membership with the narrative target (via changes to emotional and behavioural profiles elicited, e.g., Dumont et al., 2003; Tarrant et al., 2009) on the effects of emotional perspective-taking. Finally, in Studies 5-7, greater efforts were made to ensure that all participants were clearly engaging with the task in order to try and strengthen our effects. To achieve this, individuals sitting in groups or clearly talking were avoided in favour of participants sitting either alone or with another individual but not speaking. Closer attention was also paid to whether participants conversed excessively throughout the questionnaire, as this would cast doubt on their engagement with the manipulation. In the small number of cases where participants were deemed not to have been engaging properly with the narrative in these final studies, their data was excluded (see 'Participants & Design' subsections of individual studies for more information).

Study 5

A re-consideration of the perspective-taking instructions provided to participants in our previous studies revealed that they all focused on asking participants how *they* would feel and what *they* would do in the situation depicted in the campaign. Within the general perspective-taking literature, these instructions conform to what is termed 'self-focused' perspective-taking (Batson et al, 1997c). According to Batson and colleagues (1997c), self-focused instructions are only one method of inducing perspective-taking alongside alternative 'other-focused' instructions (e.g., how does the *target* feel or what

would the *target* do). Importantly, Batson and colleagues (1997c) note differences in the effects of engaging in emotional self- or other-focused perspective-taking. Specifically, self-focused emotional perspective-taking can elicit a combination of empathy and personal distress, whereas other-focused emotional perspective-taking can prompt "relatively pure empathy" (Batson et al., 1997c, p.757).

To the extent that self-focused emotional perspective-taking elicits personal distress alongside empathy, it might be expected to dampen any positive effects on individual health behaviour. For example, previous research has demonstrated an effect of presenting distress-inducing messages on defensive avoidance-consistent responses (i.e., reduced risk perceptions, e.g., Brown & Locker, 2009). Similarly, Stanton, Danoff-Burg, Cameron and Ellis (1994) argue that the typically observed adverse consequences of emotion-focused strategies for coping with stress may be due to issues concerning their measurement. Specifically, emotion-focused coping strategies may be perceived as maladaptive to the extent that they are measured using scales which confound the adaptive emotional-approach construct with the maladaptive constructs of, for instance, distress (Stanton et al., 1994). Along these lines, it seems likely that our previously observed differences between cognitive and emotional perspective-taking may have been due, in part, to the focus of the perspective-taking instructions (i.e., on the self) given to participants. Explicitly encouraging participants to engage in self-focused emotional perspective-taking may have led to greater personal distress and consequent avoidance of the recommended health-related outcomes.

The paragraphs written by participants in previous studies provide some support for this idea. For example, consider the paragraph written by one participant in the emotional perspective-taking condition:

"I feel so ashamed! disgusted and disappointed with myself! I have to

walk around pretending everything is normal yet I know that it isn't. How

could she not have known she had it either- It hurts down there even

when I go to the bathroom! And now I have to live with the fact that one

mistake can lead to so much shame!"

Participant 48, Study 3, emotional perspective-taking condition

Consistent with the above example, the negative emotions described by participants in

this condition often related to the consequences of a positive chlamydia test, for

instance shame associated with discovering the infection. To the extent that such self-

focused negative emotions are aroused by the emotional perspective-taking

manipulation, it is possible that participants may avoid further thoughts about testing in

order to defend against this emotional experience (as per Sweeny et al., 2010). Indeed, a

recent review of moral emotions research noted that "shame corresponds with attempts

to deny, hide, or escape the shame-inducing situation" (Tangney, Steuwig, & Mashek,

2007, p. 6). In short, shame, as for distress, is linked with defensive avoidance. The

activation of such negative, distressing emotions might therefore preclude more positive

effects of alternative emotional experiences, like empathy, on health-related outcomes.

Encouraging people to instead engage in other-focused emotional perspective-taking

may intervene in these negative effects and therefore increase the positive health-related

effects of emotional perspective-taking (as per the positive role of empathy for health

promotion, e.g., Campbell & Babrow, 2004; Shen, 2010).

In contrast to the expected moderating effect of perspective-taking focus on

emotional perspective-taking, previous research (as acknowledged in the Chapter 4

General Discussion) suggests that cognitive perspective-taking is not influenced by

changes in focus (Davis et al., 1996; Galinsky & Moskowitz, 2000). For instance, when discussing the specific effects of self and other focused instructions Galinsky & Moskowitz (2000) assert that:

> "although the emotional response does appear to be affected by the type of perspective-taking manipulation (Batson, Early, et al., 1997; Stotland, 1969), the cognitive consequences of perspective-taking appear to be independent of the type of experimental manipulation." (Galinsky & Moskowitz, 2000, p.709).

On the basis of the above rationale, an interaction between perspective-taking type and focus was expected. Since self-focused emotional perspective taking is especially likely to elicit personal distress, which in turn can lead to defensive avoidance, it was hypothesised that:

> **H1:** Self-focused emotional perspective-taking would undermine positive health-related outcomes relative to self-focused cognitive perspective-taking, an effect that would not be present following other-focused perspective-taking.

Furthermore, as empathic concern has been suggested to positively influence health-related outcomes (e.g., Campbell & Babrow, 2004) it was hypothesised that:

> **H2:** Other-focused emotional perspective-taking would facilitate positive health-related outcomes relative to self-focused emotional perspective-taking.

With respect to cognitive perspective-taking, no moderating influence of focus was hypothesised. Said differently, we expected to replicate the previously observed effect whereby cognitive perspective-taking is superior to emotional perspective-taking, when participants were given self-focused instructions. However, when participants

were given other-focused instructions, we expected this difference to be attenuated. This potential moderating effect of focus was also briefly explored in the General Discussion of Chapter 4, when discussing a potential confound of our experimental manipulations. That is, we acknowledged that differences in the perspective-taking instructions used in Studies 1 and 2 may have induced a difference in perspective-taking focus across conditions (i.e., a potentially greater self-focus in the emotional perspective-taking condition relative to an other-focus in the cognitive perspective-taking condition), which could have been responsible for the effects of perspective-taking type. Although this suggestion was not supported by the consistent direction of effects (albeit on different dependent variables) across Studies 3 and 4 (where the perspective-taking instructions were made more equivalent), the current study provided an excellent opportunity to test this alternative explanation explicitly with perspective-taking type and focus un-confounded.

Several methodological amendments were made in this study in order to refine the paradigm for the final programme of research. First, the focus of the study was changed from a broad 'university students' focus to a more specific 'Exeter university student' focus. This was done to better emphasise the identity-relevance of the health risk and preventive behaviour (see Oyserman et al., 2007) and thereby to increase the potential for meaningful perspective-taking as Exeter student identity was considered more meaningful and easier to connect to than the broader, more ambiguous, university student identity. Second, given that chlamydia typically presents without symptoms (NHS Choices, 2011e), it was considered possible that participants in previous studies may have underestimated its severity (as in Darroch et al., 2003). To rectify this, the illness was changed to gonorrhoea, an STI which typically presents with more visible symptoms and so may be perceived as more severe. For instance NHS Choices (2012d) notes that one in 10 men and half of women with gonorrhoea will *not* show symptoms, a

value much lower than the 70-80% of women and 50% of men who do not show symptoms for chlamydia (NHS Choices, 2011e). Third, the study included a broader set of health-relevant outcome measures. Specifically, additional measures of personal distress, perceived risk and attitudes were included. Finally, given the importance afforded to self-other overlap in the typical cognitive perspective-taking literature (e.g., Davis et al., 1996; Galinsky & Moskowitz, 2000), and the role of similarity in the success of narrative campaigns (e.g., Evers et al., 1997; see also Chapters 1-3), the Inclusion of the Other in the Self (IOS, Aron, Aron & Smollan, 1992) scale was included to tentatively explore the role for this process in explaining differences between the cognitive and emotional perspective-taking effects.

Method

Participants and Design

A convenience sample of 91 University of Exeter students (24 male, 66 female; *M* age = 20.24, *SD* = 2.14) was recruited either on the university campus (*n* = 34) or via online mailing lists (*n* = 57). As in previous studies, all participants were not in a committed, monogamous relationship and had completed the paragraph writing task. As a participation incentive, all participants were given the chance to enter a raffle to win a £20 Amazon voucher. In addition, participants that were recruited offline were also given a small chocolate as an extra incentive.

The study was a two-factor between-groups design. The two independent variables were perspective-taking type (cognitive vs. emotional) and perspective-taking focus (self vs. other). Participants we randomly allocated to one of these conditions. The breakdown of participants across the conditions was as follows: cognitive self-focused,

$n = 20$; cognitive other-focused, $n = 21$; emotional self-focused, $n = 24$; emotional other-focused, $n = 26$. The dependent variables were as in Study 4, but with the addition of: IOS, personal distress experienced in response to the vignette, attitudes towards STI testing, and perceived risk of contracting an STI.

Materials and procedure

Participants were approached in person around Exeter University, or online through student mailing lists, and were asked to take part in a study concerning Exeter University students' understanding of sexual health information, in particular relating to safe sex and gonorrhoea infection. Participants were informed that their participation was voluntary and that they could leave at any time. If participants agreed to continue, they clicked a randomiser link to take them to the questionnaire (online), or were given a questionnaire booklet (offline). As in previous studies (Studies 2-4) participants were presented with some factual information taken from the NHS Choices website which, in this study, concerned gonorrhoea infection, symptoms and complications in line with the change in STI (NHS Choices 2012d; 2012e). This information was moved from the consent form (where it was situated in Study 4) to the start of the questionnaire in order to try and ensure that participants paid attention to it. The information read as follows:

> "Gonorrhoea is an STI which is passed easily through unprotected
> vaginal, oral or anal sex. Symptoms can take anything from two weeks to
> several months to appear and may include discharge from the vagina or
> penis and pain when urinating, amongst others.
>
> If left untreated, gonorrhoea can have serious negative health effects. In
> women, gonorrhoea can cause pelvic inflammatory disease (PID) which
> can lead to long-term pelvic pain and infertility. In men, it can cause a

painful testicular/prostate gland infection which can also reduce fertility. In rare cases, untreated gonorrhoea can cause swelling in the joints and tendons, skin lesions and even meningitis in both male and female sufferers."

Enhancing Exeter student identity salience. Several steps were taken to make salient participants' identity as an Exeter University student. Firstly, the University of Exeter logo was placed at the top of each page. Secondly, in the consent form the study was presented as being "about Exeter University students' understanding of sexual health information". Thirdly, several salience items based on a combination of Haslam, Oakes, Reynolds and Turner's (1999) and White, Hogg and Terry's (2002) approaches were included. These involved asking participants to confirm that they were Exeter students, and answering 3 questions listing up to three: similarities with other Exeter students, things they and Exeter students do often, and things they and other Exeter Students do well. Finally, all dependent variables were re-framed to focus specifically on "Exeter University students" rather than university students more generally.

Manipulations and vignette. Participants were told that the study was concerned with what happens when students take the perspective of the individual in a health campaign, and were presented with the vignette. As in previous studies, this vignette was said to be part of a health campaign and provided a first person narrative of one person who had contracted an STI, in this case gonorrhoea. To reinforce the salience information (above), the campaign was presented as part of an NHS South West campaign developed in collaboration with University of Exeter students. Similarly, Sam, the target in the campaign, was presented specifically as an Exeter student.

The manipulation of perspective-taking type was based on that used in Study 3 onwards, with small changes made to the manipulation in an attempt to streamline and refine the instructions. Regardless of these changes, the manipulations retained their relative emphasis on 'what you *yourself* would do' (cognitive perspective-taking) versus 'how you *yourself* would feel' (emotional perspective-taking) emphasis. In addition, the manipulation of perspective-focus was inserted into these instructions by encouraging the participant to either focus on their self or the target during perspective taking. For example, participants in the self-focused condition were asked to "imagine what you yourself would do [how you yourself would feel] if you were the person telling the story" while those in the other-focused conditions were asked to "imagine what [how] the person telling the story (Sam, a 19 year old Exeter University student) will do [feels]". These instructions to imagine what you [the target] would do [feel] were reinforced throughout the manipulation paragraph (e.g., "Remember, while you read the story in this campaign, try to imagine exactly what Sam will [you would] do"). Participants were given one final reminder of the instruction on the following page, immediately preceding the poster (i.e., "whilst reading this campaign, please remember to imagine what you would do [what Sam will do]*"*). Given the small changes made to the perspective-taking manipulation, the inclusion of a focus manipulation, and for the sake of brevity in this method section, the manipulations are presented in Appendix D.

The vignette participants were presented with was similar to that used in Study 4, however the NHS logo in the top right hand corner was replaced with an NHS South West logo, and the specific STI contracted was gonorrhoea, not chlamydia. In all other ways, this vignette was the same as that presented in Study 4. Following exposure to the campaign vignette, participants were asked to write a paragraph "describing a day in the life of Sam", with specific writing instructions depending on experimental condition analogous to the perspective-taking instructions outlined above. For instance "…try to

imagine what you would do [how you would feel] if you were Sam" versus "…try to imagine what Sam will do [how Sam feels]". As in previous Studies, whether participants used emotive or emotional language in their paragraphs was used as a manipulation check for emotional vs. cognitive perspective-taking. In addition, participants' use of first or third person pronouns (FPP/ TPP, e.g., I vs. s/he) were recorded as a manipulation check of perspective-taking focus (i.e., participants given self-focused instructions were expected to use first person pronouns while those given other-focused instructions were expected to use third person pronouns).

Factor analysis strategy. As in previous studies, the factor analysis strategy used in Study 5, and all Studies in this Chapter, involved Principal Components Analysis (PCA) with direct oblimin rotation. Again, factors were extracted using the criteria of eigenvalues = 1 in the first instance, with item loadings considered substantive if > .4 (as per Field, 2005).

Measures. As in previous studies, the remainder of the questionnaire consisted of items assessing the dependent variables. All responses were assessed using 7 point likert scales.

First, participants were asked questions concerning their emotional responses to the campaign. The three empathic concern items used from Study 2 onwards were included alongside an additional three emotion items (disgust, pity, indifference, the latter of which was reverse coded). Participants were also asked to indicate how strongly they experienced each of eight "personal distress" emotions from Batson et al. (1997c: alarmed, grieved, troubled, distressed, upset, disturbed, worried, perturbed; 1 *not at all*, to 7 *very strongly*) while reading the campaign. This increased range of emotions was included in an attempt to capture as much of the breadth of emotional responses to narrative campaigns as possible.

Given the inclusion of these new emotion items, factor analysis was conducted to examine the respective loadings of these emotion items. Although the initial factor analysis revealed a 4 item solution, the direct oblimin rotation failed to converge in 25 iterations. Given this failure, we consulted the eigenvalues and variance percentages, which revealed that although all four loadings had eigenvalues > 1, the first two accounted for a cumulative 58.67% of the variance in the construct, whereas the following two only added a further 15.75% of variance combined (Table 18).

Table 18 *Initial eigenvalues and variance explained as a result of the emotion items PCA (Study 5)*

	Initial Eigenvalue	% of variance	Cumulative %
1	5.95	42.49	42.49
2	2.26	16.17	58.67
3	1.17	8.38	67.04
4	1.03	7.37	74.41

This suggested that we may be retaining too many factors. As a result, the factor analysis was re-run with extraction fixed at three factors. This revealed a successfully converged, rotated factor solution (Table 19). Consistent with literature suggesting the independence of empathy and distress (e.g., Batson, O'Quin, Fultz, Vanderplas & Isen, 1983) all personal distress items loaded together on a single factor (8 items, α = .92), while the three empathy items loaded together with the conceptually similar item 'pity' on a second factor (4 items, α = .74). Finally, disgust and indifference loaded together on a third factor. However, the unexpected nature of this factor when combined with the poor scale reliability (2 items, α = .47) and low factor eigenvalue/ variance percentage (Table 18) led us to exclude it from further analysis. As a result, only the distress and empathy measures were retained in the analysis.

Table 19 *Pattern matrix representing item loadings on all emotion factors (all loadings >.4) (Study 5)*

	1 (Distress)	2 (Empathy)	3
Empathy	-	.60	-
Compassion	-	.74	-
Sympathy	-	.66	-
Disgust	-		.84
Pity	-	.82	-
Indifference (R)	-	-	-.69
Alarmed	.73	-	-
Grieved	.83	-	-
Troubled	.79	-	-
Distressed	.93	-	-
Upset	.84	-	-
Disturbed	.76	-	-
Worried	.75	-	-
Perturbed	.75	-	-

Supplementing these items tapping emotional experiences, the IOS scale was adapted from Aron et al. (1992) and included as a measure of perceived overlap between the participant and Sam. As noted above, this was included to examine whether this typically observed consequence of cognitive perspective-taking (e.g., Galinsky & Moskowitz, 2000) could account for the positive effects on health-related outcomes (as per Weston & Tarrant, 2009). In this measure, participants were asked to indicate which of seven pairs of concentric circles that varied in their degree of overlap, "most closely represent[ed] how similar you think you and Sam are to one another" (Figure 12). Higher scores on this measure indicated greater perceived overlap between the self and other.

This figure has been removed by the author of this thesis for copyright reasons

Figure 12 IOS scale (including response scale) used in Study 5, adapted from Aron et al. (1992).

The next part of the questionnaire assessed participants' responses to socio-cognitive health-related outcomes concerning safe sex norms and behaviours. Six items examined how normative participants perceived unsafe sex to be for Exeter students. The three descriptive norm items were the same as those used in Study 4 (but with Exeter students rather than more general students as the target; i.e., "Most Exeter students have unprotected sex from time to time"). However the injunctive norm items were refined for this study. Specifically, the injunctive norm item "students generally approve of unprotected sex" was replaced with "Among Exeter students, unprotected sex is not that big a deal", and a new third item was included "Among Exeter students, there is a strong expectation that people always engage in safe sex" (reverse coded). All responses to the injunctive norm items were from 1 *disagree very strongly,* to 7 *agree very strongly.*

As in previous studies, factor analysis was conducted on the perceived norm items. This revealed a two-factor rotated solution (Table 20). In this solution four of the six items (three descriptive and one injunctive) loaded onto the first factor, while the three injunctive norm items loaded onto the second factor. Given the split loading of

one item across factors, the eigenvalues and percentage of variance were again

examined to look for factor redundancy (Table 21).

Table 20 *Pattern matrix representing item loadings on both social norm factors (all loadings >.4) (Study 5)*

	1 (Descriptive Norms)	2 (Injunctive Norms)
"Most Exeter students have unprotected sex from time to time."	.88	-
"It is normal among Exeter students to have unprotected sex from time to time."	.92	-
"Unprotected sex is relatively common among Exeter students."	.92	-
"Among Exeter students, unprotected sex is not that big a deal."	-	.58
"Among Exeter students it is generally accepted that people will engage in unprotected sex."	.48	.54
"Among Exeter students, there is a strong expectation that people always engage in safe sex." (R)	-	.85

Table 21 *Initial eigenvalues and variance explained as a result of the social norm items PCA (Study 5)*

	Initial Eigenvalue	% of variance	Cumulative %
1	3.40	56.73	56.73
2	1.01	16.74	73.47

Although the initial eigenvalue for the second factor was on the borderline for

inclusion, it still accounted for an additional 16.74% of the variance in the construct.

Indeed, with the exception of the shared item, the item loadings on each factor

corresponded to an existing theoretical distinction between injunctive and descriptive

norms (e.g., Cialdini, 2003; Cialdini et al., 1990). As a result, the second 'injunctive norm' factor was considered to be of theoretical importance and was included in the analysis. Given that the shared item was intended to measure injunctive norms and loaded higher on the injunctive norm factor, it was dropped from the descriptive norms factor. Consequently two scales for social norms were computed; a three item descriptive norms scale (α = .90) and a three item injunctive norms scale (α = .66).

Six items adapted from Study 4 measured perceptions of self-efficacy concerning gonorrhoea testing while a further two measured intentions to get tested. Although the two "general" self-efficacy items remained unchanged (albeit with the context changed from chlamydia to gonorrhoea), a small, change was made to the intentions items. Specifically, the items were amended to include the word 'always' (i.e., from "If I did have unprotected sex I would get tested for chlamydia" to "If I did have unprotected sex I would always get tested for gonorrhoea"). This was done to ensure the items represented a clear health-promoting behaviour (i.e., consistent rather than sporadic testing). Changes were also made to the 4 items concerning participants' gonorrhoea testing self-efficacy when faced with specific barriers. Two of these were taken directly from Study 4, while both one "barrier" self-efficacy item ("…even if I would have to overcome my different habit of non-testing"), and the reverse coded efficacy item ("imagine that you make an appointment for a chlamydia test, do you think that you will procrastinate and reschedule it?") were replaced. The replacement items followed the same format as the previous "barrier" self-efficacy items ("…even if I could only get an appointment at an inconvenient time" & "…even if I had to make a special appointment to get tested elsewhere"). Finally, the response format for the "barrier" self-efficacy items was changed from 1 *definitely not*, 7 *exactly true,* to 1 *definitely not*, 7 *yes, definitely*. As in previous studies, factor analysis was conducted on the efficacy and intentions items. This revealed a three factor solution (Table 22).

Consistent with Study 4, three factors were revealed: "barrier" self-efficacy (4 items, (α

= .86), intentions (2 items, (α = .99), and "general" self-efficacy (α = .85).

Table 22 *Pattern matrix representing item loadings on all efficacy and intentions factors (all loadings >.4) (Study 5)*

	1 ("Barrier" self-efficacy)	2 (Intentions)	3 ("General" self-efficacy)
"I feel confident that I would know where to go to get tested for gonorrhoea"	-	-	-.91
"I feel confident that I would know what to ask for to get tested for gonorrhoea"	-	-	-.91
"…even if I had to go to an STD clinic"	.76	-	-
"…even if I had to wait in a queue to get tested"	.79	-	-
"…even if I could only get an appointment at an inconvenient time"	.89	-	-
"…even if I had to make a special appointment to get tested elsewhere"	.88	-	-
"If I did have unprotected sex I would always get tested for chlamydia"	-	.98	-
"If I did not use a condom, I would always get tested for chlamydia"	-	.98	-

Following these items, participants were asked to respond to items concerning

their thoughts and feelings about STIs more generally. Five items were included to

measure participants' perceived risk of contracting an STI. Three items were adapted

from Bryan, Aiken and West's (1997) susceptibility subscale (e.g., "How susceptible to

STIs do you feel?"; 1 *not at all susceptible*, to 7 *very susceptible*) while a further two

items were developed to measure risk specifically (e.g. "I am at risk of getting an STI";

1 *totally disagree*, to 7 *totally agree*). As with the other new scales included in this

study, factor analysis was conducted, revealing a single factor solution (α = .89).

A measure of participants' attitudes towards getting tested for STIs (adapted

from Tarrant & Butler, 2011) was also included. Participants were asked to indicate the

degree to which they (dis)agreed with the statement "getting tested for STIs is…",

which was completed with eight adjectives (useful, important, worthwhile, beneficial,

necessary, rewarding, essential and pleasant; 1 *totally disagree*, to 7 *totally agree*).

Although most of these items referred to utility, the scale also included the more

emotive items 'rewarding' and 'pleasant'. As a result factor analysis was conducted to

check the scale loadings (Table 23). This revealed that, as expected, attitude items

relating to utility loaded together (6 items, α = .93), while the items 'rewarding' and

'pleasant' loaded as a second factor (2 items, α = .41). As a result of the second

construct's low reliability, only the first attitude construct was included in the analysis.

Table 23 *Pattern matrix representing item loadings on both attitude factors (all loadings >.4) (Study 5)*

	1	2
Useful	.81	-
Important	.91	-
Worthwhile	.93	-
Beneficial	.85	-
Necessary	.85	-
Rewarding	-	.69
Essential	.81	-
Pleasant	-	.88

Finally, demographic items were presented as in previous studies. Furthermore,

as in Studies 1-4, following completion of the questionnaire, participants were provided

with (or redirected to) a written debrief containing both the experimenter's and support

agencies' contact details.

Results

Two participants were identified as outliers on the attitudes scale as their responses were above +/- 3 SDs from the mean. As in all previous studies, the variable was reversed (to eliminate negative skew) and transformations were applied. While the square root and logarithmic transformations failed to eliminate the outliers, the reciprocal transformation was successful. To ensure consistency with the previous studies the untransformed results are reported in footnotes if/ where appropriate. ANCOVA analyses were conducted to examine the effects of perspective-taking type and focus on the manipulation checks and dependent measures. As in Study 4, sexual orientation was included as a covariate.

Manipulation checks

As in all previous studies, the emotional perspective-taking manipulation checks used in Study 5, and the other studies presented in this Chapter, were coded by both the primary researcher and an independent coder who was blind to condition. The chi-square tests found a significant association between participants likelihood of using emotional words and perspective-taking type for both coders, coder 1 = $\chi^2(1) = 12.77$, $p < .001$, OR = 4.95; coder 2 = $\chi^2(1) = 12.71$, $p < .001$, OR = 4.99. As expected, participants who received emotional perspective-taking instructions were more likely to use emotional language than participants who received cognitive perspective-taking instructions (Tables 24 & 25). Similarly, participants who received emotional perspective-taking instructions used more emotional words than participants who received cognitive perspective-taking instructions, coder 1 = $F(1, 86) = 12.99$, $p = .001$, $\eta^2_p = 0.13$; coder 2 = $F(1, 86) = 10.26$, $p < .01$, $\eta^2_p = 0.11$ (inter-coder correlation = $r = .91$, $p < .001$) (Table 27).

Table 24 *Contingency table for the emotional perspective-taking manipulation check, coder 1 (Study 5)*

| | | Perspective-taking type | | |
		Cognitive	Emotional	Total
Emotional words used?	Yes	16	38	54
	No	25	12	37
	Total	41	50	91

Table 25 *Contingency table for the emotional perspective-taking manipulation check, coder 2 (Study 5)*

| | | Perspective-taking type | | |
		Cognitive	Emotional	Total
Emotional words used?	Yes	17	39	56
	No	24	11	35
	Total	41	50	91

Although there were no differences between cognitive and emotional perspective-taking conditions on empathy experienced in response to the campaign, $F(1, 85) = 1.61$, $p = .21$, $\eta^2_p = 0.02$, there was a difference in terms of distress experienced, $F(1, 85) = 4.64$, $p = .03$, $\eta^2_p = 0.05$. Unexpectedly, there was greater distress reported by cognitive perspective-takers than emotional perspective-takers. Despite this unexpected effect, the expected difference in frequency of emotional language used was consistent with all previous studies. As a result, the perspective-taking type manipulation was considered to have been successful.

For the pronoun-use manipulation check, the chi-square test found no significant association between perspective-taking focus and whether participants passed the manipulation check (i.e. whether they used first person pronouns in the self-focused condition, and third person pronouns in the other-focused condition), $\chi^2(1) = 1.75$, $p =$

.19, Table 26.[18] However, a substantial number of participants across both conditions failed the manipulation check. Excluding these participants was unfeasible given the resulting sample size and distribution of participants (cognitive self-focus $n = 13$, cognitive other focus $n = 9$, emotional self-focus $n = 19$, emotional other-focus $n = 19$); as such analyses were initially run controlling for manipulation check success. As this made no meaningful difference to the pattern of results, the covariate was excluded from the analysis reported below.[19]

Table 26 *Contingency table for the focus manipulation check (Study 5)*

| | | Perspective-taking focus | | |
		Self	Other	Total
Correct use of pronouns?	Yes	32	28	60
	No	12	19	31
	Total	44	47	91

Main Analysis

The marginal means and standard errors for all dependent variables are presented in Table 27. Given the number of dependent variables in this Study, only

---

[18] For the purposes of this analysis participants who used no pronouns at all were coded as having failed the manipulation check.

[19] The only changes of any note were a slight shift down to marginal significance for the main effect of perspective-taking type on distress, $F(1, 84) = 3.80$, $p = .06$, $\eta^2_p = 0.04$, and a slight shift up to marginal significance for the interaction effect on "barrier" self-efficacy, $F(1, 85) = 2.99$, $p = .09$, $\eta^2_p = 0.03$. Participants in the other-focused emotional perspective-taking condition reported greater perceived self-efficacy (6.16) than participants in the other-focused cognitive perspective-taking condition (5.37), $F(1, 85) = 4.79$, $p = .031$, $\eta^2_p = 0.05$. Looked at differently, participants in the self-focused cognitive perspective-taking condition reported marginally greater perceived self-efficacy (6.06) than participants in the other-focused cognitive perspective-taking condition (5.37), $F(1, 85) = 3.32$, $p = .07$, $\eta^2_p = 0.04$, No significant effects were found for either perspective-taking type within self-focus, $F(1, 85) = 0.05$, $p = .83$, $\eta^2_p = 0.00$, or for focus within emotional perspective-taking, $F(1, 85) = 0.30$, $p = .58$, $\eta^2_p = 0.04$.

those on which there were marginal or significant effects are reported below (all other

$Fs < 2.64\ ps > .11$, $\eta^2_p s < 0.03$).[20]

ANCOVA revealed a significant main effect of perspective-taking type on

intentions to get tested for gonorrhoea, $F_{(1, 86)} = 3.99$, $p = .05$, $\eta^2_p = 0.04$. The direction

of this effect complemented the direction of the effect on distress: greater distress and

reduced behavioural intentions were reported by participants given cognitive

perspective-taking instructions relative to participants given emotional perspective-

taking instructions. It is interesting to note that the direction of these effects is the

opposite of the general pattern across previous studies, and suggest a more adaptive

effect of emotional over cognitive perspective-taking in this study. However, the present

study predicted that the positive effects of emotional perspective-taking would emerge

in interaction with perspective focus, rather than as a main effect.

There was also a marginally significant interaction between perspective-taking

focus and type on perceived risk, $F(1, 86) = 3.77$, $p = .06$, $\eta^2_p = 0.04$. This interaction is

presented in Figure 13. Simple effects analysis revealed that there was a marginally

significant effect of perspective-taking type within the self-focused condition, $F(1, 86)$

$= 3.47$, $p = .07$, $\eta^2_p = 0.04$, but not in the other-focused condition, $F(1, 86) = 0.74$, $p =$

$.39$, $\eta^2_p = 0.01$. In the self-focused condition, participants given emotional perspective-

taking instructions reported lower perceived risk than those given cognitive instructions.

These effects of perspective-taking type within the self-focused but not the other-

focused conditions are consistent with the overall hypothesised moderation (H1).

However, looked at differently, there were no differences between the effects of focus

within either the emotional, $F(1, 86) = 2.56$, $p = .11$, $\eta^2_p = 0.03$, or cognitive, $F(1, 86) =$

---

[20] These *F* and *p*-values are for the interaction effect on "barrier" self-efficacy.

1.37, $p = .25$, $\eta^2_p = 0.02$, perspective-taking conditions. This lack of an effect of focus within the emotional perspective-taking condition is inconsistent with H2.
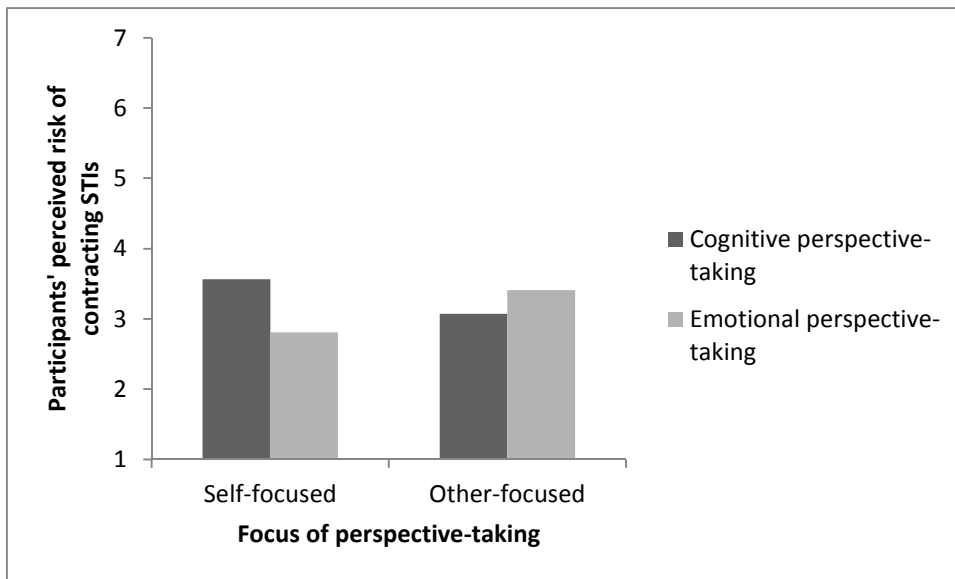
Figure 13 The interaction between perspective-taking type and focus on participants' perceived personal risk of contracting an STI (Study 5).

Summary. The results of this study revealed unexpected main effects of perspective-taking type on both personal distress and intentions to get tested for gonorrhoea. Contrary to the results of Studies 1-4 these suggest that emotional perspective-taking was generally more adaptive in this study, leading to decreased distress and increased intentions to get tested relative to cognitive perspective-taking. One marginally significant interaction was observed on perceived risk, which provided preliminary support for the broad moderation hypothesis (H1): self-focused emotional perspective-taking resulted in reduced perceptions of risk relative to self-focused cognitive perspective-taking, an effect that was attenuated in the other-focused condition. However, the absence of an effect of focus within the emotional perspective-taking condition was inconsistent with H2.

Table 27 *Marginal means and standard errors for the effects of perspective-taking type and perspective-taking focus on all manipulation checks and dependent variables (controlling for sexual orientation). Superscript used to indicate marginally significant and significant effects (Study 5)*

	Cognitive						Emotional						Total			
	Self		Other		Total		Self		Other		Total		Self		Other	
	Mean	S.E	Mean	S.E	Mean	S.E	Mean	S.E	Mean	S.E	Mean	S.E	Mean	S.E	Mean	S.E
Emotional words (coder 1)	0.77	0.34	0.83	0.33	**0.80[a]**	**0.24**	1.75	0.31	2.20	0.30	**1.97[a]**	**0.22**	**1.26**	**0.23**	**1.52**	**0.22**
Emotional words (coder 2)	0.89	0.41	1.09	0.40	**0.99[a]**	**0.29**	2.16	0.38	2.33	0.36	**2.24[a]**	**0.26**	**1.52**	**0.28**	**1.71**	**0.27**
Empathy	4.12	0.29	3.71	0.28	**3.91**	**0.20**	4.27	0.27	4.25	0.25	**4.26**	**0.18**	**4.19**	**0.19**	**3.98**	**0.19**
Distress	3.18	0.28	3.08	0.27	**3.13[a]**	**0.19**	2.69	0.26	2.42	0.25	**2.56[a]**	**0.18**	**2.94**	**0.19**	**2.75**	**0.18**
IOS	3.26	0.36	2.82	0.35	**3.04**	**0.25**	2.78	0.33	3.12	0.33	**2.95**	**0.23**	**3.02**	**0.24**	**2.97**	**0.24**
Descriptive norms	4.24	0.35	3.72	0.34	**3.98**	**0.24**	4.30	0.32	4.22	0.31	**4.26**	**0.22**	**4.27**	**0.24**	**3.97**	**0.23**
Injunctive norms	3.33	0.26	3.06	0.26	**3.19**	**0.18**	3.55	0.24	3.29	0.23	**3.42**	**0.17**	**3.44**	**0.18**	**3.17**	**0.17**
"General" self-efficacy	4.94	0.43	4.80	0.42	**4.87**	**0.30**	4.98	0.39	5.42	0.38	**5.19**	**0.27**	**4.96**	**0.29**	**5.11**	**0.28**
"Barrier" self-efficacy	6.06	0.27	5.45	0.26	**5.75**	**0.19**	5.93	0.24	6.14	0.24	**6.04**	**0.17**	**5.99**	**0.18**	**5.79**	**0.18**
Test intentions	4.17	0.43	3.96	0.42	**4.06[a]**	**0.29**	4.99	0.39	4.74	0.38	**4.87[a]**	**0.27**	**4.58**	**0.29**	**4.35**	**0.28**
Risk	3.56[a]	0.29	3.07	0.29	**3.32**	**0.21**	2.81[a]	0.27	3.41	0.26	**3.11**	**0.19**	**3.18**	**0.20**	**3.24**	**0.19**
Attitudes	6.34	0.25	5.86	0.25	**6.10**	**0.18**	6.25	0.23	6.19	0.22	**6.22**	**0.16**	**6.29**	**0.17**	**6.03**	**0.16**
Reciprocally transformed attitudes	0.68	0.06	0.60	0.06	**0.64**	**0.04**	0.72	0.05	0.69	0.05	**0.70**	**0.04**	**0.70**	**0.04**	**0.65**	**0.04**

Discussion

The overarching picture that emerges from this study is one in which emotional perspective-taking is straightforwardly more effective than cognitive perspective-taking regardless of focus, the reverse of what was observed in Studies 1-4. These findings, while unexpected, are consistent with the literature that suggests positive effects of emotional engagement in the context of health campaigns (e.g. Brown & Basil, 1995; Campbell & Babrow, 2004; Dunlop et al., 2008). Nonetheless, there was also some evidence that the focus on self versus other influenced the effects of emotional perspective-taking. Specifically, encouraging a self-focus impaired the effects of emotional perspective-taking on perceived risk (consistent with the direction of effects in Studies 1-4), whereas no effects of perspective-taking type were found following other-focus. Although the negative effect of emotional perspective-taking following self-focus was consistent with Hypothesis 1, the absence of a positive effect of other-focused emotional perspective-taking relative to self-focused emotional perspective-taking was inconsistent with Hypothesis 2. Despite not supporting H2, the absence of the typically observed effects of perspective-taking type does provide some tentative support for the hypothesis that the negative effects of emotional perspective-taking may be ameliorated following other-focus. However, on the basis of Batson and colleagues' (1997c) findings, we might also have expected to observe greater distress following self-focused emotional perspective-taking relative to other-focused emotional perspective-taking; however no such interaction effect was found. Indeed, the only effect observed on our emotion variables was the unexpected main effect of perspective-taking type on personal distress (see above).

Thus, while these findings are interesting, they were not fully consistent with expectations (i.e., the effect was marginal, it was only observed on one dependent variable, and it failed to support one of the hypotheses), and so should not be taken as

definitive support for the 'focus-as-moderator' rationale. Although these findings do provide some support for the contention that the effects in Studies 1 and 2 may have been due to unintended differences in the focus elicited across conditions, the weak and inconsistent nature of the effects in this study suggests that this explanation is not highly probable. At this point, it is important to explicitly acknowledge one limitation of this study: a large proportion of participants failed the perspective-taking focus manipulation check. Although it could be argued that this failure may have contributed to the weak and inconsistent moderating effects observed in this study, controlling for manipulation check success or failure made no meaningful difference to the pattern of effects. As a consequence, we would argue that the manipulation check failure did not significantly obscure the effects of perspective-taking focus. Nevertheless, further research in which the perspective-taking focus manipulation is made more explicit, particularly in relation to the paragraph writing task, is recommended. One method of doing this could involve emphasising the use of either first or third person pronouns (depending on condition) in the instructions for the paragraph writing task. Similar effects in such a replication would reinforce the claim that perspective-taking focus does not represent a central moderator of the effects of engaging different types of perspective-taking in response to a narrative health campaign.

Limitations notwithstanding, this study asks more questions than it answers with the main effects of perspective-taking type on distress and intentions in the opposite direction to those observed across Studies 1-4. One notable feature of this study, in contrast to the earlier studies, is that the social identity of the participant and target was likely to be highly salient during the perspective-taking task. This is exemplified by the following methodological changes that were made in Study 5. Firstly, in the present study, the target went from being a general university student to being specifically a *University of Exeter* student; secondly, the emphasis in the questionnaire shifted to

explicitly make an Exeter student identity also salient (using specific salience items) to the participant as they completed the questionnaire; finally, the Exeter University logo was presented on every page of the questionnaire to further reinforce the salience of an Exeter student identity. For these reasons, it seems likely that in the present study participants were engaged in heightened ingroup perspective-taking relative to previous studies as a result of the more explicit attempts to induce Exeter student identity salience. This identity salience led to a situation in which both the participant and target shared a salient group membership (University of Exeter students). Given that shared group membership should, theoretically, lead to depersonalised self-perception such that self and other become psychologically interchangeable (e.g., Turner, 1985; Turner, Oakes, Haslam & McGarty, 1994), under these conditions the manipulation of self-versus other focus is likely to become less relevant, because both these referents are psychologically similar.

In addition, research outlined in the introductory Chapters suggests that emotional responses (and associated behaviours) are generally both stronger and, in the case of empathy, more productive, when elicited in response to an ingroup rather than an outgroup member (e.g., Brown et al., 2006; Tarrant et al., 2009; Stürmer et al., 2005, 2006). Thus, the potentially stronger shared group membership encouraged in this study relative to Studies 1-4 may have contributed to the overall superiority of emotional perspective-taking. This possibility is explored directly in the subsequent studies.

Conclusion

Overall, despite the tentative support for perspective-taking focus as a moderator of the effects of perspective-taking type, the broader pattern of findings in this study suggest that a salient common identity between perceiver and target may be important

to the emergence of more positive effects of emotional perspective-taking for health. Conversely, conditions that do not invoke a strong common identity between perceiver and target might be those under which negative effects of emotional perspective taking are most likely, as observed in the previous studies. The validity of these ideas was tested in a further study (Study 6) in which shared group membership between perceiver and target was explicitly manipulated alongside perspective-taking type.

Study 6

Most perspective-taking research suggests positive consequences of both emotional and cognitive perspective-taking for a range of outcomes such as intergroup attitudes, helping behaviour, and negotiation (e.g., Batson et al., 2002; Galinsky & Moskowitz, 2000; Galinsky & Mussweiler, 2001). Generally, in intergroup contexts, taking the perspective of an outgroup member has been found to lead to more positive orientations towards them. However, as discussed in Chapter 2, further research suggests that there may be limits to the positive effects of intergroup cognitive perspective-taking (e.g., Caruso et al., 2006; Epley et al., 2006; Vorauer et al., 2009). Moreover, recent research suggests that the negative intergroup effects of cognitive perspective-taking may be structured by the relationship between the perspective-taker and their ingroup (e.g., Tarrant et al., 2012). Research in the context of emotional perspective-taking tells a similar and more straightforward story: emotional experiences are stronger, and may be more productive (in the case of empathy) when the target is an ingroup member rather than outgroup member (Tarrant et al., 2009; Stürmer et al., 2005; 2006, see also Brown et al., 2006).

In addition to shaping the consequences of perspective-taking, group membership can colour peoples' emotional and behavioural responses to a target (see Yzerbyt, Dumont, Mathieu, Gordijn & Wigboldus, 2005 for a review). For instance,

Gordijn, Wigboldus and Yzerbyt (2001) examined whether the emotional responses of Amsterdam University students to a proposal for greater work load for Leiden University students might be influenced by perceptions of Leiden students as ingroup or outgroup members. They found that participants experienced greater anger and less happiness in response to the negative treatment when Leiden University students were categorised as members of a broad student ingroup than when they were categorised as members of a distinct university outgroup. Similarly, across two studies Dumont et al., (2003) found that altering participants' social categorisation in relation to the victims of the September 11, 2001 attacks influenced both emotional and behavioural responses. Specifically, participants felt more fear and demonstrated stronger fear-related behavioural action tendencies (i.e., willingness to search for more information, and help/ support the victims) when the victims were categorised as ingroup rather than outgroup members (see also Yzerbyt et al., 2003).

These areas of research combine to suggest that emotional experiences are likely to be different, more intense, and more productive in response to contemplating the experiences of other ingroup members as compared to outgroup members. Relating this to the health promotion context, explicitly encouraging the perception of shared group membership between the recipients of a health promotion campaign, and the character depicted therein, could alter the specific emotions experienced, and potentially even enhance both the strength of the emotional reactions, and also of emotion-consistent behaviour. To the extent that emotional experiences can have positive implications for the success of persuasive campaigns and health promotion (e.g., Bagozzi & Moore, 1994; Biener et al., 2006; Brown & Basil, 1995; Campbell & Babrow, 2004), it follows that emotional perspective-taking should be more beneficial when the target of it belongs to an ingroup rather than to an outgroup.

However, given the potential for emotional experiences to backfire and cause avoidance (e.g., Brown & Locker, 2009; Brown & Smith, 2007; Sweeny et al., 2010) it is also possible that encouraging emotional perspective-taking of an ingroup member could exacerbate these negative effects. Previous literature suggests that these divergent effects may be dependent upon the specific, discrete emotions elicited in a given context (e.g., Consedine et al., 2004). Although we do not know the specific emotions that are being elicited by the narrative campaign in these studies, the positive effects of emotional perspective-taking relative to cognitive perspective-taking in Study 5 (where we propose that heightened shared identity salience was likely experienced relative to earlier studies) suggest that the emotions being experienced in response to an ingroup target are, in this instance, more productive rather than destructive.

It is therefore possible that this enhanced, positive effect of emotional perspective-taking in an ingroup context may consequently reduce or reverse the typically observed pattern of effects between cognitive and emotional perspective-taking (Studies 1-4), replicating the findings of Study 5. This finding would be consistent with the suggestion that the effects in Study 5 were due to the likely greater perception of shared group membership between participants and the narrative target in Study 5 relative to Studies 1-4 (See Study 5 Discussion). The current study (Study 6) manipulated both perspective-taking type and the categorical relationship between the perceiver and target (i.e., via target group membership) to examine this idea more closely. As a consequence, it was hypothesised that:

H1: Cognitive perspective-taking would have a positive effect on health-related outcomes relative to emotional perspective-taking when the narrative target was an outgroup member (replicating Studies 1-4), but that these effects would be attenuated or even reversed when the target was an ingroup member (replicating Study 5).

Method

Participants and Design

A convenience sample of 144 University of Exeter students (47 males, 97 females, *M age* = 20.37, *SD* = 1.75) was recruited from around the University of Exeter campus. As before, all participants were not in a committed relationship and had satisfactorily completed the paragraph writing task. [21] As an incentive for participation, all participants were offered sweets/ chocolates. The study was a two factor between groups, questionnaire-based experiment in which perspective-taking type (cognitive vs. emotional) and group membership of the target were manipulated. Participants were randomly allocated to one of these conditions (Cognitive Ingroup *n* = 35; Cognitive Outgroup *n* = 33; Emotional Ingroup *n* = 40; Emotional Outgroup *n* = 36). The dependent variables in this study were identical to those in Study 5 with the addition of an ease of perspective-taking scale adapted from Studies 1-4.

Materials and Procedure

Participants were approached and asked to take part in a study examining "how reading style influences Exeter University students' understanding of sexual health information, in particular relating to safe sex and gonorrhoea infection". Participants began by indicating their gender and were then given the same factual information concerning gonorrhoea, and salience items, as in Study 5.

---

[21] In addition to those participants who were screened out for not writing a perspective-taking paragraph, one further participant was screened out for failing to engage with the task (i.e., they wrote there was insufficient information to complete the task). A further two participants were screened out for excessive talking while completing the questionnaire.

Manipulations and vignette. All, participants were informed that the study was concerned with how reading style influences Exeter students' perceptions of health campaigns. The perspective-taking type manipulation used the same self-focused instructions as in Study 5. Group membership was manipulated by changing whether the target of perspective-taking was a student at the University of Exeter (ingroup) or the University of Newcastle (outgroup). In order to emphasise the group membership of the target, the following differences were made between group membership conditions: First, the NHS trust and University that 'designed' the questionnaire varied across condition from NHS South West and the University of Exeter in the ingroup condition, to NHS North East and the University of Newcastle in the outgroup condition; second, the target (Sam) was described as either "an Exeter University student" or "a Newcastle University student" throughout the manipulation; finally, the NHS and University logos on the narrative campaign varied across condition such that for the ingroup condition the NHS South West and Exeter University logos were presented, whereas the outgroup campaign used the NHS North East and Newcastle University logos. As in previous Studies, participants were asked to write a paragraph describing "a day in the life" of Sam from their respective perspectives (i.e., imagine what you would do [how you would feel]…).

Measures. After participants had read the instructions and campaign, and had completed the paragraph writing task, they completed the dependent variable questionnaire. The same items were used to assess emotional responses (i.e., empathy & distress), IOS, risk, social norms, "general" self-efficacy, "barrier" self-efficacy, test intentions, and attitudes as in Study 5. In addition, an ease of perspective-taking scale using the two self-focused items employed across Studies 1-4 was included (2 items, α = .84). As in Studies 1-5, all items were assessed on a 7 point likert scale.

For the emotional response items, factor analysis suggested a three-factor solution (Table 28). As in Study 5, all distress items loaded together, and the three empathy items loaded with pity. An unexpected third factor also emerged onto which disgust loaded alone. Given the unexpected and single-item nature of this third factor, disgust was excluded from further analysis.[22] This left two reliable emotion scales for further analysis: empathy (4 items, $\alpha = .82$) and distress (8 items, $\alpha = .92$).

Table 28 *Pattern matrix representing item loadings on all emotion items (all loadings >.4) (Study 6)*

	1 (Distress)	2 (Empathy)	3
Empathy	-	.88	-
Compassion	-	.88	-
Sympathy	-	.81	-
Disgust	-		.88
Pity	-	.62	-
Indifference (R)	-	-	-
Alarmed	.67	-	-
Grieved	.77	-	-
Troubled	.86	-	-
Distressed	.92	-	-
Upset	.79	-	-
Disturbed	.85	-	-
Worried	.68	-	-
Perturbed	.82	-	-

Factor analysis for the social norms items revealed a single factor solution excluding the reverse-coded norms item. As a result, a single scale excluding this item was included in further analysis (5 items, $\alpha = .85$).

---

[22] A restricted two-factor solution was also tested. This revealed the same items loading together to form the distress scale, but also included the reverse coded indifference item on the empathy scale. As the item loading for indifference was on the border for inclusion (.40) its exclusion would have resulted in an identical solution for distress and empathy as above.

As in Studies 3-5, both self-efficacy and test intentions items were entered into a factor analysis together. As in previous studies, a three-factor solution was revealed: "barrier" self-efficacy (4 items, α = .90), test intentions (2 items, α = .98), and "general" self-efficacy (2 items, α = .87) (Table 29). All three scales were included in further analysis.

Table 29 *Pattern matrix representing item loadings on all efficacy and intentions factors (all loadings >.4) (Study 6)*

	1 ("Barrier" self-efficacy)	2 (Intentions)	3 ("General" self-efficacy)
"I feel confident that I would know where to go to get tested for gonorrhoea"	-	-	-.94
"I feel confident that I would know what to ask for to get tested for gonorrhoea"	-	-	-.92
"…even if I had to go to an STD clinic"	.88	-	-
"…even if I had to wait in a queue to get tested"	.77	-	-
"…even if I could only get an appointment at an inconvenient time"	.97	-	-
"…even if I had to make a special appointment to get tested elsewhere"	.89	-	-
"If I did have unprotected sex I would always get tested for chlamydia"	-	.97	-
"If I did not use a condom, I would always get tested for chlamydia"	-	.99	-

As in Study 5, participants were also asked to respond to items assessing thoughts and feelings concerning STI testing more generally (i.e., risk and attitude scales). The factor analysis for risk of contracting an STI revealed a single solution, and so all items were included in the scale (5 items, α = .84). Finally, a two-factor solution was extracted for attitudes towards getting tested for STIs. As in Study 5, all of the utility items again loaded together (6 items, α = .88), with the more emotive items loading separately (2 items, α = .40) (Table 30). As a result of the second construct's

low reliability, only the first attitude construct was included for further analysis. This

was consistent with the previous study (Study 5).

Table 30 *Pattern matrix representing item loadings on both attitude factors (all loadings >.4) (Study 6)*

	1	2
Useful	.69	-
Important	.83	-
Worthwhile	.89	-
Beneficial	.87	-
Necessary	.82	-
Rewarding	-	.72
Essential	.77	-
Pleasant	-	.84

Following completion of the dependent variables, participants were again asked

the standard demographic questions from previous studies. Participants were also asked

to indicate, without looking back at the poster, which university Sam (the student in the

campaign) was a student at (a manipulation check). Finally, participants were given a

debrief sheet following their participation.

Results

Two participants were identified as outliers, one on the IOS item and the other

on the attitudes scale, for having values of +/- 3 standard deviations from the

standardised scores. While the IOS item displayed positive skew, the attitude scale

displayed negative skew and was reverse coded prior to applying transformations (as

per Field, 2005). All three transformations were successful at eliminating the outlier

effects. For consistency with previous studies, the results of the reciprocal

transformation are reported in text while the results for the untransformed variables are

presented in footnotes if/ where applicable. As in Studies 4 and 5 ANCOVA analyses

(controlling for sexual orientation) were run on all dependent variables. The means and standard error for all dependent variables are presented in Table 33.

Manipulation checks

Twenty-three participants stated the incorrect university on the target group membership manipulation check (cognitive ingroup $n = 5$, cognitive outgroup $n = 2$, emotional ingroup $n = 9$, emotional outgroup $n = 7$). This left 121 participants in the final dataset. Unlike Study 5, this left an equivalent proportion of participants within each cell (cognitive ingroup $n = 30$, cognitive outgroup $n = 31$, emotional ingroup $n = 31$, emotional outgroup $n = 29$). As a consequence, participants who failed the manipulation check were excluded from further analysis.

As in all previous studies, the chi-square analyses on participants likelihood of using emotional words found a significant association between the use of emotional words and perspective-taking type for both coders, coder $1 = \chi^2(1) = 11.39$, $p = .001$, OR = 3.54; coder $2 = \chi^2(1) = 13.92$, $p < .001$, OR = 4.07. The contingency tables (Tables 31 & 32) show that, as expected, participants who received emotional perspective-taking instructions were more likely to use emotive language than participants who received cognitive instructions. Similarly, participants who received emotional perspective-taking instructions used more emotional words than participants who received cognitive perspective-taking instructions, coder $1 = F(1, 113) = 21.81$, $p < .001$, $\eta^2_p = 0.16$; coder $2 = F(1, 113) = 29.59$, $p < .001$, $\eta^2_p = 0.21$ (inter-coder correlation $= r = .96$, $p < .001$) (Table 33).

Table 31 *Contingency table for the emotional perspective-taking manipulation check, coder 1 (Study 6)*

| | | Perspective-taking type | | |
		Cognitive	Emotional	Total
Emotional words used?	Yes	23	41	64
	No	38	19	57
	Total	61	6	121

Table 32 *Contingency table for the emotional perspective-taking manipulation check, coder 2 (Study 6)*

| | | Perspective-taking type | | |
		Cognitive	Emotional	Total
Emotional words used?	Yes	21	41	62
	No	40	19	59
	Total	61	6	121

As in previous studies, the main effects of perspective-taking type on ease of perspective-taking and emotional experience (i.e., empathy and distress) were examined as checks of the perspective-taking type manipulation. These revealed a significant main effect of perspective-taking type on participants' empathic experience, $F(1, 113) = 7.36$, $p < .01$, $\eta^2_p = 0.06$, and a marginally significant effect on emotional distress experienced, $F(1, 113) = 3.16$, $p = .08$, $\eta^2_p = 0.03$. Consistent with expectations, participants given emotional perspective-taking instructions reported greater empathic experience and distress after reading the campaign than those given cognitive perspective-taking instructions. Again, consistent with expectations, there was no significant effect on ease of perspective-taking, $F(1, 113) = 1.57$, $p = .21$, $\eta^2_p = 0.01$. As a result, the manipulation of perspective-taking type was deemed successful.

The measure of IOS was also examined as a check for the manipulation of group membership. This revealed a significant main effect, $F(1, 112) = 6.90$, $p=.01$, $\eta^2_p = 0.06$, such that participants presented with a target who was an ingroup member

reported greater IOS than those presented with an outgroup member.[23] As a result, the group membership manipulation was deemed successful. There was also a marginally significant effect of group membership on empathy, $F(1, 113) = 3.50$, $p = .06$, $\eta^2_p = 0.03$. Predictably, participants experienced more empathy when the target was an ingroup member than when they were an outgroup member.

Main Analysis

There were no significant main or interaction effects on any of the socio-cognitive health variables (social norms, "general" self-efficacy, "barrier" self-efficacy, test intentions, attitudes, and risk). The closest effect to significance was the interaction effect on intentions to get tested for gonorrhoea, $F(1, 112) = 2.79$, $p = .097$, $\eta^2_p = 0.03$, which revealed no significant simple effects, all $Fs_{(1, 112)} < 1.84$, $ps > .18$, $\eta^2_p s < 0.02$.

Summary. There were significant effects of perspective-taking type on empathy, distress, and participants' use of emotional words. In addition there was a significant effect of group membership on IOS, and a marginally significant effect of group membership on distress. Specifically, emotional perspective-takers used more emotional words in their paragraphs, and reported experiencing greater empathy and distress than did cognitive perspective-takers. Moreover, participants perceived greater similarity (or overlap) between themselves and the ingroup member relative to the outgroup member, and greater distress when the target was an ingroup member rather than an outgroup member. These effects were consistent with the perspective-taking and group membership manipulations. However despite these reliable effects of the manipulations, there were no effects on the socio-cognitive health-related outcome

---

[23] This effect was marginally significant on the untransformed variable, $F(1, 112) = 3.66$, $p = .058$, $\eta^2_p = 0.03$.

variables. In short, the findings of this study were inconclusive and did not support the hypothesis (H1).

Table 33 *Marginal means and standard errors for the effects of perspective-taking type and target group membership on all manipulation checks and dependent variables (controlling for sexual orientation). Superscript used to indicate marginally significant and significant effects (Study 6)*

	Perspective-taking type															
	Cognitive						Emotional						Total			
							Target group membership									
	Ingroup		Outgroup		Total		Ingroup		Outgroup		Total		Ingroup		Outgroup	
	Mean	S.E	Mean	S.E	**Mean**	**S.E**	Mean	S.E	Mean	S.E	**Mean**	**S.E**	**Mean**	**S.E**	**Mean**	**S.E**
Emotional words (coder 1)	0.44	0.22	0.71	0.22	**0.57^a**	**0.16**	1.59	0.23	1.67	0.23	**1.63^a**	**0.16**	**1.01**	**0.16**	**1.19**	**0.16**
Emotional words (coder 2)	0.37	0.22	0.61	0.22	**0.49^a**	**0.16**	1.69	0.23	1.74	0.23	**1.72^a**	**0.16**	**1.03**	**0.16**	**1.18**	**0.16**
Ease of perspective-taking	3.04	0.26	2.87	0.25	**2.96**	**0.18**	3.26	0.27	3.29	0.26	**3.28**	**0.19**	**3.15**	**0.18**	**3.09**	**0.18**
Empathy	3.90	0.24	3.39	0.23	**3.64^a**	**0.17**	4.49	0.25	4.10	0.24	**4.29^a**	**0.17**	**4.19^b**	**0.17**	**3.75^b**	**0.17**
Distress	2.88	0.24	2.41	0.23	**2.65^a**	**0.17**	3.03	0.25	3.11	0.24	**3.07^a**	**0.17**	**2.96**	**0.17**	**2.76**	**0.17**
IOS	2.86	0.25	2.23	0.24	**2.54**	**0.17**	2.94	0.26	2.62	0.25	**2.78**	**0.18**	**2.89^a**	**0.18**	**2.42^a**	**0.17**
Social norms	3.49	0.22	3.70	0.21	**3.59**	**0.15**	3.84	0.23	3.41	0.22	**3.63**	**0.16**	**3.67**	**0.16**	**3.56**	**0.15**
"General" self-efficacy	5.13	0.34	5.09	0.33	**5.12**	**0.24**	4.94	0.35	4.89	0.35	**4.89**	**0.25**	**5.04**	**0.25**	**4.98**	**0.24**
"Barrier" self-efficacy	6.03	0.22	5.79	0.21	**5.92**	**0.15**	5.49	0.22	5.64	0.22	**5.57**	**0.16**	**5.76**	**0.16**	**5.72**	**0.15**
Test intentions	4.49	0.34	3.89	0.34	**4.19**	**0.24**	3.99	0.36	4.54	0.35	**4.27**	**0.25**	**4.25**	**0.25**	**4.21**	**0.24**
Risk	3.12	0.22	3.29	0.22	**3.21**	**0.16**	3.51	0.23	3.23	0.23	**3.37**	**0.16**	**3.32**	**0.16**	**3.26**	**0.16**
Attitudes	6.52	0.14	6.23	0.14	**6.37**	**0.09**	6.29	0.14	6.29	0.14	**6.29**	**0.09**	**6.40**	**0.09**	**6.26**	**0.09**
Reciprocally transformed attitudes	0.77	0.05	0.69	0.05	**0.73**	**0.03**	0.66	0.05	0.69	0.05	**0.68**	**0.03**	**0.72**	**0.03**	**0.69**	**0.03**
Reciprocally transformed IOS[24]	0.44	0.05	0.63	0.05	**0.53**	**0.04**	0.43	0.05	0.52	0.05	**0.47**	**0.04**	**0.43^a**	**0.04**	**0.57^a**	**0.04**

---

[24] Note that as the IOS scale was not reverse coded prior to transformation, the reciprocally transformed values are the inverse of those for the untransformed variable. As a consequence, higher values equal greater perceived overlap for the untransformed IOS scale, while higher values equal less perceived overlap for the transformed IOS scale.

Discussion

The aim of this study was to explore whether variations in the categorical relationship between the perceiver and target would moderate the effects of perspective taking-type. Specifically, we predicted that the pattern of effects across Studies 1-4, whereby emotional perspective-taking was seen to be generally less effective than cognitive perspective-taking, would be present only when the target of perspective-taking was an outgroup member. When the target was instead an ingroup member, we expected more positive effects of emotional perspective-taking to emerge. This would confirm the suspicion that the pattern observed in the previous study was due to changes in the stimuli that highlighted the shared group membership between participants and the target. Contrary to these expectations, however, we found no evidence for the expected interaction between perspective-taking type and group membership. In short, the hypothesis was not supported.

Despite the absence of effects on the socio-cognitive health-related outcomes, there was evidence for the effectiveness of the manipulations in ways that are consistent with previous findings. For example, there was a marginally significant effect of group membership on empathy experienced while reading the target's story, an effect consistent with the finding that people experience greater emotional responses to an ingroup rather than an outgroup member (e.g., Brown et al., 2006; Tarrant et al., 2009). Furthermore, the success of the manipulation checks alongside the main effects of perspective-taking type on empathy and distress (consistent with differential emotional engagement across cognitive and emotional perspective-taking conditions), and the main effect of group membership on IOS (consistent with greater perceived similarity to ingroup members than to outgroup members), suggests that the absence of effects on the health-related outcome variables was not due to methodological issues in our manipulations. However, while significant, the difference on the IOS scale is less than 1

scale point with the mean for both conditions falling between points 2 and 3 on the IOS, representing slight overlap (see Figure 12). This suggest that while participants did perceive the ingroup target as closer to the self than the outgroup target, they still did not perceive them to be particularly close. Furthermore, Davis et al. (1996) note that as the IOS is intended for use in the contexts of close, intimate relationships, it may not accurately capture the nature of one's relationship with relative strangers. Thus, although findings on the IOS scale did support the manipulation, it appears as though: a) the IOS was an inadequate measure of measuring the success of our manipulation, and; b) our manipulation of group membership, while significant, only encouraged minor overlap in the ingroup condition over that experienced in the outgroup condition.

One possible reason for the failure to find moderation in this study is that across conditions there was still a shared group membership available to structure the relationship between perceiver and target. Self-categorisation theory (Turner, 1985; Turner, Hogg, Oakes, Reicher & Wetherell, 1987) holds that there are three broad levels of self-categorization: superordinate categorisation as a human being, intermediate categorisation in social ingroups or outgroups, and subordinate categorisation at the individual level. However, Turner (1985) further notes that there are multiple potential self-categorisations available at each of these levels. Specifically, "people have different ideas of what it means to be human, belong to a variety of social groups, and focus on different dimensions of interpersonal comparison according to the context" (Turner, 1985, p. 96). Thus, while we attempted to vary the perception of shared group membership at an intermediate, social level by presenting the narrative target as an Exeter or Newcastle student, a shared social identity of 'university student' may have remained accessible at a broader level of abstraction. That is, even when the target was portrayed as an 'outgroup' member (Newcastle student), participants could have perceived some degree of shared 'university student' group membership. As our

hypothesised effects in this study were predicated on participants' perception of the target as either an ingroup or outgroup member (in order to activate different emotional and behavioural profiles, e.g., Dumont et al., 2003; Gordijn et al., 2001; Tarrant et al., 2009), it is possible that the salience of the shared social category may have obscured the effects.

This ambiguous relationship between the perspective-taker and target by virtue of their shared 'university student' identity could also be responsible for the weak effects across Studies 1-4. As the target was presented as a 'university' student' across these studies, it is possible that participants could have variably perceived either shared group membership (as a result of their joint 'university student' identity) or non-shared group membership (by virtue of the participants being Exeter students, and the target's university affiliation not being specified) both within and across perspective-taking conditions. That is, the effects on socio-cognitive health-related outcomes between perspective-taking conditions in the previous studies may have been muddied by participants' variable perceptions of themselves and the target as possessing either shared or non-shared group membership. As a result, further research utilising a clearer manipulation of shared group membership is required to help clarify the relative effects of cognitive and emotional perspective-taking.

Conclusion

Overall, Study 6 suggests that group membership of the narrative target is not a moderator of the effects of perspective-taking on health-related outcomes. Notwithstanding this, although we varied shared group membership between target and perceiver via their institutional affiliation, shared student identity may have remained salient across the experimental conditions. This shared student identity may have

obscured the predicted effects. As a result, a further study was conducted using a more direct manipulation of the categorical relationship between perceiver and target of perspective-taking, one that relied on the salience of different self-categorizations for the perceiver, while holding the target identity constant.

Study 7

The goal of Study 7 was to strengthen the manipulation of target categorisation relative to the self to further explore the possibility that shared group membership with the target might moderate the effects of perspective-taking type on health-related outcomes. As noted above, there are three broad levels of self-categorisation: human, social, and individual (Turner, 1985; Turner et al., 1987). While Study 6 manipulated shared group membership within the social level, this study aimed to optimise the manipulation by activating identities across levels (i.e., individual versus. social). That is, we kept the target's Exeter student identity constant across conditions but varied whether the individual perceiver thought of themselves in terms of their social Exeter student identity (in which case they would share a salient group membership with the target) or in terms of their unique personal identity (in which case differences between the self and other should be more salient, regardless of how the target is described). In other words, when participants' personal identity is made salient, we would expect participants to perceive the target as different to themselves (paralleling the outgroup condition in Study 6), whereas when participants' social identity as an Exeter student is made salient, we would expect participants to perceive the target as similar to themselves (as an ingroup member, paralleling the ingroup condition in Study 6). Consistent with the rationale outlined in Study 6 (i.e., that emotional perspective-taking is likely to have different, or even more productive emotional and behavioural effects when engaged in response to an ingroup relative to an outgroup target, e.g., Dumont et

al., 2003; Stürmer et al., 2005, 2006; Tarrant et al., 2009), we consequently expected that:

> **H1:** When participants' personal (unshared) identity is salient, cognitive perspective-taking would have a positive effect relative to emotional perspective-taking on health-related outcomes (consistent with Studies 1-4). However, when participants' social Exeter student (shared) identity is salient, these relative effects of cognitive and emotional perspective-taking were expected to be either attenuated or reversed.

Method

Participants and Design

One hundred and thirteen University of Exeter students (89 female, 24 male; *M* age = 18.88 years, *SD* = 2.63 years) were recruited during a first year introductory social psychology class. As in all previous studies, only participants who reported not being in a committed, monogamous relationship, and who satisfactorily completed the paragraph writing task were included.[25] The study involved a questionnaire-based, between subjects experimental design in which perspective-taking type (cognitive vs. emotional) and identity salience (social vs. personal) were manipulated. The distribution of participants across the conditions was as follows: Cognitive Personal *n* = 27, Cognitive Exeter *n* = 26, Emotional Personal *n* = 31, Emotional Exeter *n* = 29. The dependent variables were the same as those in the previous study, but also included a

---

[25] Two participants were excluded for making it clear through the paragraph writing task that they were not engaging with the manipulation.

new measure of participants' beliefs about other Exeter students' intentions to get tested for gonorrhoea (see materials subsection).

Materials and Procedure

As noted above, this study was conducted in first year social psychology undergraduate practical classes. The experimenter was introduced as a consumer psychology student who was interested in consumer's evaluations of retail objects and health communications. Participants were informed that, as a result, the session was to split into two parts; the first concerning their perceptions and evaluations of research products, and the second concerning their perceptions and evaluations of health communications. This deception was necessary in order to minimise participants' confusion and suspicions over the presentation of two otherwise distinct questionnaires by the same experimenter within the same class. As is typical, the undergraduate students were split into smaller groups to attend these classes. As the identity salience manipulation involved participants rating retail products presented in a PowerPoint presentation (see below), this manipulation was administered to each smaller class as a whole. However, as the type of perspective-taking was manipulated within the questionnaire (as in previous studies), these were distributed within each class. In other words, every participant in a given class received the same identity salience manipulation, whereas the perspective-taking manipulations were randomly distributed within each class.

Identity salience manipulation. The identity salience manipulation was implemented first. To manipulate the salience of different levels of identity – namely, individual identity versus Exeter student identity – several steps were taken. First, based on the visual manipulation used by Seger, Smith and Mackie (2009), the experimenter

presented participants with a task which ostensibly concerned their evaluations of retail

products. Participants were presented with a PowerPoint consisting of nine photographs

of products that they were told were available in the campus shop, and were asked to: a)

rate these items for their appeal (on a 1-7 scale), and; b) indicate whether or not they

would buy them (yes or no). While three of the photographs were common to both

experimental conditions (a notepad, multi-coloured binders and a black jumper), the

remaining six items constituted the identity salience manipulation and varied between

conditions. These items depicted deliberately similar items (specifically, stationary,

clothing, USB sticks, key-rings, and car bumper stickers) which explicitly (via branding

and slogans) or implicitly (via the nature of the object) made reference to either the

University of Exeter (in the social identity condition) or to individuality/ uniqueness (in

the personal identity condition). Examples of these items are presented in Figure 14.

This figure has been removed by the author of this thesis for copyright reasons

Figure 14 Examples of items presented in the personal and social identity conditions (Study 7).

Photograph of 'The Unique Breed' hoodie. Jabberhockey. Retrieved from http://www.spreadshirt.net/the-unique-breed-hoodies-sweatshirts-C4408A16584771.

Photograph of University of Exeter branded hoodie. Exeter Guild Student shop. Retrieved from http://cdn.shopify.com/s/files/1/0094/4482/products/Chunky_Hood_Denim_Close_medium.jpg?151

To reinforce this priming manipulation, participants then completed a standard identity salience manipulation adapted from the "3 things" paradigm (Haslam et al., 1999; White et al., 2002). Participants in the social identity condition answered the same questions used in Studies 5 and 6 to prime social identity (e.g., "List up to three things that you and most other Exeter University students do relatively often"). Participants in the personal identity condition received questions that referred to individuality rather than group membership (e.g., "List up to three things that you personally do relatively often"). The purpose of this manipulation was to raise the salience of participants' social identity as a University of Exeter student (an identity shared with the target) or to raise the salience of their unique personal identity (an identity not shared with the target).

Perspective-taking manipulation and vignette. After completion of the first task, participants were provided with a second questionnaire which contained the narrative health campaign poster, our perspective-taking manipulation, and dependent variables. In keeping with the salience manipulation, this questionnaire was presented as concerning either Exeter University students' or individuals' "evaluations of sexual health campaigns". To further reinforce the salience manipulation, the University of Exeter logo was either present (social identity salient) or absent (personal identity salient) on the top right hand corner of every page. The only difference between the perspective-taking manipulation in this study and that used in Study 6 was a slight change to the information concerning the identity of the target. In this study, we wanted to avoid overemphasising that the target was an Exeter student so as not to interfere with the manipulation of identity salience. Accordingly, the repeated references to the target being an Exeter student that were present in the Study 6 version of this text were

removed. To ensure that participants did still know that the target was an Exeter student, the sentence concerning the design of the campaign was emboldened and modified to read:

> "As mentioned above, this particular campaign was developed and designed by students from the University of Exeter to present the real life experiences of those Exeter University students".

Measures. The items assessing ease of perspective-taking, emotional responses, IOS, social norms, risk, "general" self-efficacy, "barrier" self-efficacy, and personal test intentions were all similar to those used in the previous study. A further measure assessing participants' beliefs concerning other Exeter students' intentions to get tested was also included. The changes made to the dependent variables and results of the factor analyses are elaborated below.

As in Study 6, participants were first presented with items assessing their responses to the narrative campaign. The ease of perspective-taking items (2 items, α = .72) and IOS scale were the same as those used in Study 6. Items assessing the emotions participants experienced while reading the narrative campaign were also presented. Although the specific emotions examined were identical to those used in the previous study, in the current study the order of these items was randomised and they were merged into one question which asked "To what extent did you feel any of the following emotions when you were reading about Sam's story?". As before, factor analysis was conducted to examine the factor loading of these items (Table 34). The factor analysis revealed a two-factor solution. As expected, the distress items loaded together (with the inclusion of disgust) to form the first factor; 'distress'. As in previous studies, the empathy items (compassion, sympathy, empathy) loaded with pity; however

in the present study these also loaded with indifference (which was reverse-coded). This makes intuitive sense: reverse coded indifference is synonymous with concern, an emotional response reflected in the empathy items. As a result, this factor was labelled 'emotional concern'. As scales constructed from these items were reliable, both distress (9 items, $\alpha = .92$) and emotional concern (5 items, ($\alpha = .78$) were included for further analysis.

Table 34 *Pattern matrix representing item loadings on both emotional response factors (all loadings >.4) (Study 7)*

	1 (Distress)	2 (Emotional concern)
Compassion	-	.87
Distressed	.61	-
Upset	.70	-
Disgust	.81	-
Sympathy	-	.88
Worried	.54	-
Disturbed	.89	-
Indifferent (R)	-	.50
Troubled	.85	-
Empathy	-	.78
Grieved	.79	-
Pity	-	.59
Perturbed	.76	-
Alarmed	.82	-

Next, participants responded to the socio-cognitive health-related outcomes from Studies 5 and 6 (social norms concerning unsafe sex, perceived risk of contracting an STI, self-efficacy concerning gonorrhoea testing, intentions to get tested for gonorrhoea, and attitudes towards STI testing). The social norms and risk items were the same as those used in Study 6. Both were subjected to factor analysis which revealed single-factor solutions for each scale. As a result, a single 'social norms' scale (6 items, $\alpha = .85$) and a single risk scale (5 items, $\alpha = .88$) were constructed.

Although both the "general" self-efficacy and intentions to get tested for gonorrhoea items were the same as those used in Study 6, the context of the "barrier" self-efficacy items was altered. This was reworded from "I could get tested for gonorrhoea…" to "If I was in this situation, I could get tested for gonorrhoea…". As in Studies 4-6, factor analysis of these items revealed a three-factor solution (Table 35): general self-efficacy ($\alpha = .79$), barrier self-efficacy ($\alpha = .89$), and intentions ($\alpha = .97$). All three scales were therefore included for further analysis.

Table 35 *Pattern matrix representing item loadings on all efficacy and intentions factors (all loadings >.4) (Study 7)*

	1 ("Barrier" self-efficacy)	2 (Intentions)	3 ("General" self-efficacy)
"I feel confident that I would know where to go to get tested for gonorrhoea"	-	-	.91
"I feel confident that I would know what to ask for to get tested for gonorrhoea"	-	-	.89
"…even if I had to go to an STD clinic"	.81	-	-
"…even if I had to wait in a queue to get tested"	.79	-	-
"…even if I could only get an appointment at an inconvenient time"	.91	-	-
"…even if I had to make a special appointment to get tested elsewhere"	.93	-	-
"If I did have unprotected sex I would always get tested for chlamydia"	-	.98	-
"If I did not use a condom, I would always get tested for chlamydia"	-	.99	-

Several changes were made to the attitudes measure used in the previous study. Three attitude items were substituted from the questionnaire (rewarding, necessary & essential were replaced with awkward, embarrassing & sensible) as they were deemed inappropriate for the context of STI testing. Furthermore, the order of presentation was randomised. Given the inclusion of new attitude items, factor analysis was conducted to examine their loadings (Table 36). The attitudes loaded onto two reliable factors

reflecting both positive attitudes (5 items, α = .94), and negative attitudes (3 items, α =

.81) attitudes. Both scales were retained for analysis.

Table 36 *Pattern matrix representing item loadings on both attitude factors (all loadings >.4) (Study 7)*

	1 (Positive attitudes)	2 (Negative attitudes)
Beneficial	.94	-
Useful	.94	-
Important	.93	-
Awkward	-	.85
Sensible	.78	-
Embarrassing	-	.89
Worthwhile	.93	-
Unpleasant	-	.82

A novel measure of participants' beliefs about the intentions of other Exeter

students' to get tested for gonorrhoea was also included. While our typical measure of

social norms concerned the likelihood/ approval of Exeter students engaging in unsafe

sex, this scale provided an alternative conceptualisation in terms of students' typical

likelihood of engaging in the recommended behaviour for dealing with STI infection.

For this scale, our two individual intentions to get tested for gonorrhoea items were

adapted and applied to the social group (e.g. "If they did not use a condom, other Exeter

students would always get tested for STIs"; 1 *totally disagree*, to 7 *totally agree*, 2

items, α = .96).

The demographic items used were the same as in previous studies. Finally, when

all participants had completed the questionnaire, the experimenter verbally debriefed the

participants and also provided them with a written debrief.

Results

As acknowledged above, factor analysis confirmed two distinct factor solutions for the positive and negative attitude items. As per our previous analysis, the standardised values were examined and two participants were identified as outliers on the positive attitudes subscale. As a result, this scale was reversed (to correct negative skew) and transformations were applied of which only the reciprocal transformation was successful in eliminating the skew. However, the analysis of these subscales together in a MANCOVA (controlling for sexual orientation, as in previous studies), revealed significant values on all 4 multivariate tests for the interaction (Pilai's Trace, Wilks' Lambda, Hotelling's Trace & Roy's Largest Root, all $ps = .03$). In the absence of an explicit theoretical rationale for their separation, the negative attitudes items were consequently reversed and combined with the (untransformed) positive items to create a total attitudes scale ($\alpha = .71$). This scale was used both in determining outliers on attitudes and the final analysis (in place of the positive and negative emotions subscales).

Four participants were identified as outliers on one or more dependent variable (specifically: distress, "barrier" self-efficacy, and attitudes).[26] As per the standard paradigm, these scales were reversed to correct negative skew (in the case of the attitudes and efficacy scales) prior to transformation. All three of the transformations successfully corrected the outliers for distress and "barrier" self-efficacy. The reciprocal transformations for "barrier" self-efficacy and distress were used to maintain consistency across studies. However, none of the transformations were successful in correcting the outliers on the attitudes scale. Outlier values on the attitude scale were therefore replaced by the mean plus 2 standard deviations (i.e., 3.54) in accordance with

---

[26] After combining the positive and negative attitude subscales together, the same two participants were identified as outliers on the full attitudes scale.

Field's (2005) recommendation. This successfully eliminated the outliers for attitudes.

Thus, in the analysis below, the reciprocal transformations for distress and "barrier"

self-efficacy are used, and the recoded scale is used to assess attitudes (the analyses on

the untransformed variables are included in footnotes where relevant). As in previous

studies, all analyses were conducted using ANCOVAs controlling for sexual

orientation.

Manipulation checks

As in Studies 1-6, the chi-square analyses found a significant relationship

between participants' likelihood of using emotional words and perspective-taking type

for both coders, coder 1 = $\chi^2(1) = 17.59$, $p < .001$, OR = 5.48 ; coder 2 = $\chi^2(1) = 19.29$, p

< .001, OR = 6.06. The contingency tables (Tables 37 & 38) show that, as expected,

participants who received emotional perspective-taking instructions were more likely to

use emotive language than participants who received cognitive instructions. Similarly,

participants who received emotional perspective-taking instructions used more

emotional words in their paragraphs than participants who received cognitive

perspective-taking instructions, coder 1 = $F(1, 108) = 20.33$, $p < .001$, $\eta^2_p = 0.16$; coder

2 = $F(1, 108) = 18.39$, $p < .001$, $\eta^2_p = 0.15$ (inter-coder correlation = $r = .79$, $p < .001$)

(Table 39).

Table 37 *Contingency table for the emotional perspective-taking manipulation check,
coder 1 (Study 7)*

		Perspective-taking type		
		Cognitive	Emotional	Total
Emotional words used?	Yes	21	47	68
	No	32	13	45
	Total	53	60	113

Table 38 *Contingency table for the emotional perspective-taking manipulation check, coder 2 (Study 7)*

		Perspective-taking type		
		Cognitive	Emotional	Total
Emotional words used?	Yes	21	48	69
	No	32	12	44
	Total	53	60	113

As in previous studies, the effects of perspective-taking type on emotions experienced (i.e., emotional concern, distress) were also examined as manipulation checks. No significant effect was observed on ease of perspective-taking, $F(1, 108) = 2.69$, $p = .10$, $\eta^2_p = 0.02$, although there was a non-significant trend suggesting participants in the emotional perspective-taking condition found it easier to take the perspective of the target than participants in the cognitive perspective-taking condition. There were no main effects of perspective-taking type on emotional concern, $F(1, 108) = .46$, $p = .49$, $\eta^2_p = 0.00$, or distress, $F(1, 108) = 1.36$, $p = .25$, $\eta^2_p = 0.01$.[27] Although we would have expected to see greater emotional experience following emotional (relative to cognitive) perspective-taking in previous studies, the absence of effects here could be due to the salience manipulation eliciting different emotional profiles across conditions. As a result, and consistent with previous studies, the emotional word frequency/ use manipulation checks were considered sufficient confirmation that our perspective-taking type manipulation was successful.

---

[27] This effect was also non-significant on the untransformed distress variable, $F(1, 108) = 0.88$, $p = .35$, $\eta^2_p = 0.01$.

Main Analysis

Means and standard errors for all main effects and interactions are presented in Table 39. As in Studies 5 and 6, only the significant and marginal effects are discussed in detail below (all other $Fs < 2.69$, $ps > .10$, $\eta^2_p s < 0.02$).[28,29]

ANCOVA revealed a significant interaction between perspective-taking type and identity salience on experienced distress, $F(1, 108) = 7.07$, $p < .01$, $\eta^2_p = 0.06$ (Figure 15).[30] Simple effects analysis revealed a significant difference between cognitive and emotional perspective-taking in the social (shared) identity condition such that greater distress was experienced by participants given cognitive perspective-taking instructions than participants given emotional perspective-taking instructions, $F(1, 108) = 7.08$, $p < .01$, $\eta^2_p = 0.06$.[31] Conversely, in the personal (unshared) identity condition, the difference between the conditions was not significant, $F(1, 108) = 1.13$, $p = .29$, $\eta^2_p = 0.01$.[32] Given the typically observed relationship between distressing emotion and avoidant behaviour (e.g., Brown & Locker, 2009; Witte, 1992), this pattern provides partial support for H1: although the expected positive effect of cognitive perspective-

---

[28] While there were no significant effects on "barrier" self-efficacy for the re-coded variable, there was a significant interaction on the untransformed variable, $F(1, 108) = 4.17$, $p = .04$, $\eta^2_p = 0.04$. Simple effects analyses revealed marginally greater perceived self-efficacy following cognitive perspective-taking instructions (6.18) relative to emotional perspective-taking instructions (5.64) when participants' personal (unshared) identity was salient, $F(1, 108) = 2.77$, $p = .099$, $\eta^2_p = 0.03$, There was no significant effect of perspective-taking type within the social (shared) identity condition, $F(1, 108) = 1.49$, $p = 0.23$, $\eta^2_p = 0.01$. There was also significantly greater perceived self-efficacy reported following personal (unshared) identity salience (6.18) relative to social (shared) identity salience (5.43) in the cognitive perspective-taking condition, $F(1, 108) = 4.86$, $p = .03$, $\eta^2_p = 0.04$. However, no simple effects were found for the effect of identity salience within the emotional perspective-taking condition, $F(1, 108) = 0.39$, $p = .53$, $\eta^2_p = 0.00$.

[29] The F and p values presented here were for the effect of identity salience on social norms.

[30] This interaction effect was marginal for the untransformed variable, $F(1, 108) = 3.44$, $p = .07$, $\eta^2_p = 0.03$.

[31] This simple effect was marginal for the untransformed variable, $F(1, 108) = 3.77$, $p = .06$, $\eta^2_p = 0.03$.

[32] This simple effect was non-significant for the untransformed variable, $F(1, 108) = 0.424$, $p = .52$, $\eta^2_p = 0.00$.

over emotional perspective-taking was not obtained following personal identity salience, in the context of shared social identity salience, emotional perspective-taking did reduce distress in response to a campaign relative to cognitive perspective-taking, which should facilitate productive campaign effects.

It should also be noted that this interaction was also due to a marginally significant effect of identity salience within both cognitive perspective-taking, $F(1, 108) = 3.20$, $p = .08$, $\eta^2_p = 0.03$, and emotional perspective-taking, $F(1, 108) = 3.88$, $p = .052$, $\eta^2_p = 0.04$).[33] Specifically, cognitive perspective-takers perceived marginally greater distress following social (shared) identity salience relative to personal (unshared) identity salience. However, this effect was marginally reversed within the emotional perspective-taking condition: emotional perspective-takers perceived greater distress following personal (unshared) identity salience relative to social (shared) identity salience.

---

[33] Both of these simple effects were non-significant in the original dataset. Cognitive = $F(1, 108) = 1.28$, $p = .26$, $\eta^2_p = 0.01$; Emotional = $F(1, 108) = 2.24$, $p = .14$, $\eta^2_p = 0.02$.
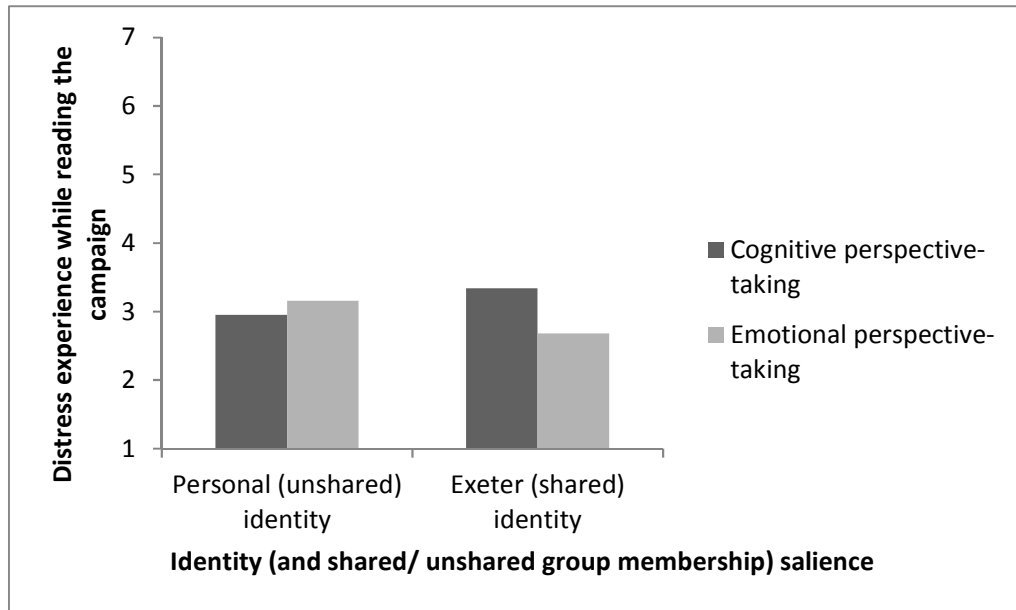
Figure 15 The interaction between perspective-taking type and identity salience on distress experienced when reading the campaign (note: for ease of interpretation, the untransformed variable means were plotted) (Study 7).

Analysis of participants' attitudes towards getting tested for STIs following exposure to the campaign revealed a similar pattern. Specifically, there was a significant interaction between perspective-taking type and identity salience, $F(1, 108) = 7.49$, $p < .01$, $\eta^2_p = 0.07$ (Figure 16). [34] Simple effects analysis revealed a significant difference between cognitive and emotional perspective-taking in the personal (unshared) identity condition, $F(1, 108) = 4.89$, $p = .03$, $\eta^2_p = 0.04$: under these conditions, cognitive perspective-taking was associated with more positive attitudes towards STI testing than emotional perspective taking. This pattern was reversed in the shared identity condition, although the difference between conditions here did not reach conventional levels of significance, $F(1, 108) = 2.75$, $p = .10$, $\eta^2_p = 0.03$. This pattern of effects provide support for H1: when participants do not perceive shared group membership with a narrative target (i.e., following personal identity salience), cognitive perspective-taking

---

[34] This interaction effect is also significant on the non-recoded variable, $F(1, 108) = 3.97$, $p = .05$, $\eta^2_p = 0.04$.

leads to more positive health behaviour-related attitudes relative to emotional

perspective-taking; an effect that is attenuated (and non-significantly reversed) in the

context of shared group membership with the target (i.e., following social identity

salience).

It should also be noted that this interaction was also due to a significant

difference between the identity salience conditions within cognitive perspective-taking,

such that salience of personal (unshared) identity resulted in more positive attitudes

towards STI testing than salience of shared identity, $F(1, 108) = 5.27$, $p = .02$, $\eta^2_p =$

0.05. In the emotional perspective-taking condition, this difference was not significant,

$F(1, 108) = 2.39$, $p = .13$, $\eta^2_p = 0.02$. [35]
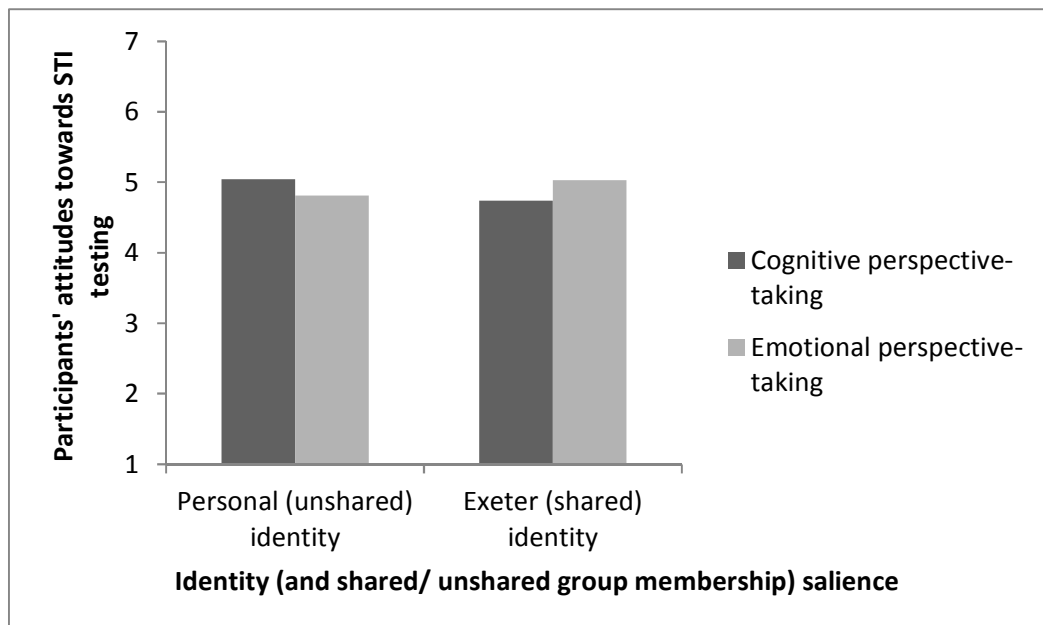
*Figure 16* The interaction between perspective-taking type and identity salience on
attitudes towards STI testing (note: for consistency with the transformed variables, the
data presented here is using the non-recoded attitudes variable) (Study 7).

---

[35] None of these simple effects were significant on the non-recoded variable (all Fs(1, 108) <2.44, ps>
.12, η^2_ps < 0.02.

Finally, there were marginally significant main effects of identity salience on participants' "general" self-efficacy beliefs, $F(1, 108) = 3.76$, $p < .06$, $\eta^2_p = 0.03$, and their perceptions of other Exeter students' behavioural intentions (i.e., protective behaviour norms), $F(1, 107) = 2.77$, $p = .099$, $\eta^2_p = 0.03$. Specifically, when personal (versus social) identity was salient, participants perceived their own efficacy to be higher, but the intentions of other students to be lower. Although neither of these effects were hypothesised, they do make some sense in the context of the identity manipulation, a point that will be discussed below.

Summary. The broad pattern of interaction effects across perceived distress and attitudes towards STI testing provides support for the hypothesis concerning the moderating impact of shared group membership or social identity. That is, when personal identity was salient - a condition under which differences between self and other should have been in focus - cognitive perspective-taking led to significantly more positive attitudes towards STI testing than emotional perspective-taking, reflecting the general pattern observed across Studies 1-4. However, when participants' social identity was salient - a condition under which participants should perceive shared group membership with the target - emotional perspective-taking was instead associated with significantly reduced distress about the campaign, and non-significantly more positive attitudes towards STI testing, relative to cognitive perspective-taking. In short, whether participants perceived shared group membership between themselves and the target via identity salience moderated the relative effects of perspective-taking type on responses to narrative health-campaigns.

Table 39 *Marginal means and standard errors for the effects of perspective-taking type and identity salience on all manipulation checks and dependent variables (controlling for sexual orientation). Superscript used to indicate marginally significant and significant effects (Study 7)*

	Cognitive						Emotional						Total			
	Personal		Social		**Total**		Personal		Social		**Total**		Personal		Social	
	Mean	S.E	Mean	S.E	**Mean**	**S.E**	Mean	S.E	Mean	S.E	**Mean**	**S.E**	**Mean**	**S.E**	**Mean**	**S.E**
Emotional words(coder 1)	0.99	0.32	0.87	0.33	**0.94[a]**	**0.23**	2.08	0.30	2.65	0.31	**2.37[a]**	**0.22**	**1.54**	**0.22**	**1.76**	**0.23**
Emotional words (coder 2)	0.70	0.24	0.76	0.24	**0.73[a]**	**0.17**	1.72	0.22	1.75	0.23	**1.74[a]**	**0.16**	**1.21**	**0.16**	**1.26**	**0.17**
Ease of perspective-taking	3.05	0.25	3.43	0.26	**3.24**	**0.18**	3.54	0.24	3.76	0.24	**3.65**	**0.17**	**3.29**	**0.17**	**3.59**	**0.18**
Emotional concern	4.40	0.23	4.50	0.24	**4.45**	**0.16**	4.34	0.21	4.26	0.22	**4.29**	**0.15**	**4.37**	**0.16**	**4.38**	**0.16**
Distress	2.95	0.24	3.39[a]	0.25	**3.14**	**0.17**	3.16	0.22	2.68[a]	0.23	**2.92**	**0.16**	**3.06**	**0.16**	**3.01**	**0.17**
IOS	3.00	0.29	3.00	0.31	**3.00**	**0.21**	2.61	0.28	2.55	0.29	**2.58**	**0.20**	**2.80**	**0.20**	**2.78**	**0.21**
Social Norms	3.87	0.19	3.46	0.21	**3.67**	**0.14**	3.75	0.19	3.51	0.19	**3.63**	**0.13**	**3.81**	**0.14**	**3.49**	**0.14**
"General" self-efficacy	5.09	0.32	4.06	0.33	**4.58**	**0.23**	4.49	0.30	4.29	0.31	**4.39**	**0.22**	**4.79[a]**	**0.22**	**4.18[a]**	**0.23**
"Barrier" self-efficacy	6.18[ab]	0.24	5.43[b]	0.24	**5.81**	**0.17**	5.64[a]	0.22	5.84	0.23	**5.74**	**0.16**	**5.91**	**0.16**	**5.64**	**0.17**
Test intentions	3.58	0.34	4.03	0.35	**3.80**	**0.24**	3.68	0.32	3.71	0.33	**3.69**	**0.23**	**3.63**	**0.23**	**3.87**	**0.24**
Risk	3.66	0.25	3.28	0.26	**3.47**	**0.18**	3.11	0.24	3.32	0.24	**3.22**	**0.17**	**3.38**	**0.17**	**3.29**	**0.18**
Attitudes	5.04	0.13	4.74	0.14	**4.89**	**0.09**	4.81	0.12	5.03	0.13	**4.92**	**0.09**	**4.92**	**0.09**	**4.89**	**0.09**
Exeter student intentions	3.22	0.24	3.78	0.25	**3.50**	**0.17**	3.20	0.23	3.44	0.23	**3.32**	**0.16**	**3.21[a]**	**0.17**	**3.61[a]**	**0.17**
Recoded attitudes	5.13[ab]	0.11	4.78[b]	0.11	**4.96**	**0.08**	4.81[a]	0.09	5.03	0.10	**4.92**	**0.07**	**4.97**	**0.07**	**4.91**	**0.08**
Reciprocally transformed distress[36]	0.43[b]	0.04	0.33[ab]	0.04	**0.38**	**0.03**	0.37[c]	0.04	0.47[ac]	0.04	**0.42**	**0.03**	**0.40**	**0.03**	**0.40**	**0.03**
Reciprocally transformed "barrier" self-efficacy	0.71	0.06	0.53	0.06	**0.62**	**0.04**	0.59	0.06	0.59	0.06	**0.59**	**0.04**	**0.65**	**0.04**	**0.56**	**0.04**

---

[36] Note that as the distress scale was not reverse coded prior to transformation, the reciprocally transformed values are the inverse of those for the untransformed variable.

Discussion

Study 7 was conducted to explore more directly the moderating role of shared identity on the effects of perspective-taking in response to a narrative health campaign. To achieve this, we introduced a manipulation that addressed the salience of different identities in the perceivers as they contemplated the same target. The manipulation of personal versus social identity used in this study framed the relationship between the perceiver and target in terms of either similarities (as a result of the salient shared social identity) or differences (as a result of the salient personal identities). Consistent with previous studies (1-4) we expected that cognitive perspective-taking would be superior to emotional perspective taking in terms of facilitating positive health-related outcomes, but only when personal (unshared) identity was salient. Conversely, and consistent with the overall pattern in Study 5, we expected that in the context of a shared social identity, these differences between cognitive and emotional perspective-taking on health-related outcomes would be attenuated, or even reversed. This expectation was based on the literature suggesting that altering individuals' self-categorisations in relation to a target can influence their emotional experiences and even behavioural intentions (e.g., Dumont et al., 2003; Yzerbyt et al., 2003), and the literature showing that emotional experiences are often stronger and (in the case of empathy) more productive within rather than across identity boundaries (e.g., Brown et al., 2006; Stürmer et al., 2005, 2006; Tarrant et al., 2009).

The significant interactions observed on distress experienced in response to the campaign, and attitudes towards STI testing both provide partial support for this hypothesis. Specifically, when personal identity was salient, attitudes towards STI testing reported after the campaign were more positive following cognitive perspective taking rather than emotional perspective taking, a pattern that was attenuated (and non-significantly reversed) when social identity was instead salient. Similarly, experienced

distress was lower following emotional perspective-taking relative to cognitive perspective taking, but only when social identity was salient. Although the pattern on distress experienced in response to the narrative campaign is somewhat different to that observed for attitudes, these findings also suggest that the conditions under which distress is reduced (emotional perspective-taking plus shared identity) are the conditions under which emotional perspective-taking becomes less of a barrier to positive campaign effects. In short, these parallel interactions provide the first tentative support for our contention that identity salience (or shared group membership) moderates the relative impact of cognitive and emotional perspective-taking on health-related outcomes. While cognitive perspective-taking leads to more positive effects on health-related outcomes (i.e., more positive attitudes) than emotional perspective-taking when personal (unshared) identity is salient, within the context of shared social identity these effects are reduced, and even non-significantly reversed. This is consistent with the literature suggesting that different emotional and emotion-consistent behavioural responses are elicited in response to an ingroup rather than outgroup individual (e.g., Dumont et al., 2003; Gordijn et al., 2001; Yzerbyt et al., 2003).

The main effects of the identity salience manipulation on individual efficacy and perceived collective intentions are also worth briefly considering. When considered together, these effects suggest that participants in the social identity condition responded more positively on group-based measures (i.e., perceiving fellow Exeter students to be more likely to get tested for STIs) whereas those in the personal identity condition responded more positively to the individually focused "general" self-efficacy items (i.e., perceiving their individual self to be more efficacious). In some sense then, the patterns on these items confirm the substance of the identity salience manipulation and could be seen as a manipulation check. These manipulation-consistent main effects,

alongside the emotional engagement manipulation check, leave us confident that both manipulations were successful.

Finally, despite the hypothesis-consistent interaction effects on attitudes towards STI testing and perceived distress, these effects need to be understood in the broader context of null effects in this Study. That is, these effects were observed on only two of the dependent variables, with no effects on variables implicated in the earlier studies (i.e., behavioural intentions, social norms, and self-efficacy). As a consequence, caution should be taken when discussing any practical or theoretical implications of this Study; it seems likely that further - as yet untested - mediators and moderators may exist that could help to strengthen and clarify consistent effects of perspective-taking type on health-related responses to narrative health campaigns. Suggestions for further research to identify and explore such clarifying mechanisms are presented in Chapter 7.

Conclusion

On the basis of the interaction effects observed in this study, it appears likely that methodological changes to the questionnaire in Study 5 may have led to the reversed direction of effects; specifically by eliciting a stronger sense of shared identity with the target (i.e., as an Exeter student) rather than the weaker, ambiguous categorisation of the target (i.e., as a non-specific university student) that was likely present in Studies 1-4. The results also shed more light on the inconsistent effects of narrative health campaigns outlined in Chapter 1. That is, while we have previously suggested that absolute differences in the type of perspective-taking elicited by existing narrative health campaigns could be responsible for their inconsistent effects, it appears that this assertion was incomplete. Although the type of perspective-taking induced is important, this should be considered in light of the identity salient when the respondent

engages with the campaign. Specifically, if a campaign encourages cognitive perspective-taking of a narrative campaign we would suggest that it should also attempt to induce a more personal identity in order to ensure effectiveness. However, if a campaign aims to encourage emotional perspective-taking it should also attempt to induce a more inclusive group based identity, or at least an identity that is clearly shared by the perceiver and the target of their perspective taking.

General Discussion

As acknowledged in the introduction to this Chapter, our previous studies have suggested a weak, but almost unilaterally positive effect of activating cognitive perspective-taking in relation to a narrative health campaign on health-related outcomes relative to emotional perspective-taking. These findings supported the anticipated straightforward relationship between cognitive perspective-taking and responses to narrative health campaigns (see Chapter 3), and were consistent with the literature suggesting that emotional experience in response to health campaigns can backfire (e.g., Brown & Locker, 2009; Witte, 1992). However, the literature reviewed in Chapter 3 also suggests a more complex, context dependent relationship between emotional engagement and health behaviour (e.g., Consedine et al., 2004; Consedine & Moskowitz, 2007; Moore et al., 2004). In other words, in addition to the backfiring effects, research also demonstrates more positive effects of emotional experience on health related outcomes (e.g., Biener et al., 2006; Brown & Basil, 1995; Campbell & Babrow, 2004). A post-hoc moderation analysis conducted on Study 4 provided tentative support for these positive effects: Emotional perspective-taking led to greater intentions to get tested for chlamydia than cognitive perspective-taking when participants perceived high levels of concern about chlamydia testing. This suggests that the effects of cognitive and emotional perspective-taking on health-related outcomes

may be conditional. This final series of studies sought to identify some of the conditions under which emotional perspective-taking may be more, or at least as, effective for health promotion as cognitive perspective-taking by looking beyond the type of perspective-taking to the nature of the relationship between the target and the perceiver.

Three different approaches to addressing the relationship between perceiver and target were undertaken in the studies contained in this Chapter. First we tested whether the focus of perspective-taking (i.e., encouraging participants to focus on either what they themselves would feel/do or what the target would feel/ do) could moderate the effects of perspective-taking type. Specifically we expected that emotional perspective-taking (in relation to cognitive perspective-taking) would only be maladaptive when participants were self-focused as a result of the increased distress likely to be associated with this approach (Batson et al., 1997c). Conversely, this pattern of effects was expected to be eliminated when the participants engaged in other-focused perspective-taking. While this Study revealed some weak interaction effects consistent with this suggestion, the broad picture of findings suggested that emotional perspective-taking was more effective (both in terms of reducing distress and increasing intentions) than cognitive perspective-taking irrespective of participants' focus. This effect was inconsistent with the broad pattern across Studies 1-4, but consistent with the positive consequences of emotional engagement in the literature (e.g., Campbell & Babrow, 2004; Dunlop et al., 2008).

Methodological changes made to the design in Study 5 to more explicitly emphasise the shared group membership between the participant and narrative target were suggested as an explanation for these effects. Previous literature has demonstrated that not only are different emotional and behavioural reactions to a target elicited

depending on salient group membership, these reactions can be both stronger and (in the case of empathy) more productive in relation to an ingroup rather than outgroup target (e.g., Dumont et al., 2003; Gordijn et al., 2001; Stürmer et al., 2005, 2006; Tarrant et al., 2009; Yzerbyt et al., 2003). Thus, we proposed that the positive health-related effects of emotional perspective-taking (relative to cognitive perspective-taking) observed in Study 5 may be due to the likely heightened perception of shared group identity with the target in this study relative to Studies 1-4. To explore this, a follow up study was conducted in which the group membership of the target was manipulated. While the results of this study failed to support the hypothesised moderating effect, reflection on the methodology suggested that this probably did not represent a clean manipulation of shared group membership. That is, although the narrative target was identified as belonging to a different university in the outgroup membership condition; there was still a shared general student identity available that may have masked the effects.

In order to provide a more thorough test of the shared group membership hypothesis, a final study was conducted in which participants' own identity was manipulated rather than that of the target. This manipulation was designed to make either participants' Exeter student social identity salient (thereby prompting a shared identity with the target who was also presented as an Exeter student) or to make participants' distinct personal identity salient (thereby prompting participants to see themselves as distinct from the target regardless of the fact that they were also an Exeter student). In this study we found that cognitive perspective-taking led to more positive attitudes towards STI testing than emotional perspective-taking under conditions of personal identity salience, an effect that disappeared (and was non-significantly reversed) when the shared social identity was made salient. Similarly, emotional perspective-taking elicited weaker emotional distress (an emotion frequently associated

with defensive avoidance, e.g., Brown & Locker, 2009) than cognitive perspective-taking when shared group membership was salient, an effect that disappeared in the personal identity condition.

Although we did not observe similar interactions on the previously central measures of intentions, efficacy, or social norms, the overall pattern in Study 7 was broadly consistent with the hypothesis: cognitive perspective-taking led to more positive effects on a typically adaptive health-related outcome (i.e., attitudes towards STI testing) than emotional perspective-taking following personal identity salience, an effect consistent with Studies 1-4. In contrast, emotional perspective-taking reduced the experience of distress (an emotion frequently associated with defensive responding, e.g., Brown & Locker, 2009; Brown & Smith, 2007), and led to non-significantly more positive attitudes towards STI testing than cognitive perspective-taking following shared social identity salience, effects consistent with Study 5.However, despite these hypothesis consistent effects it is important to acknowledge that although we did expect stronger, more productive emotions to be experienced in response to emotional perspective-taking of an explicitly ingroup narrative target; neither Studies 6 nor 7 shed any light on the specific emotions underlying the effects. Suggestions for further research to explore both the discrete emotions experienced in response to narrative health campaigns, and the consequences of these for the effects of perspective-taking are discussed in the next Chapter (Chapter 7).

Nevertheless, these findings provide support for the suggestion that the reversed effects observed in Study 5 may have been due to methodological changes increasing the salience of an explicit, shared social categorisation with the target over the weaker, more ambiguous 'university student' identity likely activated in Studies 1-4. It is, however, important to acknowledge here that although these methodological changes

were made in an attempt to strengthen the perspective-taking effects by targeting an explicit, relevant ingroup identity; they did involve sacrificing some of the ecological validity of our studies. That is, the campaign used in Studies 5-7 targeted a more exclusive social identity, whereas narrative health campaigns typically have a broader, more inclusive focus to ensure far-reaching campaign relevance. As a consequence, the findings of these studies may be less relevant to understanding the mechanisms underlying general, existing narrative health campaigns. Thus, although these findings may be useful for developing more exclusively focused, future health promotion campaigns (particularly those that seek to engage emotional perspective-taking in the recipient), caution is recommended when applying these findings directly to existing narrative health campaigns.

Conclusion

Throughout the literature review and PhD rationale (Chapters 1-3), we suggested that the inconsistent effects of narrative health campaigns could be due to such campaigns eliciting different types of perspective-taking in the perceiver. Specifically we asserted that, in light of the complex relationship between emotional experience and health-related outcomes, campaigns that elicited cognitive perspective-taking would be more effective than those that elicited emotional perspective-taking. While the first two empirical Chapters broadly supported this contention, the results of the current Chapter suggest that this assertion may itself be too simplistic. In particular, the results of Study 7 suggest that differences in the effects of cognitive and emotional perspective-taking on health-related outcomes are dependent upon the specific identity elicited, and how this frames the relationship between the self and the target of perspective-taking. Although cognitive perspective-taking may generally be more effective at ensuring the success of narrative health campaigns, in the context of an explicitly shared identity

between campaign recipients and the narrative target, emotional perspective-taking

might actually facilitate positive effects, or at the very least not lead to negative effects.

Chapter 7 General Discussion

"The accountancy firm Price Waterhouse Coopers [have] warned that

even if the NHS continues to make drastic savings up to 2023, the

potential [funding] shortfall could be as high as £38bn…Proposals to cut

costs in the health service have included encouraging patients to take

more responsibility for their own health."

(Cooper, 2013, *The Independent*)

As the above quote highlights, the detrimental effect of increasing costs in the

National Health Service (NHS) could be reduced by encouraging individuals to engage

in health promoting behaviour. In the context of sexual health, sources cited by the

Department of Health (2009) note that women with untreated chlamydia can suffer

further health complications that cost the NHS £29 million per year. The ease with

which chlamydia can be prevented and diagnosed reinforces the importance of

developing effective sexual health promotion campaigns that not only raise public

awareness of STIs, but also prompt people to engage in safe sex behaviours. Thus, as

outlined in Chapter 1, maximising the utility of future health interventions could

simultaneously improve the health of the population and reduce the financial burden on

healthcare services. In light of the recent rise in the use of narrative forms of health

promotion (Hinyard & Kreuter, 2007), this thesis was concerned with identifying and

exploring the processes underlying the success of this particular form of health

campaign.

Across the seven studies reported in this thesis, we manipulated the type of

perspective-taking encouraged when individuals engaged with a narrative health

promotion campaign, and observed the impact of this on various health-related, socio-cognitive variables. Following a review of the extant literature, I suggested that the inconsistent utility of narrative health campaigns (e.g., Allen & Preiss, 1997; de Wit et al., 2008; see Hinyard & Kreuter's, 2007 review) might be due to the variable consequences of encouraging emotional engagement (e.g., via emotional perspective-taking) with a campaign narrative. In contrast, encouraging cognitive perspective-taking seemed likely to have more straightforwardly positive consequences. As a result, the primary aim of this research was to examine whether encouraging cognitive perspective-taking (i.e., imagining "what you yourself would do" if you were the person in the narrative) or emotional perspective-taking (i.e., imagining "how you yourself would feel" if you were the person in the narrative) in response to a first person health narrative would lead to the most positive health-related outcomes. In this final discussion Chapter, I present a detailed summary of the findings and discuss both the theoretical implications and practical applications of this research. Despite the general consistency of the overarching pattern of findings, many of the individual effects were weak. Because of this, several of the points made in this Chapter are necessarily only suggestive and should be considered with this in mind.

Summary of findings

The first empirical Chapter (Chapter 4) presented two experimental studies. These studies aimed to explore: a) whether there were differences in the effects of cognitive and emotional perspective-taking for health promotion, and; b) whether these effects could explain the inconsistent effects of narrative health campaigns. A broadly consistent pattern was observed: compared to emotional perspective-taking, cognitive perspective-taking in response to a narrative health campaign reduced risky normative

perceptions (both studies) and increased health promoting behavioural intentions (Study 1). Moreover, in Study 2, instructing participants to engage in cognitive perspective-taking in response to a health campaign reduced risky normative perceptions relative to presenting the campaign with no reading instructions, with no difference between encouraging emotional perspective-taking and this control. In this sense, cognitive perspective-taking seemed beneficial for eliciting the positive, health-promoting effects of narrative health campaigns relative to either emotional perspective-taking or presenting the campaign with no reading instructions. This was consistent with the central suggestion that differences in the type of perspective-taking elicited by narrative health campaigns may be responsible for the variable effects of these campaigns. More specifically, Studies 1 and 2 supported the notion that cognitive perspective-taking might represent a more effective method of encouraging the positive health-related outcomes of narrative campaigns than the more complex and variable processes associated with emotional perspective-taking (e.g., Brown & Basil, 1995; Brown & Locker, 2009; Consedine et al., 2004).

Having established the basic effect, the second phase of research consisted of two studies that attempted to identify the psychological processes underlying these effects (Chapter 5). Given the importance of self-efficacy in health promotion (e.g., Fishbein, 2000; Maddux & Rogers, 1982), and its relationship with emotional engagement (e.g., Bandura, 1998; Lench & Levine, 2005; Salovey & Birnbaum, 1989; Witte, 1992), Studies 3 and 4 focused on self-efficacy as a potential mediator of the perspective-taking effects. More specifically, we explored whether cognitive (versus emotional) perspective taking might enhance (versus undermine) feelings of self-efficacy in relation to a health promoting behaviour. The results of these two studies showed significant differences between perspective-taking conditions on feelings of self-efficacy and, despite the absence of any direct effects, reliable indirect effects on

intentions through these self-efficacy perceptions. In other words, cognitive perspective-taking increased participants' perceived self-efficacy about chlamydia testing relative to emotional perspective-taking, which in turn positively influenced participants' intentions to get tested. However, Study 4 revealed no significant differences in efficacy perceptions between either cognitive or emotional perspective-taking and a no-narrative control condition. As a result, no firm conclusions could be drawn as to the specific direction of the effect of perspective-taking on self-efficacy. That is, although cognitive perspective-taking was superior to emotional perspective-taking in these studies, we are unable to firmly conclude whether this was due to emotional perspective-taking reducing perceptions of efficacy (based on, for example, Lench & Levine, 2005; Pajares, 2002; Salovey & Birnbaum, 1989) or cognitive perspective-taking increasing them (consistent with the roles of vicarious modelling and cognitive rehearsal, e.g., Bandura, 1998, Hinyard & Kreuter, 2007; Maibach & Flora, 1993).

Despite the broadly consistent pattern across Studies 1-4, the typically weak or indirect nature of these effects suggested that additional factors might underlie the relative effects of cognitive and emotional perspective-taking. A post-hoc moderation analysis conducted in Study 4 provided some support for this idea: A significant interaction was observed between perspective-taking type and specific emotional experiences on behavioural intentions. When feelings of concern about STI testing were low, cognitive perspective-taking was associated with more positive intentions to get tested than emotional perspective-taking, an effect that was reversed among participants who experienced higher concern about STI testing. This moderation effect suggests that the degree to which emotional perspective-taking is effective or otherwise is contingent on other factors, for example the specific emotions that perspective-taking arouses – a suggestion that is consistent with the variable effects of emotional engagement on

health-related outcomes reviewed in Chapter 3 (e.g., Consedine et al., 2004; Consedine & Moskowitz, 2007; Dunlop et al., 2008).

Building on this finding, a final 3 studies (reported in Chapter 6) were conducted to explore more closely the conditions under which cognitive and emotional perspective-taking might exert different effects on health-related outcomes. Specifically, we examined whether features of the relationship between the perspective-taker and target may act as a moderator. First, Study 5 explored the potential for variations in perspective-taking focus – that is, considering the narrative from the target's perspective (i.e., other-focus) versus imagining the events outlined in the narrative happening to the self (i.e., self-focus), (e.g., Batson et al., 1997c) – in determining the outcome of emotional perspective-taking. Here, we reasoned that taking a self-focus during emotional perspective taking (i.e., imagine how you would feel in this situation) would amplify personal distress as well as empathy (as per Batson et al., 1997c), and, through this, defensive avoidance (e.g., Brown & Locker, 2009). However, adopting an other-focus during emotional perspective-taking (i.e., imagine how the target feels in this situation) was expected to elicit empathy without personal distress (Batson et al., 1997c), and therefore reduce any distress-induced responses that may have been responsible for the relative effects of cognitive and emotional perspective-taking observed across Studies 1-4. Cognitive perspective-taking, in contrast, has previously been found to be less responsive to variations in self- versus other-focus (Davis et al., 1996; Galinsky & Moskowitz, 2000) and, as a result, no moderating effect was expected under these conditions. This study revealed some evidence of the expected moderation effect on perceptions of personal risk (cognitive perspective-taking led to greater perceived risk of contracting an STI than emotional perspective-taking under conditions of self-focus, a difference that was not observed following other-focus), but the overarching pattern in Study 5 was one in which emotional perspective-taking was

superior to cognitive perspective-taking irrespective of focus. In contrast to the previous studies, emotional perspective-taking both reduced personal distress in response to the health campaign, and increased participants' behavioural intentions (to get tested for gonorrhoea) relative to cognitive perspective-taking.

In response to these unexpected findings, we considered whether changes to the methodology in Study 5 might have been responsible for the observed pattern. Specifically, in this study more explicit attempts were made to ensure the salience of a University of Exeter identity for both the participant and target relative to the general university student identity encouraged in Studies 1-4 (e.g., by including more explicit, salience items and presenting the University of Exeter logo on every page). As a consequence, it seemed plausible that the materials used in Study 5 may have made shared group membership between participants and the narrative campaign salient in a way that was not the case for previous studies. Moreover, prior research has demonstrated that emotional experiences and behavioural responses consistent with these emotions vary depending upon the group membership of the target (Dumont et al., 2003; Gordijn et al., 2001; Yzerbyt et al., 2003), with some research suggesting emotional responses are stronger, or even (in the case of empathy) more productive in response to an ingroup over an outgroup target (e.g., Tarrant et al., 2009; Stürmer et al., 2005, 2006). Therefore, we reasoned that to the extent that emotional engagement can sometimes have positive implications for the success of persuasive campaigns and health promotion (as in Study 5, e.g., Brown & Basil, 1995), this is more likely when there is shared group membership between the perceiver and target. To test this possibility, Study 6 explicitly manipulated the group membership of the narrative target and explored whether this moderated any effects of perspective-taking type, again with a specific interest in the effects of emotional perspective-taking. However, the results of

this study were again inconclusive. Indeed, this study produced very little in terms of clear findings.

Again, in response to these unexpected findings, we considered aspects of the methodology that may have been responsible for undermining the intended manipulations. As the group membership manipulation used in Study 6 involved presenting the target as a Newcastle student versus an Exeter student (i.e., unshared versus shared group membership on the basis of university), we could not rule out the possibility that a higher-order shared group membership (i.e., based on shared university student status) was active across conditions. The availability of this common categorisation may have obscured any effects by minimising variation between conditions on the intended dimension (i.e., shared vs. unshared group membership). Accordingly, Study 7 attempted to improve and strengthen the manipulation of shared versus unshared group membership.

To achieve this, Study 7 kept constant the target's Exeter student identity but varied each participant's own salient identity. Specifically, the manipulation either activated participants' Exeter student social identity (and consequently shared group membership with the target), or their own unique, personal (unshared) identity. This study revealed interaction effects on both the experience of distress in response to the campaign, and attitudes towards STI testing; a pattern of effects consistent with the hypothesis. In the context of personal unshared identity, cognitive perspective-taking was associated with more positive attitudes towards STI testing (a likely positive consequence given the predictive role of attitudes for health behaviour, e.g., Fishbein, 2000) relative to emotional perspective-taking. However, when shared social identity was salient, emotional perspective-taking resulted in weaker personal distress (an emotional response frequently associated with defensive avoidance, e.g., Brown &

Locker, 2009), and non-significantly more positive attitudes towards STI testing than cognitive perspective-taking. This overall pattern of interactions suggests that although cognitive perspective has more positive health-related effects than emotional perspective-taking under conditions of personal (unshared) identity salience, emotional perspective-taking seems to have more positive effects (or at least an absence of negative effects) relative to cognitive perspective-taking under conditions of social (shared) identity salience.

Taken together, the results presented in Chapter 6 provide some evidence that cognitive and emotional perspective-taking can each facilitate the success of narrative health campaigns, albeit under different circumstances. Specifically, cognitive perspective-taking appears to be more effective than emotional perspective-taking in contexts where there is weak or no clearly-shared social identity between the recipient of the campaign (perspective-taker) and the target. Conversely, in the context of an explicitly salient, shared group membership that includes both perceiver and target, these differential effects of cognitive versus emotional perspective taking seem to be attenuated or even reversed.

To summarise, the initial studies conducted within this thesis (Studies 1-4) suggest that engaging in cognitive perspective-taking in response to a narrative health promotion campaign may be preferable to engaging in emotional perspective-taking. However, subsequent studies (Studies 5-7) suggest that this assertion may be incomplete. Instead the health impact of encouraging different types of perspective-taking in response to narrative health campaigns appear to depend, at least in part, upon the relationships between the perceiver and target of perspective-taking. The theoretical and practical implications of these findings are discussed in the following sections.

Theoretical Implications

Mirroring the structure of my perspective-taking literature review (Chapter 2), in the following section I separately discuss the theoretical implications of this thesis as they relate to both the cognitive and emotional perspective-taking literature. Through this discussion of theoretical implications, I hope to emphasise the importance of viewing the thesis not simply as a collection of empirical findings, but more broadly in terms of the unique contribution it makes to the understanding of cognitive and emotional perspective-taking, and the processes associated with these in different contexts.

Cognitive perspective-taking implications. When discussing the consequences of engaging in cognitive perspective-taking in response to a narrative health campaign in Chapter 3, I drew on the notion that an increase in perceived similarity to, or overlap with, a target individual could play a part in the positive effects of narrative health campaigns. This assertion was consistent not only with my own previous research (Weston & Tarrant, 2009) and the typical processes underlying cognitive perspective-taking (e.g., Galinsky et al., 2005; Galinsky & Moskowitz, 2000), but also with research into narrative health promotion more directly (e.g., Evers et al., 1997). Indeed, in their discussions of the mechanisms underlying the effectiveness of narrative health campaigns, Hinyard and Kreuter (2007) and Kreuter et al. (2007) both stress the importance of similarity to (or identification with) campaign characters for ensuring positive effects. Despite these ideas in the literature, in the present work no theoretically important effects of type of perspective-taking were found on a measure of similarity to, or overlap with, the narrative target (Studies 5-7).

The lack of effects of perspective-taking type on, or through, cognitive overlap in this thesis has implications for the broad perspective-taking literature. That is, although

self-other overlap is posited as the central mechanism underlying the effects of cognitive perspective-taking for strengthening social bonds (e.g., Galinsky et al., 2005; 2008b; Galinsky & Moskowitz, 2000), this does not appear to be the central mechanism behind the effects of cognitive perspective-taking in the context of health promotion. Methodological limitations of the inclusion of other in self (IOS) scale aside (see Limitations subsection), this could be due to the typical outcomes in previous perspective-taking work when compared to this thesis. Specifically, the research reviewed in Chapter 2 typically applied cognitive perspective-taking to the reduction of intergroup stereotyping, derogation, and discrimination (e.g., Galinsky & Moskowitz, 2000; Berndsen & McGarty, 2012; Todd et al., 2012), and to ensuring the success of interpersonal or intergroup negotiations (e.g., Galinsky et al., 2008a). When perspective-taking has been applied to the context of health it has typically focused on the quality of the relationship between healthcare providers and patients, or the quality of care given to patients (e.g., Blatt et al., 2010; Drwecki et al., 2011). Indeed, even when cognitive perspective-taking research has demonstrated an influence over individual behaviour (i.e., behavioural mimicry) these effects have been interpreted in the context of improving social bonds (e.g., Galinsky et al., 2005). In other words, much typical cognitive perspective-taking research has been conducted in the context of relationships, or behaviour, between people. In contrast, the studies reported in this thesis have typically focused on behaviour of the self in isolation from others. As a consequence, it makes sense that overlap, a mechanism concerning the perspective-takers relationship with a target, may not be the primary mediator of these individually-oriented health-related outcomes. It follows from this assertion that more individualistic mechanisms may underlie the effects of cognitive perspective-taking in such intra-personal contexts. One such alternative mechanism, self-efficacy, was identified and tested in Studies 3 and 4. The personally-focused nature of self-efficacy (i.e., assessing

participants' individual perceptions of their own ability to engage in a specific

behaviour) and its associated mediational role in supporting intentions is consistent with

the suggestion that a more individualistic mechanism may underlie the positive effects

of cognitive perspective-taking in the context of health promotion.

The broader theoretical implications of the effects on, and through, efficacy

become apparent when the established role of efficacy in health promotion is

considered. As acknowledged in Chapter 5, efficacy is afforded a central role in several

theoretical models of health behaviour change (e.g., Bandura, 1977, 1998; Maddux &

Rogers, 1982; Fishbein, 2000). Of particular relevance here, Bandura's (e.g., 1977;

1998) social cognitive theory of health promotion considers vicarious experience as a

useful method for enhancing self-efficacy. Observing another individual successfully

engaging in a specific behaviour should increase the observer's confidence in his or her

own ability to enact that behaviour. Along similar lines, Hinyard and Kreuter (2007)

argued that narratives provide the opportunity to model a recommended behaviour, and

through this to increase the appeal of such behaviour. Although our studies did not

present the narrative target modelling a specific behaviour, there are clear parallels

between our findings and the research concerning cognitive rehearsal and perceived

self-efficacy. For example, recall research by Maibach and Flora (1993) which

demonstrated that giving participants instructions to mentally rehearse safe-sex

behaviours following a video in which these behaviours were modelled increased

perceived self-efficacy for these behaviours over simply presenting the video. Thus, this

thesis further extends previous research by demonstrating that the perception of

heightened self-efficacy - a mechanism central to the success of narrative campaigns - is

more likely to be experienced following instructions to engage in cognitive perspective-

taking in response to a campaign relative to engaging emotional perspective-taking. Of

course, it should be noted that the evidence obtained for this mediating mechanism in

Studies 3 and 4 was not replicated across Studies 5-7. Thus, caution against over-interpreting the evidence for this mechanism, and its importance for understanding the effects of cognitive perspective-taking in self-oriented domains relative to the more traditional mechanism of self-other overlap, is advised. Further research is clearly needed to fully establish the importance of self-efficacy to perspective-taking effects in this domain.

One further theoretical implication of this thesis for research on cognitive perspective-taking concerns differences between the conceptualisation of cognitive perspective-taking typically employed in the literature, and that employed in this thesis. That is, while perspective-taking is traditionally used to enhance understanding of, or a sense of connection with, other individuals (e.g., Galinsky et al., 2005), in the current studies, perspective-taking was used to encourage participants to contrast away from the behaviour of others (i.e., engaging in unsafe sex). This difference is most clearly reflected in the literature demonstrating the effect of perspective-taking on behaviour. As noted in Chapter 2, perspective-taking has previously been demonstrated to influence behaviour by increasing behavioural mimicry of the target by the perspective-taker (e.g., Galinsky et al., 2008b). In contrast, perspective-taking in this thesis was deemed to have been more successful when the perspective-takers deviated from the original, undesirable behaviour of the target. This raises the possibility that although perspective-taking can improve intergroup relations via behavioural mimicry, it could potentially also be employed to encourage contrast away from the undesirable behaviour of the target in the context of health promotion. However, in light of the weak and often inconsistent effects in this thesis (particularly on behavioural intentions) further research is needed to more explicitly explore both the potential for perspective-taking to enact behavioural contrast as well as behavioural mimicry, and the contexts under which these relative effects occur.

Emotional perspective-taking implications. Just as the typically observed effects of cognitive perspective-taking via self-other overlap were not replicated in this thesis, the role of empathy in the success of emotional perspective-taking was also not replicated. That is, there were no consistent or theoretically important effects of empathy in line with the literature suggesting empathy as a key factor in persuasive communications (e.g., Campbell & Babrow, 2004; Shen, 2010), or the literature suggesting the experience of empathy as central to the effects of emotional perspective-taking (e.g. Batson et al., 1997a; 2002). However, across the studies reported here, we did observe differences in the effects of cognitive and emotional perspective-taking on emotional outcomes; for instance, in terms of the use of emotive language in the paragraph writing tasks. Although the frequency of emotional language was used simply as a manipulation check, in the absence of clear differences in reported empathy, this data suggests that emotional perspective-taking is activating a broader range of emotional engagement than just empathy, a finding that is consistent with the work of, for example, Batson et al. (1997c) and Dovidio et al. (2004).

Although the literature on health promotion also suggests that broad emotional experience impacts upon health promotion efforts (e.g., Biener et al., 2006; Brown & Basil, 1995; Dunlop et al., 2008), one emotion that is especially relevant in this setting is the experience of fear and distress (e.g., Brown & Locker, 2009; Brown & Smith, 2007; Witte, 1992). Researchers concerned with empathy and perspective-taking have also considered the importance of personal distress. For example, Davis (1983, p.12) noted that empathic concern and personal distress are distinct constructs, with empathic concern "assessing the degree to which the respondents experience feelings of warmth, compassion, and concern for the observed individual" while personal distress "measures the individual's own feelings of fear, apprehension and discomfort at witnessing the negative experiences of others". That is, empathic concern is other-oriented while

personal distress is more self-oriented, a distinction underlined by Batson et al (1983) who found that while empathy led to altruistic motivation, personal distress led to more egoistic motivation. In Study 7 a cursory examination of Figures 13 and 14 suggests that the conditions under which personal distress was highest (regardless of perspective-taking type) were also the conditions under which attitudes towards STI testing were least positive. This pattern is suggestive of defensive avoidance: when individuals experienced negative personal emotions in response to the narrative, they distanced themselves from the issue, in this case by reporting weaker attitudes towards STI testing (e.g., Brown & Locker, 2009; Brown & Smith, 2007; Sweeney et al., 2010). However, further work would be required to explicitly test this speculative point. Nevertheless, as for the mechanisms behind cognitive perspective-taking, in the context of individual health behaviour change, emotions other than empathy may be more relevant to determining perspective-taking effects than those typically implicated in contexts that involve interpersonal or intergroup responses. In other words, using emotional perspective-taking to influence more individually-oriented emotional responses to a narrative campaign (such as personal distress) may be more effective in the context of personally relevant health behaviour than influencing other-oriented emotional responses (such as empathy). This suggestion is also consistent with the claim made in the previous subsection that the effects of perspective-taking, in the context of health promotion, may be less focused on establishing a connection with the target (for which other-oriented empathy is directly relevant), and more focused on encouraging divergence from the undesirable behaviour of the target. However, as previously noted, further research is required to explicitly test this speculative contention.

Summary. First and foremost, this thesis has established that both cognitive and emotional perspective-taking can influence individuals' health-related responses to a narrative health campaign, albeit via different processes. Specifically, this thesis

suggests that neither self-other overlap nor empathy (the two processes through which perspective-taking typically influences interpersonal and intergroup relations) are the primary mechanisms underlying the effects of perspective-taking on health related-outcomes. Instead, more personally-oriented outcomes (e.g., emotional experiences and self-efficacy) appear to play a role in this context. This suggests that the processes through which both cognitive and emotional perspective-taking influence outcomes *may be dependent upon the nature of these outcomes*: other-focused overlap and empathy could be important for ensuring positive interpersonal and intergroup relations, whereas more individually-focused emotions and self-efficacy may be implicated in influencing more self-oriented outcomes. Moreover, this thesis tentatively suggests that the specific effects of perspective-taking may depend on the nature of the perspective-taking that is activated. Although cognitive and emotional perspective-taking are traditionally employed to improve intergroup or interpersonal relationships, in the context of health behaviour perspective-taking may instead be used to encourage deviation from the undesirable or unhealthy behaviours of the target. That is, perspective-taking could be a useful tool for encouraging similarity (or overlap) with a target, and contrast away from a target depending on how and when it is activated. Finally, although we have established that perspective-taking does play a role in the success of narrative health campaigns, more research is required to fully understand the mechanisms underlying these effects. Bearing this in mind, the discussion now turns to consider the more practical implications of this thesis.

Practical Implications

Considered together, the studies presented in this thesis suggest that the type of perspective-taking that perceivers engage in response to narrative campaigns may

represent a key consideration for ensuring their effectiveness, and thereby be an important practical consideration. As acknowledged in Chapter 1, both Hinyard and Kreuter (2007) and Kreuter et al. (2007) present several potential factors that could influence the effectiveness of narrative campaigns. These include: aspects of the source (e.g., trustworthiness, similarity to the perceiver, reliability), message (e.g., length or form of narrative, whether it is fictional or true), and some individual difference or cultural aspects of the audience (e.g., ability to create vivid images). However these authors did not explicitly consider the variable effects of the different types of perspective-taking that may be activated in response to a narrative health campaign, and the psychological processes that might be implicated by these. Indeed, the closest idea to this, acknowledged by Kreuter and colleagues (2007), is an untested suggestion that the content of a narrative campaign should match the social support required by recipients (i.e., informational, appraisal, or emotional support). This thesis therefore contributes to practical understanding by suggesting that simply presenting a narrative health campaign that is vivid, engaging and that portrays someone similar to the target audience may be insufficient for maximising its utility, unless attempts are also made to explicitly encourage forms of perspective-taking that match these message and audience features.

Notwithstanding this clear applicability of perspective-taking processes to understanding the variable outcomes of narrative health campaigns (see Chapter 1); drawing out precise recommendations for future practice is not easy based on the current findings. Originally, I reasoned that cognitive perspective-taking would have a straightforwardly positive impact on the effectiveness of narrative campaigns, whereas the effect of emotional perspective-taking effect would be variable. However, across these studies it has been established that perceived self-efficacy, specific emotional experiences, and the perceived relationship between the perspective-taker and target are

all implicated in the relative health-related effects of cognitive and emotional forms of perspective-taking. It therefore seems that although the type of perspective-taking activated in response to a narrative health campaign is clearly an important consideration for the success of these campaigns, there are a number of complicating factors that require further investigation. As a consequence, it would seem unwise to simply champion the continued use of narrative campaigns as a tool for health promotion without further exploration of the processes through, and conditions under, which different types of perspective-taking are likely to lead to adaptive consequences.

Nevertheless, our research may still have implications for the initial steps involved in developing successful health interventions. In Chapter 1, I argued for the importance of understanding the processes underlying the success of narrative campaigns in light of the intervention mapping approach to health promotion. By way of a recap, intervention mapping is defined as "a protocol for developing effective behavior change interventions" ("Intervention Mapping" n.d.). In setting out the stages involved in developing successful behaviour-change interventions according to this approach, Bartholomew and colleagues (1999) stated that:

> "Intervention development requires a thorough understanding of the problem using theory and empirical evidence to specify determinants of behaviour and environmental conditions and to propose a change process" (Bartholomew et al., 1999, p.548).

I would argue that throughout this thesis: a) a key problem has been identified (i.e., the inconsistent effects of narrative health campaigns), and; b) the empirical research has

identified determinants that can influence this problem (e.g., the role of shared group membership in structuring the effects of perspective-taking, and the potential importance of self-efficacy and specific emotional engagement in ensuring the success of narrative campaigns). Although further investigation is required, the iterative process of intervention mapping means that, at the very least, this thesis has laid the groundwork for future efforts to understand the processes through which perspective-taking type may influence the utility of narrative health campaigns.

The successful application of perspective-taking to the context of health in this thesis also connects to the emerging body of work advocating the 'Social Cure' (Jetten et al., 2012). Typical research in this tradition focuses on the role of social identity theory and social groups for health and well-being (e.g., Gleibs, Haslam, Haslam & Jones, 2011; Haslam et al., 2012; Sani, 2012; Tarrant & Butler, 2011), and argues that engaging meaningful group memberships, and participation within these, is a useful tool for promoting positive health. I would argue that the research in this thesis tentatively demonstrates that additional social psychological processes can intersect with aspects of social identity and group membership, particularly in the context of health communications. For instance, given that the effects of cognitive and emotional perspective-taking in response to a narrative campaign are at least partly structured by the relationship between the perspective-taker and target (i.e., shared versus. unshared group membership, see Study 7), it seems likely that engaging different types of perspective-taking in response to narrative campaigns may be more or less effective to the extent that the specific health threats targeted by the campaign connect to personal versus social concerns. In their article exploring the utility of online health material for individuals with stigmatised illnesses, Berger, Wagner and Baker (2005) cite a variety of research demonstrating that individuals often hide and avoid treatment for illnesses such as STIs, urinary incontinence and mental health issues. Indeed, research by Barth,

Cook, Downs, Switzer and Fischhoff (2002) suggests that one of the key reasons underlying students' avoidance of STI testing is their worry concerning how others will perceive them if they test positive. According to Link and Phelan's (2006) conceptualisation, stigma involves labelling and separation of stigmatised individuals from the group. To the extent that people are focused on their personal identity and their difference from others when they contemplate such conditions, narrative campaigns targeting these may be better off encouraging cognitive perspective-taking. This suggestion is consistent with the generally more positive effects of cognitive perspective-taking relative to emotional perspective-taking across this thesis, and especially under conditions of personal identity salience.

On the other hand, certain health threats are more socially constructed, and clearly overlaid with group membership. For example, research suggests that alcohol consumption is structured by social relationships and (perceived) social norms (e.g., Neighbors, Lee, Lewis, Fossos & Larimer, 2007; Sher, Bartholow & Nanda, 2001). Given that emotional perspective-taking appears to exert its most adaptive effects when this is framed by shared group membership, socially-constructed health threats such as alcohol abuse may therefore respond more effectively to campaigns that encourage emotional perspective-taking. That is, to the extent that a target expresses distress or discomfort concerning excessive drinking, the emotional and associated behavioural responses elicited are likely to be stronger when participants perceive shared group membership with this target (e.g., Dumont et al., 2003; Tarrant et al., 2009). These strong reactions may, in turn, be more effective at deterring the perspective-taker from continuing their own, similarly socially structured, behaviour.

Limitations and suggestions for further research

As previously noted, the primary limitation of this thesis is the lack of consistent effects across studies. That is, although a broadly consistent story emerges, the measures on which effects are found vary across the studies; this raises an important question about the power of the studies and the reliability of the effects. Across studies, approximately 25-30 participants were recruited per cell, with generally small to medium effects reported on the dependent variables (excluding manipulation checks) throughout. Using the G*Power software (Faul, Erdfelder, Lang & Buchner, 2007), a priori power analyses revealed that sample sizes ranging from 128-159 participants would have been required to adequately detect significant, medium-sized effects (assuming power of .8, as recommended by Cohen, 1988; 1992; cited in Field, 2005). Moreover, post hoc power analyses revealed that, although power in our studies did increase over time (from 0.37 in Study 1 to 0.75 in Study 7), only one study achieved the recommended power of .8 (Study 6 = 0.84). Thus, despite improvements over the course of the PhD, the studies were ultimately underpowered and so may have been unable to accurately detect the small to medium effects reported. This lack of power could, at least in part, explain the weak and inconsistent effects observed across studies in this thesis. As a consequence, it is therefore recommended that future research utilising more highly powered designs be conducted to further explore the effects outlined in this thesis.

In addition, as discussed in the conclusion to Chapter 5 and the Study 7 Discussion (Chapter 6), these weak effects are likely to be at least partially due to the presence of untested mediators and moderators of the perspective-taking – health relationship. Although Chapter 6 presents an initial exploration of possible moderators, this was intended more as a springboard for future research than a definitive test of all routes of influence.

Two avenues for further exploration are immediately apparent following this thesis. First, I recommend further research in which participants' perceived efficacy concerning health promoting behaviours is experimentally manipulated (rather than simply measured) in order to examine how this might interact with perspective-taking type. Based on the rationale outlined in Chapter 5, one could intuitively expect that the greater behavioural focus of cognitive perspective-taking (e.g., Oswald, 1996; Galinsky & Moskowitz, 2000) may prove to be detrimental when a narrative target emphasises the difficulty associated with a recommended health behaviour (i.e., a condition of low self-efficacy), but productive when they emphasise the ease. Thus, just as the effects of emotional perspective-taking might be guided by the specific emotions that are aroused in response to the target and their situation, the effects of cognitive perspective-taking are likely to be contingent on what the target is doing and what this implies about both self- and response-efficacy. This contention is consistent with the role afforded to vicarious experience, or modelling, of behaviour for influencing perceptions of self-efficacy (Bandura, 1977; 1998). That is, although vicarious modelling in social cognitive theory is expected to increase efficacy to the extent that the model demonstrates that a behaviour is either easy to accomplish, or effective at eliminating a problem (Bandura, 1977), it may reduce efficacy to the extent that it presents a target who repeatedly fails to enact a behaviour (see also Morman's, 2000 research presenting health communications including high or no-efficacy information).

It is also possible that the effects of emotional perspective-taking could be moderated by variations in the target's stated efficacy. Previous research has suggested that experiencing negative emotion in the absence of sufficient efficacy concerning a recommended behaviour can lead to defensive avoidance (the Extended Parallel Processing Model, e.g., Witte, 1992). It follows, therefore, that emotional perspective-taking may also be more effective to the extent that it is combined with a high efficacy

message (as per Witte, 1992; Witte & Allen, 2000). Whatever the precise pattern of results, the role afforded to perceived efficacy in this thesis, the success of narrative campaigns, and the prediction of health behaviour more generally underlines the importance of further exploring how this key mechanism interacts with perspective-taking to influence the utility of these campaigns.

The second suggestion for further research involves exploring the interplay between emotional experience and the effects of emotional perspective-taking on the success of narrative health campaigns. As already noted, it seems likely that the inconsistent effects of emotional perspective-taking relative to cognitive perspective-taking may be due to the specific focus of the emotions experienced by participants. For instance, recall in Chapter 3 I reviewed existing literature that suggests that there are different, context dependent effects of eliciting specific emotions on behaviour (e.g., Consedine et al., 2004; Consedine & Moskowitz, 2007; see also the supplementary moderation effect in Study 4, the rationale for Study 6, and the General Discussion of Chapter 6). It therefore seems important to identify and examine the contextually specific emotional experiences that are associated with the success or failure of narrative health campaigns that aim to encourage emotional perspective-taking, particularly as the studies reported in this thesis were unable to identify the specific emotions experienced in responses to the narrative campaigns.

One method of exploring this could involve a combination of quantitative and qualitative methodologies. For instance, future research could replicate the experimental paradigm developed throughout this thesis (i.e., presenting a campaign and activating perspective-taking) alongside in-depth interviewing of participants designed to ascertain the types of emotional responses that they experience in response to a specific campaign. These emotional experiences could then be explored in relation to the health-

promoting (or inhibiting) impact of activating emotional perspective-taking in response to these campaigns. This role of liaising with the intended recipients of health interventions to ensure their effectiveness is central to the Medical Research Council (MRC) guidelines for developing complex interventions (MRC, 2000; 2008). Specifically, these state that it is important to thoroughly assess the feasibility of a health intervention following its development. The guidelines further recommend that this feasibility testing should involve a mixture of qualitative and quantitative research methods designed to collect the input of intended users on aspects of the intervention, including potential barriers to intervention success (MRC, 2008). Thus, on the basis of this thesis, it seems crucially important to encourage a deeper exploration of the interplay between emotional experience and emotional perspective-taking in response to a narrative campaign, particularly if these types of campaigns are going to continue to be implemented in future health promotion initiatives.

A further limitation of this thesis concerns the previously noted failure to consistently demonstrate effects on two of the most commonly cited consequences of cognitive and emotional perspective-taking: cognitive overlap and empathic concern. Despite the possible theoretical implications of this (see above), in the case of cognitive overlap there is some suggestion that this may have been partly due to measurement issues. The IOS scale used in Studies 5-7 to measure self-other overlap has been the subject of some debate within the cognitive perspective-taking literature. As noted in Chapter 6, Davis and colleagues (1996, p. 714) argue that the IOS is more relevant in the context of close, intimate relationships and that the "self-other confusion" involved in such intimate relationships would be greatly reduced when participants were asked to take the perspective of a stranger. This thesis involved participants taking the perspective of a target campaign character who, while possibly sharing the same social group membership, is ostensibly a stranger. It therefore follows that the IOS scale may

not have been sensitive enough to the subtle differences in overlap between the perspective-taker and target across perspective-taking type. One alternative method of assessing self-other overlap used in previous perspective-taking research is a trait attribution task (e.g. Davis et al., 1996; Galinsky & Moskowitz, 2000, for a summary see Galinsky et al., 2005). This involves presenting participants with a list of traits and asking them to rate how well each trait describes them (pre-perspective-taking), before rating how the same traits apply to target's group (post-perspective-taking). The absolute difference between the attribution of traits to the self and other is then used to represent the degree of cognitive overlap (Galinsky & Moskowitz, 2000). Future research could therefore employ this trait attribution method to explore whether the non-significant effects on overlap are due to methodological issues in its measurement.

Alternatively, as discussed in the theoretical implications subsection, overlap may simply represent an inappropriate mechanism through which perspective-taking influences responses to narrative health campaigns. In this case, future research would be unlikely to observe any different effects on the trait attribution task relative to the IOS. It is therefore important to explore alternative constructs and processes through which perspective-taking may influence the utility of narrative health campaigns. One such construct, identification with a campaign character, has previously been related to the success of narrative campaigns. Recall Dunlop et al. (2008), who noted that plot-referent emotional responses to a narrative could become self-referent (and so influence personal risk perceptions and persuasive outcomes) following identification with a narrative target. Similarly, Slater et al. (2003) found that participants' identification with narrative characters moderated the effects of narrative messages on audience responses (e.g., relating to believability, clarity and utility of the message; see also Kreuter et al., 2007; Moyer-Gusé, 2008).

As briefly outlined in Chapter 1, Cohen (2001) operationalises identification as a multi-faceted construct involving emotional (sharing the feelings of the character), cognitive (sharing the perspective of the character), motivational (sharing the goals of the character), and absorption (loss of self-awareness) aspects. Although this thesis did tentatively explore the more cognitive and emotional aspects of identification through perspective-taking, it did not explicitly consider how perspective-taking relates to this multi-faceted construct of identification. Further work might therefore benefit from examining the relationship between perspective-taking and Cohen's (2001) conceptualisation of identification with a narrative character. In the first instance, future research could include Cohen's (2001) identification scale – a measure that was successfully used as a mediator in the relationship between role playing and efficacy (Peng, 2008) – to explore the broad relationship between identification and different types of perspective-taking. By including this measure it may be possible to tap a greater proportion of the variance associated with the effects of perspective-taking for the success of narrative health campaigns.

In addition, the inconsistent effects on behavioural intentions throughout this thesis represent another substantial limitation. Despite the prominent role of three proximal predictors (i.e., social norms, attitudes, and efficacy, see the integrative model, e.g., Fishbein, 2000), our studies failed to find consistent direct effects on intentions. One potential explanation for this concerns the likely distal nature of perspective-taking in the prediction of behavioural intentions. Research by Yzer et al. (2004) suggests that distal variables can impact behavioural intentions indirectly, through other, more proximal predictors (see also Fishbein & Capella, 2006). Take, for instance, perceived risk: some researchers suggest that its inconsistent relationship with intentions may be due to its role as a distal rather than proximal predictor of intentions (e.g., Gerrard, Gibbons & Bushman, 1996; Fishbein & Yzer, 2003). Given that the effects of

perspective-taking on behavioural intentions typically occurred through, or as a consequence of, additional variables (e.g., the mediating effect of self-efficacy and moderating effect of emotions, Studies 3 & 4), it seems likely that perspective-taking may represent a distal rather than proximal predictor of behavioural intentions. It therefore follows that more consistent effects on behavioural intentions may emerge as a consequence of further research into the processes that interact with perspective-taking type such as those outlined throughout this Chapter (i.e., identification, efficacy, & emotional experience).

Although undesirable, the absence of effects on intentions in this thesis also needs to be considered in the context of the weak overall relationship between intentions and behaviour. For instance, Godin & Kok (1996, p. 93) remark that "in the domain of health, about a third of the variations in behavior can be explained by the combined effect of intention and perceived behavioral control" (see also Armitage & Conner, 2001). Thus, the absence of direct effects on intentions does not necessarily mean the absence of an effect on behaviour – a substantial portion of behavioural variance is explained by things other than intentions. As a result, I recommended that a more direct approach to measuring behaviour be taken in future, rather than relying on intentions as a proxy for this. One such method could involve giving participants diaries in which they self-report their health-related behaviours over a period of time (Fenton, Johnson, McManus, & Erens, 2001).

Concluding comment

In the introduction to this thesis I drew on a Chapter by Maes and Boersma (2005), and research in the 'Social Cure' tradition (e.g., Jetten et al., 2012) to emphasise the role that (social) psychological theory can have in advancing our understanding of

the mechanisms underlying health and wellbeing. The research conducted for this PhD was inspired by a commitment to these same ideas of fusing psychological theory and health promotion, and so began with the broad aim of exploring the psychological processes and mechanisms underlying the variable effects of narrative health campaigns, a health promotion tool that has seen a recent rise in popularity (Hinyard & Kreuter, 2007). By understanding these processes better, it was hoped that this thesis could contribute to the design and ultimate success of future narrative health campaigns. Across seven studies this thesis was successful in demonstrating that the type of perspective-taking (a social psychological construct) activated in response to a narrative health campaign is an important factor in determining the effectiveness of these campaigns. Moreover, the studies presented in this thesis demonstrate that the precise nature of the processes through, and conditions under, which different types of perspective-taking influence these kinds of campaigns are not yet fully understood. On the basis of this thesis, several potential mechanisms have been identified that require further study; these include: perceived self-efficacy, specific emotional experiences in response to a campaign, and the relationship between the campaign recipient and target.

Overall, this thesis was therefore successful both at explicitly exploring cognitive and emotional perspective-taking in the context of health promotion, and in suggesting ways in which these psychological constructs may work to influence the success of narrative health campaigns. In this way, the thesis managed to at least partly contribute to the mandate laid out by researchers such as Maes and Boersma (2005) advocating the application of psychological mechanisms into the field of health promotion. It is therefore my hope that this thesis represents a clear starting point for a future tradition of research devoted to understanding the conditions under, and processes through, which both cognitive and emotional perspective-taking can contribute to ensuring the utility of narrative health campaigns.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. doi: 10.1016/0749-5978(91)90020-T

Allen, M., & Preiss, R. W. (1997). Comparing the persuasiveness of narrative and statistical evidence using meta-analysis. *Communication Research Reports, 14*(2), 125-131. doi: 10.1080/08824099709388654.

Armitage, C. J., & Conner, M. (2001). Efficacy of the theory of planned behaviour: a meta-analytic review. *British Journal of Social Psychology, 40*(4), 471-499. doi: 10.1348/014466601164939.

Aron, A., Aron, E. N., & Smollan, D. (1992). Inclusion of other in the self scale and the structure of interpersonal closeness. *Journal of Personality and Social Psychology, 63*(4), 596-612. doi: 10.1037/0022-3514.63.4.596.

Ashe, D., Patrick, P. A., Stempel, M. M., Shi, Q., & Brand, D. A. (2006). Educational posters to reduce antibiotic use. *Journal of Pediatric Health Care, 20*(3), 192-197. doi: 10.1016/j.pedhc.2005.12.017.

AVERT (n.d.). *STIs and STDs in the UK*. Retrieved February 2, 2011 from http://www.avert.org/std-statistics-uk.htm

Baesler, E. J., & Burgoon, J. K. (1994). The temporal effects of story and statistical evidence on belief change. *Communication Research, 21,* 582-602. doi: 10.1177/009365094021005002.

Bagozzi, R. P., & Moore, D. J. (1994). Public service advertisements: emotions and empathy guide prosocial behavior. *Journal of Marketing, 58*(1), 56-70. doi: 10.2307/1252251.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review, 84*(2), 191-215. doi: 10.1037/0033-295X.84.2.191.

Bandura, A. (1998). Health promotion from the perspective of social cognitive theory. *Psychology and Health, 13*(4), 623-649. doi: 10.1080/08870449808407422.

Barth, K. R., Cook, R. L., Downs, J. S., Switzer, G. E., and Fischhoff, B. (2002). Social stigma and negative consequences: Factors that influence college students' decisions to seek testing for sexually transmitted infections. *Journal of American College Health, 50*(4), 153-159. doi: 10.1080/07448480209596021.

Bartholomew, L. K., Parcel, G. S., & Kok, G. (1998). Intervention mapping: a process for developing theory and evidence-based health education programs. *Health Education & Behavior, 25*(5), 545-563. doi: 10.1177/109019819802500502.

Batson, C. D., & Ahmad, N. Y. (2009). Using empathy to improve intergroup attitudes and relations. *Social Issues and Policy Review, 3*(1), 141-177. doi: 10.1111/j.1751-2409.2009.01013.x

Batson, C. D., Chang, J., Orr, R., & Rowland, J. (2002). Empathy, attitudes and action: Can feeling for a member of a stigmatized group motivate one to help the group? *Personality and Social Psychology Bulletin, 28*(12), 1656-1666. doi: 10.1177/014616702237647.

Batson, C. D., Early, S., & Salvarani, G. (1997c). Perspective taking: imagining how another feels versus imagining how you would feel. *Personality & Social Psychology Bulletin, 23*(7), 751-758. doi: 10.1177/0146167297237008.

Batson, C. D., Lishner, D. A., Carpenter, A., Dulin, L., Harjusola-Webb, S., Stocks, E. L., … Sampat, B. (2003). "…as you would have them do unto you": Does

imagining yourself in the other's place stimulate moral action? *Personality and Social Psychology Bulletin, 29*(9), 1190-1201. doi: 10.1177/0146167203254600.

Batson, C. D., O'Quin, K., Fultz, J., Vanderplas, M., & Isen, A. M. (1983). Influence of self reported distress and empathy on egoistic versus altruistic motivation to help. *Journal of Personality and Social Psychology, 45*(3), 706-718. doi: 10.1037/0022-3514.45.3.706.

Batson, C. D., Polycarpou, M. P., Harmon-Jones, E., Imhoff, H. J., Mitchener, E. C., Bednar, L. L. … Highberger, L. (1997a). Empathy and attitudes: can feelings for a member of a stigmatised group improve feelings towards the group? *Journal of Personality and Social Psychology*, *72*(1), 105-118. doi: 10.1037/0022-3514.72.1.105.

Batson, C.D., Sager, K., Garst, E., Kang, M., Rubchinsky, K., & Dawson, K. (1997b). Is empathy-induced helping due to self-other merging? *Journal of Personality and Social Psychology, 73*(3), 495-509. doi: 10.1037/0022-3514.73.3.495.

Batson, C.D., Turk, C.L., Shaw, L.L., & Klein, T.R. (1995). Information function of empathic emotion: learning that we value the other's welfare. *Journal of Personality and Social Psychology, 68*(2), 300-313. doi: 10.1037/0022-3514.68.2.300.

Baumann, D. J., Cialdini, R. B., & Kendrick, D. T. (1981). Altruism as hedonism: Helping and self-gratification as equivalent responses. *Journal of Personality and Social Psychology, 40*(6), 1039-1046. doi: 10.1037/0022-3514.40.6.1039.

Berger, M., Wagner, T. H., & Baker, L. C. (2005). Internet use and stigmatized illness. *Social Science and Medicine, 61*(8), 1821-1827. doi: 10.1016/j.socscimed.2005.03.025.

Berndsen, M. & McGarty, C. (2012). Perspective taking and opinions about forms of

    reparation for victims of historical harm. *Personality and Social Psychology*

    Bulletin, 38, 1316-1328. doi: 10.1177/0146167212450322.

Bettinghaus, E. P. (1986). Health promotion and the knowledge-attitude-behavior

    continuum. *Preventive Medicine, 15*, 475-491. doi: 10.1016/0091-7435(86)90025-

    3.

Biener, L., Reimer, R. L., Wakefield, M., Szczypka, G., Rigotti, N.A., Connolly, G.

    (2006). Impact of smoking cessation aids and mass media among recent quitters.

    American Journal of Preventive Medicine, 30(3), 217-224. doi:

    10.1016/j.amepre.2005.10.026.

Blatt, B., LeLacheur, S. F., Galinsky, A. D., Simmens, S. J., & Greenberg, L. (2010).

    Does perspective-taking increase patient satisfaction in medical encounters.

    Academic Medicine, 85(9), 1445-1452. doi: 10.1097/ACM.0b013e3181eae5ec.

Borsari, B., & Carey, K. B. (2003). Descriptive and injunctive norms in college

    drinking: A meta-analytic integration. *Journal of Studies on Alcohol, 64*(3), 331-

    341. Retrieved from

    http://www.jsad.com/jsad/article/Descriptive_and_Injunctive_Norms_in_College_

    Drinking_A_MetaAnalytic_Integ/1171.html

Brewer, N. T., Chapman, G. B., Gibbons, F. X., Gerrard, M., McCaul, K. D., &

    Weinstein, N. D. (2007). Meta-analysis of the relationship between risk

    perception and health behavior: the example of vaccination. *Health Psychology,*

    26(2), 136-145. doi: 10.1037/0278-6133.26.2.136.

Brown, L. M., Bradley, M. M., & Lang, P. J. (2009). Affective reactions to pictures of ingroup and outgroup members. *Biological Psychology, 71*, 303-311. doi: 10.1016/j.biopsycho.2005.06.003.

Brown, S. L., & Smith, E. Z. (2007). The inhibitory effect of a distressing anti-smoking message on risk perceptions in smokers. *Psychology & Health, 22*(3), 255-268. doi: 10.1080/14768320600843127

Brown, S., & Locker, E. (2009). Defensive responses to an emotive anti-alcohol message. *Psychology & Health, 24*(5), 517-528. doi: 10.1080/08870440801911130.

Brown, W. J., & Basil, M. D. (1995). Media celebrities and public health: Responses to "Magic" Johnson's HIV disclosure and its impact on AIDS risk and high-risk behaviors. *Health Communication, 7*(4), 345–370. doi: 10.1207/s15327027hc0704_4.

Bryan, A. D., Aiken, L. S., & West, S. G. (1997). Young women's condom use: The influence of acceptance of sexuality, control over the sexual encounter, and perceived susceptibility to common STDs. *Health Psychology, 16*(5), 468-479. doi: 10.1037/0278-6133.16.5.468.

Campbell, R. G., & Babrow, A. S. (2004). The role of empathy in responses to persuasive risk communication: Overcoming resistance to HIV prevention messages. *Health Communication, 16*(2), 159-182. doi: 10.1207/S15327027HC1602_2

Cancer Research UK. (2012a, December). *CancerStats: Key facts all cancers combined.* Retrieved April 12 2013 from http://www.cancerresearchuk.org/cancer-info/cancerstats/keyfacts/Allcancerscombined/.

Cancer Research UK. (2012b, April 13). *CancerStats: Lung cancer incidence statistics.* Retrieved April 12 2013 from http://www.cancerresearchuk.org/cancer-info/cancerstats/types/lung/incidence/uk-lung-cancer-incidence-statistics.

Cardio & Vascular Coalition. (2008, April). *Cardiovascular Disease in England: Opportunities and Challenges Over the Next Ten Years.* London: British Heart Foundation. Retreived April 15 2013 from http://www.bhf.org.uk/cvc/pdf/CVC_10Years_2008_v2.pdf

Carrera, P., Oceja, L., Caballero, A., Muñoz, López-Pérez, B., & Ambrona, T. (2012). I feel so sorry! Tapping the joint influence of empathy and personal distress on helping behavior. *Motivation and Emotion, 37*(2), 335-345. doi: 10.1007/s11031-012-9302-9.

Caruso, E. M., Epley, N., & Bazerman, M. H. (2006). The good, the bad, and the ugly of perspective taking in groups. *Research on Managing Groups and Teams, 8,* 201-224. doi: 10.1016/S1534-0856(06)08010-8.

Castle, C. M., Skinner, T. C., & Hampson, S. E. (1999). Young women and suntanning: An evaluation of a health education leaflet. *Psychology & Health, 14*(3), 517-527. doi: 10.1080/08870449908407344.

Cialdini, R. B. (2003). Crafting normative messages to protect the environment. *Current Directions in Psychological Science, 12*(4), 105-109. doi: 10.1111/1467-8721.01242.

Cialdini, R. B., Reno, R. R., & Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology, 58*(6), 1015-1026. doi: 10.1037/0022-3514.58.6.1015.

Cialdini, R. B., Schaller, M., Houlihan, D., Arps, K., Fultz, J., & Beaman, A. L. (1987). Empathy-based helping: Is it selflessly or selfishly motivated? *Journal of Personality and Social Psychology, 52*(4), 749-758. doi: 10.1037/0022-3514.52.4.749.

Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass Communication & Society, 4*(3), 245-264. doi: 10.1207/S15327825MCS0403_01.

Cohen, T. R. (2010). Moral emotions and unethical bargaining: The differential effects of empathy and perspective taking in deterring deceitful negotiation. *Journal of Business Ethics, 94*, 569-579. doi: 10.1007/s10551-009-0338-z.

Colledge, A., Car, J., Donnelly, A., & Majeed, A. (2008). Health information for patients: Time to look beyond patient information leaflets. *Journal of the Royal Society of Medicine, 101*(9), 447-453. doi: 10.1258/jrsm.2008.080149.

Consedine, N. S. (2008). The health-promoting and health-damaging effects of emotions: The view from developmental functionalism. In M. Lewis, J. Haviland-Jones, & L. Feldman-Barrett (Eds.), *Handbook of emotions (3rd Edition)*, 676-690. Guilford: New York.

Consedine, N. S., Magai, C., & Neugut, A. I. (2004). The contribution of emotional characteristics to breast cancer screening among women from six ethnic groups. *Preventive Medicine, 38*, 64-77. doi: 10.1016/j.ypmed.2003.09.030.

Consedine, N. S. & Moskowitz, J. T. (2007). The role of discrete emotions in health outcomes: A critical review. *Applied and Preentive Psychology, 12*, 59-75. doi: 10.1016/j.appsy.2007.09.001.

Consedine, N. S., Krivoshekova, Y. S., & Harris, C. R. (2007). Bodily embarrassment and judgment concern as separable factors in the measurement of medical embarrassment: Psychometric development and links to treatment-seeking outcomes. *British Journal of Health Psychology, 12*, 439-462. doi: 10.1348/135910706X118747.

Cooper, C. (2013, July 05). NHS chief warns service facing £30bn funding gap by 2020. *The Independent*. Retrieved October 14, 2013 from http://www.independent.co.uk/life-style/health-and-families/health-news/nhs-chief-warns-service-faces-30bn-funding-gap-by-2020-8691161.html

Dahl, D. W., Gorn, G. J., & Weinberg, C. B. (1998). The impact of embarrassment on condom purchase behaviour. *Canadian Journal of Public Health, 89*(6), 368-370. Retrieved from http://journal.cpha.ca/index.php/cjph/article/view/1134/1134.

Darroch, J., Myers, L., & Cassell, J. (2003). Sex differences in the experience of testing positive for genital chlamydia infection: A qualitative study with implications for public health and for a national screening programme. *Sexually Transmitted Infections, 79*(5), 372-373. doi: 10.1136/sti.79.5.372.

Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog of Selected Documents in Psychology, 10.* Retrieved from http://www.uv.es/~friasnav/Davis_1980.pdf.

Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology, 44*(1), 113-126. doi: 10.1037/0022-3514.44.1.113.

Davis, M. H., Conklin, L., Smith, A., & Luce, C. (1996). Effect of perspective taking on the cognitive representations of persons: A merging of self and other. *Journal of*

Personality and Social Psychology, 70(4), 713-726. doi: 10.1037/0022-3514.70.4.713.

Davis, M. H., Soderlund, T., Cole, J., Gadol, E., Kute, M., Myers., M & Weihing, J. (2004). Cognitions associated with attempts to empathize: How do we imagine the perspective of another? *Personality and Social Psychology Bulletin, 30*, 1625-1635. doi: 10.1177/0146167204271183.

De Wit, J. B. F., Das, E., & Vet, R. (2008). What works best: Objective statistics or a personal testimonial? An assessment of the persuasive effects of different types of message evidence on risk perception. *Health Psychology, 27*(1), 110-115. doi: 10.1037/0278-6133.27.1.110.

Department for Transport. (2007, July). *Moment of doubt [commercial]* retrieved February 10 2011 from http://www.advertolog.com/department-for-transport/adverts/moment-of-doubt-10174005/.

Department of Health (2009, November) Teenage pregnancy and sexual health marketing strategy. Retrieved May 16 2013 from http://www.nhs.uk/sexualhealthprofessional/Documents/Sexual_Health_Strategy_2009.pdf

Dey, P., Collins, S., Will, S., & Woodman, C. J. (1995). Randomised controlled trial assessing effectiveness of health education leaflets in reducing incidence of sunburn. *BMJ, 311,* 1062-1063. doi: 10.1136/bmj.311.7012.1062.

Dovidio, J. F., ten Vergert, M., Stewart, T. L., Gaertner, S. L., Johnson, J. D., Esses, V. M., . . . Pearson, A. R. (2004). Perspective and prejudice: Antecedents and mediating mechanisms. *Personality and Social Psychology Bulletin, 30*, 1537-1549. doi: 10.1177/0146167204271177.

Drwecki, B.B., Moore, C.F., Ward, S.E., & Prkachin, K.M. (2011). Reducing racial disparities in pain treatment: the role of empathy and perspective-taking. *PAIN, 152*, 1001-1006. doi: 10.1016/j.pain.2010.12.005.

Dumont, M., Yzerbyt, V., Wigboldus, D., & Gordijn, E. H. (2003). Social categorization and fear reactions to the September 11th terrorist attacks. *Personality and Social Psychology Bulletin, 29*(12), 1509-1520. doi: 10.1177/0146167203256923.

Dunlop, S., Wakefield, M., & Kashima, Y. (2008). Can you feel it? Negative emotion, risk, and narrative in health communication. *Media Psychology, 11*, 52-75. doi: 10.1080/15213260701853112.

Epley, N., Caruso, E. M., & Bazerman, M. H. (2006). When perspective taking increases taking: Reactive egoism in social interaction. *Journal of Personality and Social Psychology, 91*(5). doi: 10.1037/0022-3514.91.5.872.

Evers, K. E., Bishop, C. H., Gerhan, L. S., & Weisse, C. S. (1997). AIDS educator effectiveness as a function of sexual orientation and HIV status. *Journal of Applied Social Psychology, 27*(10), 902-914. doi: 10.1111/j.1559-1816.1997.tb00277.x.

Exeter Guild Student Shop (n.d.) [*Photograph of University of Exeter branded hoodie*]. Retrieved October 2 2012 from http://cdn.shopify.com/s/files/1/0094/4482/products/Chunky_Hood_Denim_Close _medium.jpg?151.

Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods, 39*(2), 175-191. doi: 10.3758/BF03193146

Fenton, K. A., Johnson, A. M., McManus, S., & Erens, B. (2001). Measuring sexual behaviour: Methodological challenges in survey research. *Sexually Transmitted Infections, 77*(2), 84-92. doi: 10.1136/sti.77.2.84

Field, A. (2005). *Discovering statistics using SPSS* (2nd ed). Sage Publications: London.

Fishbein, M. & Capella, J. N. (2006). The role of theory in developing effective health communications. *Journal of Communication, 56*, S1-S17. Doi: 10.1111/j.1460-2466.2006.00280.x

Fishbein, M. (2000). The role of theory in HIV prevention. *AIDS CARE, 12*(3), 273-278. doi: 10.1080/09540120050042918.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research.* Reading, MA: Addison-Wesley.

Fishbein, M., & Yzer, M. C. (2003). Using theory to design effective health behaviour interventions. *Communication Theory, 13*(2), 164-183. doi: 10.1111/j.1468-2885.2003.tb00287.x.

Galinsky, A. D., & Ku, G. (2004). The effects of perspective-taking on prejudice: The moderating role of self-evaluation. *Personality and Social Psychology Bulletin, 30*, 594-604. doi: 10.1177/0146167203262802.

Galinsky, A, D., Ku, G., & Wang, C. S. (2005). Perspective-taking and self-other overlap: Fostering social bonds and facilitating social coordination. *Group Processes & Intergroup Relations, 8*(2), 109-124. doi: 10.1177/1368430205051060.

Galinsky, A. D., & Moskowitz, G. B. (2000). Perspective taking: Decreasing stereotyping expression, stereotype accessibility and in-group favoritism. *Journal*

of Personality and Social Psychology, *78*(4), 708-724. doi: 10.1037/0022-3514.78.4.708.

Galinsky, A. D., Maddux, W. M., Gillin, D., & White, J. B. (2008a). Why it pays to get inside the head of your opponent. The differential effects of perspective taking and empathy in negotiations. *Psychological Science, 19*(4), 378-384. doi: 10.1111/j.1467-9280.2008.02096.x.

Galinsky, A. D., & Mussweiler, T. (2001). First offers as anchors: The role of perspective-taking and negotiator focus. *Journal of Personality and Social Psychology, 81*(4), 657-669. doi: 10.1037/0022-3514.81.4.657.

Galinsky, A. D., Wang, C. S., & Ku, G. (2008b). Perspective-takers behave more stereotypically. *Journal of Personality and Social Psychology, 92*(2), 404-419. doi: 10.1037/0022-3514.95.2.404.

Gerrard, M. Gibbons, F. X., & Bushman, B. J. (1996). Relation between perceived vulnerability to HIV and precautionary sexual behavior. *Psychological Bulletin, 119*(3), 390-409. doi: 10.1037/0033-2909.119.3.390.

Gilin, D. Maddux, W. M., Carpenter, J., & Galinsky, A. D. (2013). When to use your head and when to use your heart: The differential value of perspective-taking versus empathy in competitive interactions. *Personality and Social Psychology Bulletin, 39*(1), 3-16. doi: 10.1177/0146167212465320.

Gleibs, I.H., Haslam, C., Haslam, S.A., & Jones, J.M. (2011). Water clubs in residential care: is it the water or the club than enhances health and well-being? *Psychology and Health, 26*(10), 1361-1377. doi: 10.1080/08870446.2010.529140.

Godin, G., & Kok, G. (1996). The theory of planned behavior: a review of its applications to health-related behaviors. *American Journal of Health Promotion, 11*(2), 87-98. doi: 10.4278/0890-1171-11.2.87.

Gordijn, E.H., Wigboldus, D., & Yzerbyt, V. (2001). Emotional consequences of categorizing victims of negative outgroup behaviour as ingroup or outgroup. *Group Processes & Intergroup Relations, 4*(4), 317-326. doi: 10.1177/1368430201004004002.

Green, M. C. (2004). Transportation into narrative worlds: The role of prior knowledge and perceived realism. *Discourse Processes, 38*(2), 247-266. doi: 10.1207/s15326950dp3802_5

Green, M. C. (2006). Narratives and cancer communication. *Journal of Communication, 56*, S163-S183. doi: 10.1111/j.1460-2466.2006.00288.x

Green, M. C., & Brock, T. C. (2000). The role of transportation in the persuasiveness of public narratives. *Journal of Personality and Social Psychology, 79*(5), 701-721. doi: 10.1037/0022-3514.79.5.701.

Greene, K., & Brinn, L. S. (2003). Messages influencing college women's tanning bed use: Statistical versus narrative evidence format and a self-assessment to increase perceived susceptibility. *Journal of Health Communication, 8,* 443-461. doi: 10.1080/713852118.

Hagger, M. S., Chatzisarantis, N., Biddle, S. J. H., & Orbell, S. (2001). Antecedents of children's physical activity intentions and behaviour: predictive validity and longitudinal effects. *Psychology and Health, 16*(4), 391-407. doi: 10.1080/08870440108405515

Haslam, C., Jetten, J., Haslam, S. A., & Knight, C. P. (2012). The importance of remembering and deciding together: Enhancing the health and well-being of older adults in care. In J. Jetten, C. Haslam, & S. A. Haslam (Eds.), *The Social Cure* (297-315). Hove: Psychology Press.

Haslam, S. A., Oakes, P. J., Reynolds, K. J., & Turner, J. C. (1999). Social identity salience and the emergence of stereotype consensus. *Personality and Social Psychology Bulletin, 25*(7), 809-818. doi: 10.1177/0146167299025007004.

Hayes, A.F. (2009). Beyond Baron and Kenny: statistical mediation analysis in the new millennium. *Communication Monographs, 76*(4), 408-420. doi: 10.1080/03637750903310360.

Hayes, A.F. (2013). *An introduction to mediation, moderation, and conditional process analysis: A regression-based approach.* New York: Guilford Press.

Health Protection Agency. (2012, June, 1). Sexually transmitted infections in England, 2011. *Health Protection Report, 6*(1). Retrieved November 5 2012 from http://www.hpa.org.uk/hpr/archives/2012/hpr2212.pdf.

Helweg-Larsen, M., & Collins, B. E. (1994). The UCLA multidimensional condom attitude scale: Documenting the complex determinants of condom use in college students. *Health Psychology, 13*(3), 224-237. doi: 10.1037/0278-6133.13.3.224.

Hinyard, L. J., & Kreuter, M. W. (2007). Using narrative communication as a tool for health behavior change: A conceptual, theoretical, and empirical overview. *Health Education & Behavior, 34*(5), 777-792. doi: 10.1177/1090198106291963.

Intervention Mapping (n.d.). Retrieved April 22 2013 from http://www.interventionmapping.com/.

Isen, A. M., & Levin, P. F. (1972). Effect of feeling good on helping: Cookies and kindness. *Journal of Personality and Social Psychology, 21*(3), 384-388. doi: 10.1037/h0032317.

Jabberhockey (n.d.) *The Unique Breed Hoodie* [Photograph]. Retrieved October 2 2012 from http://www.spreadshirt.net/the-unique-breed-hoodies-sweatshirts-C4408A16584771.

Janis, I. L., & Feshbach, S. (1953). Effects of fear-arousing communications. *The Journal of Abnormal and Social Psychology, 48*(1), 78-92. doi: 10.1037/h0060732.

Janz, N. K., & Becker, M. H. (1984). The Health Belief Model: A decade later. *Health Education Quarterly, 11*(1), 1-47. doi: 10.1177/109019818401100101.

Jetten, J., Haslam, C., & Haslam, S. A. (2012). *The social cure: Identity, health and well-being*. Hove: Psychology press.

Jones, J.M., Jetten, J., Haslam, S.A., & Williams, W.H. (2012). Deciding to disclose: The importance of maintaining social relationships for well-being after acquired brain injury. In J. Jetten, C. Haslam, & S. A. Haslam (Eds.), *The Social Cure* (255-271). Hove: Psychology Press.

Kelly, J. A., Murphy, D. A., Sikkema, K. J., McAuliffe, T. L., Roffman, R. A., Solomon, L. J., … the Community HIV Prevention Research Collaborative. (1997). Randomised, controlled, community-level HIV-prevention intervention for sexual-risk behaviour among homosexual men in US cities. *The Lancet, 350,* 1500-1505. doi: 10.1016/S0140-6736(97)07439-4.

Kreuter, M. W., Green, M. C., Capella, J. N., Slater, M. D., Wise, M. E., Storey, D., . . . Woolley, S. (2007). Narrative communication in cancer prevention and control: A

framework to guide research and application. *Annals of Behavioral Medicine, 33*(3), 221-235. doi: 10.1007/BF02879904.

Kreuter, M. W., Holmes, K., Alcaraz, K., Kalesan, B., Rath, S., Richert, M., . . . Clark., E. M. (2010). Comparing narrative and informational videos to increase mammography in low-income African American women. *Patient Education and Counselling, 81*, S6-14. doi: 10.1016/j.pec.2010.09.008.

Ku, G., Wang, C. S., & Galinsky, A. D. (2010). Perception through a perspective-taking lens: Differential effects on judgement and behaviour. *Journal of Experimental Social Psychology, 46,* 792-798. doi: 10.1016/j.jesp.2010.04.001.

Ku, G., Wang, C. S., & Galinsky, A. D. (2010). Perception through a perspective-taking lens: Differential effects on judgement and behaviour. *Journal of Experimental Social Psychology, 46*, 792-798. doi: 10.1016/j.jesp.2010.04.001.

Kumagai, A. K., Murphy, E. A., & Ross, P. T. (2009). Diabetes stories: Use of patient narratives to teach patient-centered care. *Advances in Health Sciences Education, 14*, 315-326. doi: 10.1007/s10459-008-9123-5.

Lader, D. (2009, October 20). *Contraception and Sexual Health 2008/09.* Retrieved November 5 2012 from http://www.ons.gov.uk/ons/rel/lifestyles/contraception-and-sexual-health/2008-09/index.html

Lamy, L., Fisher-Lokou, J., & Guéguen, N. (2012). Priming emotion concepts and helping behavior: How unlived emotions can influence action. *Social Behavior and Personality, 40*(1), 55-62. doi: 10.2224/sbp.2012.40.1.55.

Laurent, S. M., & Myers, M. W. (2011). I know you're me, but who am I? Perspective taking and seeing the other in the self. *Journal of Experimental Social Psychology, 47*, 1316-1319. doi: 10.1016/j.jesp.2011.05.018

Lench, H. C., & Levine, L. J. (2005). Effects of fear on risk and control judgements and memory: Implications for health promotion messages. *Cognition and Emotion, 19*(7), 1049-1069. doi: 10.1080/02699930500203112.

Levin, P. F., & Isen, A. M. (1975). Further studies on the effect of feeling good on helping. *Sociometry, 38*(1), 141-147. doi: 10.2307/2786238.

Levy, S. R., Freitas, A. L., & Salovey, P. (2002). Construing action abstractly and blurring social distinctions: Implications for perceiving homogeneity among, but also empathizing with and helping, others. *Journal of Personality and Social Psychology, 83*(5), 1224-1238. doi: 10.1037//0022-3514.83.5.1224.

Lewis, I. M., Watson, B., & White, K. M. (2010). Response efficacy: The key to minimizing rejection and maximising acceptance of emotion-based anti-speeding messages. *Accident, Analysis and Prevention, 42*, 459-467. doi: 10.1016/j.aap.2009.09.008.

Link, B. G., & Phelan, J. C. (2006). Stigma and its public health implications. *The Lancet, 367*(9509), 528-529. doi: 10.1016/S0140-6736(06)68184-1.

Little, P., Somerville, J., Williamson, I., Warner, G., Moore, M., Wiles, R., . . . Peveler, R. (2001). Randomised controlled trial of self management leaflets and booklets for minor illness provided by post. *BMJ, 322*, 1-5. doi: 10.1136/bmj.322.7296.1214.

Lobchuk, M. M. (2006). Concept analysis of perspective-taking: Meeting informal caregiver needs for communication competence and accurate perception. *Journal of Advanced Nursing, 54*(3), 330-341. doi: 10.1111/j.1365-2648.2006.03815.x.

Louis, W., Davies, S., Smith, J., & Terry, D. (2007). Pizza and pop and the student identity: The role of referent group norms in healthy and unhealthy eating. *The Journal of Social Psychology, 147*(1), 57-74. doi: 10.3200/SOCP.147.1.57-74.

Maddux, J. E., & Rogers, R. W. (1982). Protection motivation and self-efficacy: A revised theory of fear appeals and attitude change. *Journal of Experimental Social Psychology, 19*, 469-479. doi: 10.1016/0022-1031(83)90023-9

Maes, S. & Boersma, S. N. (2005). Applications in health psychology: how effective are interventions? In S. Sutton, A. Baum and M. Johnston (Eds), *The SAGE handbook of health psychology*. Sage Publications: London: 299-325.

Maibach, E., & Flora, J. A. (1993). Symbolic modelling and cognitive rehearsal: Using video to promote AIDS prevention self-efficacy. *Communication Research, 20*(4), 517-545. doi: 10.1177/009365093020004002.

Matefy, R. E. (1972). Attitude change induced by role playing as a function of improvisation and role-taking skill. *Journal of Personality and Social Psychology, 24*(3), 343-350. doi: 10.1037/h0033725.

Medical Research Council. (2000, April 1). *A Framework for development and evaluation of RCTs for Complex Interventions to Improve Health*. Retrieved June 23 2013 from http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC003372.

Medical Research Council. (2008, September 29). *Complex interventions guidance*. Retrieved June 23 2013 from http://www.mrc.ac.uk/Utilities/Documentrecord/index.htm?d=MRC004871

Montazeri, A., & Sajadian, A. (2004). Do women read poster displays on breast cancer in waiting rooms? *Journal of Public Health, 26*(4), 355-358. doi: 10.1093/pubmed/fdh178.

Moore, R., Brødsgaard, I., & Rosenberg, N. (2004). The contribution of embarrassment to phobic dental anxiety: A qualitative research study. *BMC Psychiatry,4*(10). doi: 10.1186/1471-244X-4-10.

Morman, M. T. (2000). The influence of fear appeals, message design, and masculinity on men's motivation to perform the testicular self-exam. *Journal of Applied Communication Research, 28*(2), 91-116. doi: 10.1080/00909880009365558.

Moyer-Gusé, E. (2008). Toward a theory of entertainment persuasion: Explaining the persuasive effects of entertainment-education messages. *Communucation Theory, 18*, 407-425. doi:10.1111/j.1468-2885.2008.00328.x.

National Chlamydia Screening Programme. (2009, July). *Initiating Conversations Leaflet*. Retrieved September 22 2010 from http://www.chlamydiascreening.nhs.uk/ps/resources/materials/Initiating_conversations_Leaflet.pdf.

National institute for Health and Clinical Excellence (2008, June). *Guide to the methods of technology appraisal.* Retrieved November 11 2013 from http://www.nice.org.uk/media/B52/A7/TAMethodsGuideUpdatedJune2008.pdf

Neighbors, C. Lee, C.M., Lewis, M.A., Fossos, N., & Larimer, M. E. (2007). Are social norms the best predictor of outcomes among heavy-drinking college students? *Journal of Studies on Alcohol and Drugs, 68*(4), 556-565. Retrieved from http://www.jsad.com/jsad/article/Are_Social_Norms_the_Best_Predictor_of_Outcomes_Among_HeavyDrinking_Colleg/2153.html.

NHS Cancer Screening Programme. (n.d). *Your risk of breast cancer increases [poster]*.
Retrieved 30th May 2013 from
http://www.cancerscreening.nhs.uk/breastscreen/publications/poster-risk-of-
breast-cancer-increases.html.

NHS Choices. (2009) *Chlamydia – Introduction*. Retrieved November 11 2010 from
http://www.nhs.uk/Conditions/Chlamydia/Pages/Introduction.aspx.

NHS Choices. (2011a, November 11). *Lung Cancer – Prevention.* Retrieved November
28 2012 from http://www.nhs.uk/Conditions/Cancer-of-the-
lung/Pages/Prevention.aspx.

NHS Choices. (2011b, December 5). *Why 5 A DAY?* Retrieved June 4 2013 from
http://www.nhs.uk/Livewell/5ADAY/Pages/Why5ADAY.aspx.

NHS Choices. (2011c, November 11) *Chlamydia – Sally's story.* Retrieved 6th June
2013 from http://www.nhs.uk/Conditions/Chlamydia/Pages/Sallys-story.aspx.

NHS Choices. (2011d, November 11) *Chlamydia – Julie's story.* Retrieved 6th June
2013 from http://www.nhs.uk/Conditions/Chlamydia/Pages/Julies-story.aspx.

NHS Choices. (2011e, November 17) *Chlamydia – Introduction*. Retrieved September
26 2011 from http://www.nhs.uk/Conditions/Chlamydia/Pages/Introduction.aspx.

NHS Choices. (2012a, August 8). *Student sexual health*. Retrieved June 27 2013 from
http://www.nhs.uk/Livewell/studenthealth/Pages/Sexualhealth.aspx

NHS Choices. (2012b, March 5). *Obesity – Prevention.* Retrieved June 4 2013 from
http://www.nhs.uk/Conditions/Obesity/Pages/obesityprevention.aspx

NHS Choices. (2012c, July 3). *Cardiovascular disease – Prevention adults.* Retrieved

June 4 2013 from http://www.nhs.uk/Conditions/cardiovascular-

disease/Pages/Prevention-adults.aspx

NHS Choices. (2012d, January 12) *Gonorrhoea – Introduction.* Retrieved January 23

2012 from http://www.nhs.uk/Conditions/Gonorrhoea/Pages/Introduction.aspx.

NHS Choices. (2012e, January 12) *Gonorrhoea – Complications* Retrieved January 23

2012 from

http://www.nhs.uk/Conditions/Gonorrhoea/Pages/new_Complications.aspx.

Oswald, P. A. (1996). The effects of cognitive and affective perspective taking on

empathic concern and altruistic helping. *The Journal of Social Psychology,

136*(5), 613-623. doi: 10.1080/00224545.1996.9714045

Oyserman, D., Fryberg, S. A., & Yoder, N. (2007). Identity based motivation and health.

Journal of Personality and Social Psychology, 93(6), 1011-1027. doi:

10.1037/0022-3514.93.6.1011

Pajares, F. (2002). *Overview of social cognitive theory and of self-efficacy*. Retrieved

January 11 2012 from http://www.emory.edu/EDUCATION/mfp/eff.html.

Peng, W. (2008). The mediational role of identification in the relationship between

experience mode and self-efficacy: Enactive role-playing versus passive

observation. *CyberPsychology & Behavior, 11*(6), 649-652. doi:

10.1089/cpb.2007.0229.

Perlini, A. H., & Ward, C. (2000). HIV prevention interventions: the effect of role-play

and behavioural commitment on knowledge and attitudes. *Canadian Journal of

Behavioural Science, 32*(3), 133-143. doi: 10.1037/h0087108.

Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods*, *40*(3), 879-891. doi: 10.3758/BRM.40.3.879.

Prentice-Dunn, S., & Rogers, R.W. (1986). Protection motivation theory and preventive health: beyond the Health Belief Model. *Health Education Research Theory and Practice, 1*(3), 153-161. doi: 10.1093/her/1.3.153.

Prevention First (2008, June). *Ineffectiveness of Fear Appeals in Youth Alcohol, Tobacco and Other Drug (ATOD) Prevention.* IL: Prevention First. Retrieved January 16 2013 from http://www.careofsem.com/includes/Student%20Programs/Ineffectiveness%20of%20Fear%20appeals%20in%20Youth%20ATOD.pdf.

Ray, M. L., & Wilkie, W. L. (1970). Fear: The potential of an appeal neglected by marketing. *Journal of Marketing, 34*(1)*,* 54-62. doi: 10.2307/1250296.

Ruiter, R. A. C., Abraham, C., & Kok, G. (2001). Scary warnings and rational precautions: A review of the psychology of fear appeals. *Psychology & Health, (16)*6, 613-630. doi: 10.1080/08870440108405863.

Salovey, P., & Birnbaum, D. (1989). Influence of mood on health-relevant cognitions. *Journal of Personality and Social Psychology, 57*(3), 539-551. doi: 10.1037/0022-3514.57.3.539.

Salovey, P., Rothman, A. J., Detweiler, J. B., & Steward, W. T. (2000). Emotional states and physical health. *American Psychologist, 55*(1), 110-121. doi: 10.1037///0003-066X.55.1.110.

Sani, F. (2012). Group identification, social relationships, and health. In J. Jetten, C.

Haslam, & S. A. Haslam (Eds.), *The Social Cure* (21-37). Hove: Psychology

Press.

Scarborough, P., Wickramsinghe,K., Bhatnagar, P., & Rayner, M. (2011, December 6).

Trends in coronary heart disease 1961-2011. British Heart Foundation: London.

Retrieved November 5 2011 from http://www.bhf.org.uk/publications/view-

publication.aspx?ps=1001933

Schwarzer, R., & Luszczynska, A. (2007). Self-efficacy. In M. Gerrard & K. D. McCaul

(Eds.), *Health behavior constructs: Theory, measurement, and research*.

Retrieved May 18, 2011 from http://dccps.cancer.gov/brp/constructs/self-

efficacy/.

Seger, C.R., Smith, E.R., & Mackie, D.M. (2009). Subtle activation of a social

categorization triggers group-level emotions. *Journal of Experimental Social

Psychology, 45*, 460-467. doi: 10.1016/j.jesp.2008.12.004.

Shen, L. (2010). Mitigating psychological reactance: The role of message-induced

empathy in persuasion. *Human Communication Research, 36*, 397-422. doi:

10.1111/j.1468-2958.2010.01381.x

Sher, K. J., Bartholow, B. D., & Nanda, S. (2001). Short- and long-term effects of

fraternity and sorority membership on heavy drinking: A social norms

perspective. *Psychology of Addictive Behaviors, 15*(1), 42-51. doi: 10.1037//0893-

164X.15.1.42

Shih, M., Wang, E., Bucher, A. T., & Stotzer, R. (2009). Perspective taking: Reducing

prejudice towards general outputs and specific individuals. *Group Processes &

Intergroup Relations, 12*(5), 565-577. doi: 10.1177/1368430209337463.

Slater, M. D., Buller, D. B., Waters, E., Archibeque, M., & LeBlanc, M. (2003). A test of conversational and testimonial messages versus didactic presentations of nutrition information. *Journal of Nutrition Education and Behavior, 35*(5), 255-259. doi: 10.1016/S1499-4046(06)60056-0.

Slater, M. D., & Rouner, D. (2002). Entertainment-education and elaboration likelihood: Understanding the processing of narrative persuasion. *Communication Theory, 12*(2), 173-191. doi: 10.1111/j.1468-2885.2002.tb00265.x

Smith, K. D., Keating, J. P., & Stotland, E. (1989). Altruism reconsidered: The effect of denying feedback on a victim's status to empathic witnesses. *Journal of Personality and Social Psychology, 57*(4), 641-650. doi: 10.1037/0022-3514.57.4.641.

Stanton, A. L., Danoff-Burg, S., Cameron, C. L., & Ellis, A. P. (1994). Coping through emotional approach: Problems of conceptualization and confounding. *Journal of Personality and Social Psychology, 66*(2), 350-362. doi: 10.1037/0022-3514.66.2.350

Stephan, W. G., & Finlay, K. (1999). The role of empathy in improving intergroup relations. *Journal of Social Issues, 55*(4), 729-743. doi: 10.1111/0022-4537.00144.

Stürmer, S., Snyder, M., & Omoto, A. M. (2005). Prosocial emotions and helping: The moderating role of group membership. *Journal of Personality and Social Psychology, 88*(3), 532-546. doi: 10.1037/0022-3514.88.3.532.

Stürmer, S., Snyder, M., Kropp, A., & Siem, B. (2006). Empathy-motivated helping: The moderating role of group membership. *Personality and Social Psychology Bulletin, 32*(7), 943-956. doi: 10.1177/0146167206287363.

Sweeny, K., Melnyk, D., Miller, W., & Shepperd, J. A. (2010). Information avoidance: who, what, when, and why. *Review of General Psychology, 14*(4), 340-353. doi: 10.1037/a0021288.

Tangney, J. P., Steuwig, J., & Mashek, D. J. (2007). Moral emotions and moral behaviour. *Annual Review of Psychology, 58*, 345-372. doi: 10.1146/annurev.psych.56.091103.070145.

Tarrant, M., & Butler, K. (2011). Effect of self-categorization on orientation towards health. *British Journal of Social Psychology, 50*, 121-139. doi: 10.1348/014466610X511645.

Tarrant, M., Calitri, R., & Weston, D. (2012). Social identification structures the effects of perspective taking. *Psychological Science, 23*(9), 973-978. doi: 10.1177/0956797612441221.

Tarrant, M., Dazeley, S., & Cottom, T. (2009). Social categorisation and empathy for outgroup members. *British Journal of Social Psychology, 48*, 427-446. doi: 10.1348/014466608X373589.

Taylor, S. E., & Thompson, S. C. (1982). Stalking the elusive "vividness" effect. *Psychological Review, 89*(2), 155-181. doi: 10.1037/0033-295X.89.2.155.

Terry, D. J., & Hogg, M. A. (1996). Group norms and the attitude-behavior relationship: A role for group identification. *Personality and Social Psychology Bulletin, 22*(8), 776-793. doi: 10.1177/0146167296228002.

The NHS Information Centre, Lifestyle Statistics. (2012, February 23). Statistics on obesity, physical activity and diet: England, 2012 obesity. Retrieved November 28 2012 from http://www.aso.org.uk/wp-content/uploads/downloads/2012/03/2012-Statistics-on-Obesity-Physical-Activity-and-Diet-England.pdf.

Tilson, E.C., Sanchez, V., Ford, C.L., Smurzynski, M., Leone, P.A., Fox, K.K., …
Miller, W.C. (2004). Barriers to asymptomatic screening and other STD services
for adolescents and young adults: Focus group discussions. *BMC Public Health,
4*(21). doi: 10.1186/1471-2458-4-21.

Todd, A. R., Bodenhausen, G. V., & Galinsky, A. D. (2012). Perspective taking
combats the denial of intergroup discrimination. *Journal of Experimental Social
Psychology, 48*, 738-745. doi: 10.1016/j.jesp.2011.12.011.

Trötschel, R., Hüffmeier, J., Loschelder, D. D., Schwartz, K., & Gollwitzer, P. M.
(2011). Perspective taking as a means to overcome motivational barriers in
negotiations: When putting oneself into the opponent's shoes helps to walk
toward agreements. *Journal of Personality and Social Psychology, 101*(4), 771-
790. doi: 10.1037/a0023801.

Turner, J. C. (1985). Social categorization and the self-concept: A social cognitive
theory of group behaviour. In E. J. Lawler (Ed.), *Advances in group processes*
(vol. 2, 77-122) Greenwich, CT: JAI Press.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., Wetherell, M. S. (1987).
Rediscovering the social group: A self-categorization theory. Oxford: Blackwell.

Turner, J. C., Oakes, P. J., Haslam, S. A., & McGarty, C. (1994). Self and collective:
cognition and social context. *Personality and Social Psychology*, *20*, 454-463.
doi: 10.1177/0146167294205002.

Van Dick, R., & Haslam, S.A. (2012). Stress and well-being in the workplace: Support
for key propositions from the social identity approach. In J. Jetten, C. Haslam, &
S. A. Haslam (Eds.), *The Social Cure* (175-194). Hove: Psychology Press.

Vescio, T. K., Sechrist, G. B., & Paolucci, M. P. (2003). Perspective taking and prejudice reduction: the mediational role of empathy arousal and situational attributions. *European Journal of Social Psychology, 33*, 455-472. doi: 10.1002/ejsp.163.

Vorauer, J. D., & Sasaki, S. J. (2009). Helpful only in the abstract? Ironic effects of empathy in intergroup interaction. *Psychological Science, 20*(2), 191-197. doi: 10.1111/j.1467-9280.2009.02265.x.

Vorauer, J. D., Martens, V., & Sasaki, S. J. (2009). Trying to understand detracts from trying to behave: Effects of perspective taking in intergroup interaction. *Journal of Personality and Social Psychology*, *96*(4), 811-827. doi: 10.1037/a0013411.

Wang, Y.C., McPherson, K., Marsh, T., Gortmaker, S. L., & Brown, M. (2011). Health and economic burden of the projected obesity trends in the USA and the UK. *The Lancet, 278*, 815-825. doi: 10.1016/S0140-6736(11)60814-3

Ward, K., & Hawthorne, K. (1994). Do patients read health promotion posters in the waiting room? A study in one general practice. *British Journal of General Practice, 44*, 583-585. Retreived from http://www.ncbi.nlm.nih.gov/pmc/articles/PMC1239083/.

Weinstein, N. D. (1984). Why it wont happen to me: Perceptions of risk factors and susceptibility. *Health Psychology, 3*(5): 431-457. doi: 10.1037//0278-6133.3.5.431.

Weston, D. & Tarrant, M. (2008) *The effect of injunctive/descriptive social norm conflict on intentions to engage in exercise behaviour.* (Unpublished BSc dissertation), Keele University, Keele.

Weston, D. & Tarrant, M. (2009). *Examining the relationships between perspective taking, perceived risk and intentions to engage in health promoting behaviour.* (Unpublished MSc dissertation), Keele University, Keele.

White, K. M., Hogg, M. A., & Terry, D. J. (2002). Improving attitude-behavior correspondence through exposure to normative support from a salient ingroup. *Basic and Applied Social Psychology, 24*(2), 91-103. doi: 10.1207/S15324834BASP2402_2.

Wicke, D. M., Lorge, R. E., Coppin, R. J., & Jones, K. P. (1994). The effectiveness of waiting room notice-boards as a vehicle for health education. *Family Practice, 11*(3), 292-295. doi: 10.1093/fampra/11.3.292.

Wilkinson, E. (2010, February 22) Obesity rise on death certificates, researchers say. *BBC News*. Retrieved 6th November 2012 from http://news.bbc.co.uk/1/hi/health/8524510.stm.

Wilkinson, H., & Milne, A. J. (2003). Sharing a diagnosis of dementia – learning from the patient perspective. *Aging & Mental Health, 7*(4), 300-307. doi: 10.1080/1360786031000120705.

Wills, C. E., & Moore, C. F. (1996). Perspective-taking judgements of medication acceptance: Inferences from relative importance about the impact and combination of information. *Organizational Behavior and Human Decision Processes, 66*(3), 251-267. doi: 10.1006/obhd.1996.0054.

Witte, K. (1992). Putting the fear back into fear appeals: The extended parallel process model. *Communication Monographs, 59*(4), 329-349. doi: 10.1080/03637759209376276.

Witte, K. (1994). Fear control and danger control: a test of the Extended Parallel

Processing Model (EPPM). *Communication Monographs, 61*, 113-134. doi:

0.1080/03637759409376328.

Witte, K. (n.d.). *Theory-Based Interventions and Evaluations of Outreach Efforts*.

Retreived June 27 2013 from http://nnlm.gov/evaluation/pub/witte/witte_fig2.gif.

Witte, K., & Allen, M. (2000). A meta-analysis of fear appeals: Implications for

effective public health campaigns. *Health Education & Behaviour, 27*(5), 591-

615. doi: 10.1177/109019810002700506.

Xu, X., Zuo, X., Wang, X., & Han, S. (2009). Do you feel my pain? Racial group

membership modulates empathic neural responses. *The Journal of Neuroscience,

29*(26), 8525-8529. doi: 10.1523/JNEUROSCI.2418-09.2009.

Yzer, M. C., Cappella, J. N., Fishbein, M., Hornik, R., Sayeed, S. Ahern, R. K. (2004).

The role of distal variables in behavior change: Effects of adolescents' risk for

marijuana use on intentions to use marijuana. *Journal of Applied Social

Psychology, 34*(6), 1109-1328. doi: 10.1111/j.1559-1816.2004.tb02005.x.

Yzerbyt, V. Y., Dumont, M., Mathieu, B., Gordijn, E., & Wigboldus, D. (2005). Social

comparison and group-based emotions. In S. Guimond (Ed.), *Social comparison

and social psychology: Understanding cognition, intergroup relations, and

culture* (174-205). Cambridge, UK: Cambridge University Press

Yzerbyt, V., Dumont, M., Wigboldus, D., & Gordijn, E. (2003). I feel for us: The

impact of categorization and identification on emotions and action tendencies.

British Journal of Social Psychology, 42, 533-549. doi:

10.1348/014466603322595266

Zebel, S., Doosje, B., & Spears, R. (2009). How perspective-taking helps and hinders group-based guilt as a function of group identification. *Group Processes & Intergroup Relations*, *12*(1), 61-78. doi: 10.1177/1368430208098777.

Zemack-Rugar, Y., Bettman, J. R., & Fitzsimons, G. J. (2007). The effects of nonconsciously priming emotion concepts on behaviour. *Journal of Personality and Social Psychology, 93*(6), 927-939. doi: 10.1037/0022-3514.93.6.927.

Appendix A Manipulations used in Study 1

Cognitive perspective-taking

"The story you will read is a university student's account of contracting chlamydia, taken from the real stories section of the NHS Choices website. Recent research by de Wit *et al* (2008) has suggested that statistical information and narratives (personal accounts) concerning STDs vary in terms of the way they are perceived by individuals. As a result, the real story taken from the NHS choices website is presented to give a first person account of an individual's experience of chlamydia.

Please read the account below and then write a short paragraph about "a day in the life" of the individual in the account. When writing this paragraph, you should write from the individual's perspective as if you were them. That is, as if you had gone through a typical day in their life as them.

Since the success of the study depends on how well you carry out these reading perspective instructions, please re-read them and be sure you have them clearly in mind before reading the account. Once you have them clearly in mind, begin to read the account from this perspective. When you have finished, you will be asked to write a paragraph describing a 'day in the life' of the target."

Emotional perspective-taking

"The story you will read is a university student's account of contracting chlamydia, taken from the real stories section of the NHS Choices website. Traditional, statistics based sexual health information has a reputation for being cold and impersonal (de Wit *et al*, 2008). As a result, the purpose of the real stories section of the NHS website is to take a warmer, more personal approach to sexual health education, focusing upon the experience of contracting Chlamydia for the individuals involved.

As you read the account, please imagine how you *yourself* would feel if you were the person in the account. In your mind's eye, trade places with Sam and read the account as if the events were actually happening to *you*. You should concentrate on the way *you* would feel under those circumstances. Your job as you read the account will be to think about what *your* reactions would be in this situation. Imagine how *you* would feel if these events were happening to you. Imagine as clearly and vividly as possible everything that *you* would feel. In short, imagine that *you* actually are the person in the story.

Since the success of the study depends on how well you carry out these reading perspective instructions, please re-read them and be sure you have them clearly in mind before reading the account. Once you have them clearly in mind, begin to read the account from this perspective. When you have finished, you will be asked to write a paragraph describing a 'day in the life' of the target."

Appendix B Emotional manipulation check coding instructions used across all Studies

In these studies participants were presented with the narrative of a university student (named Sam) who had contracted an STI on a night out. Participants were then instructed to engage in different types of perspective-taking of the target before writing a paragraph describing a "day in the life" of Sam. Although most participants write the paragraphs from the first person perspective, some also refer to Sam in the third person.

For this task I would like you to read these paragraphs and fill in the following information on the coding sheet:

1. Report the participant number (the number written on the paragraph page for paper questionnaires)
2. Code whether or not the paragraph makes mention of specific emotional feelings or responses experienced by Sam or the self (this is a Yes/ No coding).
3. Report the *number* of specific emotional responses or feelings that the participants report.
4. Report which specific emotive phrases/words were used.
5. Include any other information you feel is relevant in the 'notes' column.

Below are a number of guidelines to help with the selection of these emotions:

1. You should include any explicit mentions of emotions or feelings that relate to the self/ Sam and that are relevant to the narrative (i.e., that relate to Sam's unprotected sex/ STI, the aftermath of this, or to engaging in any relevant behaviours).
2. These emotional responses or feelings can be positive or negative
3. You SHOULD also include the attempted absence of emotions or feelings (i.e., "I would try not to feel…")
4. You SHOULD include any anticipated emotions as well as those that are currently felt.
5. Multiple mentions of the same emotional response or feeling in the same paragraph SHOULD be counted every time.
6. Please DO NOT include any mention of emotions or feelings that are not directly relevant to the narrative (i.e., relating to settling into university etc).
7. Please DO NOT include any mentions of emotions or feelings that individuals other than Sam/ the self may experience (i.e., parents).

NOTE FOR WRITTEN QUESTIONNAIRES ONLY: The blu-tacked paper is there to ensure that you remain blind to condition. Please do not remove this and please do not flick through the questionnaire booklet as there may be other references to the

experimental condition that are not obscured. Please stay exclusively on the paragraph task page.

Appendix C Manipulations used in Study 3

Cognitive perspective-taking

On the next page is a poster from a recent chlamydia awareness campaign by the NHS targeted at university students. As this study is concerned with how reading perspective affects responses to sexual health campaigns, please examine the poster imagining what you *yourself* would do if you were the person in the poster (Sam, a 19 year old university student). In your mind's eye, trade places with Sam and read the account as if the events were actually happening to *you*. You should concentrate on what *you* would do under those circumstances. Your job as you examine the poster will be to think about what *you* would do in this situation. Imagine what *you* would do if these events were happening to you. Imagine as clearly and vividly as possible everything that *you* would do. In short, imagine that *you* actually are the person on the poster. Afterwards you will be asked to write a short paragraph about "a day in the life" of Sam.

Since the success of the study depends on how well you read from the requested perspective, please re-read the above instructions and be sure you have them clearly in mind before examining the poster. Once you have them clearly in mind, begin to examine the poster from this perspective.

Please click yes to indicate that you have read and understood these instructions and then progress to the next page.

Emotional perspective-taking

On the next page is a poster from a recent chlamydia awareness campaign by the NHS targeted at university students. As this study is concerned with how reading perspective affects responses to sexual health campaigns, please examine the poster imagining how you *yourself* would feel if you were the person in the poster (Sam, a 19 year old university student). In your mind's eye, trade places with Sam and read the account as if the events were actually happening to *you*. You should concentrate on the way *you* would feel under those circumstances. Your job as you examine the poster will be to think about what *your* reactions would be in this situation. Imagine how *you* would feel if these events were happening to you. Imagine as clearly and vividly as possible everthing that *you* would feel. In short, imagine that *you* actually are the person on the poster. Afterwards you will be asked to write a short paragraph about "a day in the life" of Sam.

Since the success of the study depends on how well you have read from the requested perspective, please re-read the above instructions and be sure you have them clearly in mind before examining the poster. Once you have them clearly in mind, begin to examine the poster from this perspective.

Please click yes to indicate that you have read and understood these instructions and then progress to the next page.

Appendix D Manipulations used in Study 5

Cognitive other-focused perspective-taking

Below is a poster from a new NHS South West gonorrhoea awareness campaign. This particular campaign was developed in collaboration with students from the University of Exeter. The aim of the campaign was to present the real life experiences of those students.

We are conducting research to examine the effectiveness of this campaign. Past research has found that the effectiveness of health campaigns can be influenced by people's "reading style". In this study we are looking at what happens when students take the perspective of a person featured in the campaign.

To help this investigation, we would like to ask you to examine the campaign poster below and the story it contains. As you do this, **please imagine what the person telling the story (Sam, a 19 year old Exeter University student) will do**. That is, try to take Sam's perspective, imagining what she will do.

Remember, while you read the story in this campaign, try to imagine exactly what Sam will do. Concentrate on what Sam will do. In your mind's eye visualise clearly and vividly what she will do in the situation. Try not to concern yourself with attending to all the information presented. **Just imagine what Sam will do in this situation.** Afterwards you will be asked to write a short paragraph about "a day in the life" of Sam.

Since the success of the study depends on how well you read from the requested perspective, please re-read the above instructions and be sure you have them clearly in mind before examining the poster. Once you have them clearly in mind, study the poster from this perspective.

Please tick to indicate that you have read and understood the above

Cognitive self-focused perspective-taking

Below is a poster from a new NHS South West gonorrhoea awareness campaign. This particular campaign was developed in collaboration with students from the University of Exeter. The aim of the campaign was to present the real life experiences of those students.

We are conducting research to examine the effectiveness of this campaign. Past research has found that the effectiveness of health campaigns can be influenced by people's "reading style". In this study we are looking at what happens when students take the perspective of a person featured in the campaign.

To help this investigation, we would like to ask you to examine the campaign poster below and the story it contains. As you do this, **please imagine what you *yourself* would do if you were the person telling the story (Sam, a 19 year old Exeter University student)**. That is, try to imagine what you would do if you were in this situation.

Remember, while you read the story in this campaign, try to imagine exactly what you would do. Concentrate on what you would do. In your mind's eye visualise clearly and vividly what you would do in the situation. Try not to concern yourself with attending to all the information presented. **Just imagine what you would do in this situation.** Afterwards you will be asked to write a short paragraph about "a day in the life" of Sam.

Since the success of the study depends on how well you read from the requested perspective, please re-read the above instructions and be sure you have them clearly in mind before examining the poster. Once you have them clearly in mind, study the poster from this perspective.

Please tick to indicate that you have read and understood the above

Emotional other-focused perspective-taking

Below is a poster from a new NHS South West gonorrhoea awareness campaign. This particular campaign was developed in collaboration with students from the University of Exeter. The aim of the campaign was to present the real life experiences of those students.

We are conducting research to examine the effectiveness of this campaign. Past research has found that the effectiveness of health campaigns can be influenced by people's "reading style". In this study we are looking at what happens when students take the perspective of a person featured in the campaign.

To help this investigation, we would like to ask you to examine the campaign poster below and the story it contains. As you do this, please **imagine how the person telling the story (Sam, a 19 year old Exeter University student) feels.** That is, try to take Sam's perspective, imagining how she feels.

Remember, while you read the story in this campaign, try to imagine exactly how Sam feels. Concentrate on how Sam feels. In your mind's eye visualise clearly and vividly how she feels in the situation. Try not to concern yourself with attending to all the information presented. **Just imagine how Sam feels in this situation.** Afterwards you will be asked to write a short paragraph about "a day in the life" of Sam.

Since the success of the study depends on how well you read from the requested perspective, please re-read the above instructions and be sure you have them clearly in mind before examining the poster. Once you have them clearly in mind, study the poster from this perspective.

Please tick to indicate that you have read and understood the above

Emotional self-focused perspective-taking

Below is a poster from a new NHS South West gonorrhoea awareness campaign. This particular campaign was developed in collaboration with students from the University of Exeter. The aim of the campaign was to present the real life experiences of those students.

We are conducting research to examine the effectiveness of this campaign. Past research has found that the effectiveness of health campaigns can be influenced by people's "reading style". In this study we are looking at what happens when students take the perspective of a person featured in the campaign.

To help this investigation, we would like to ask you to examine the campaign poster below and the story it contains. As you do this, **please imagine how you *yourself* would feel if you were the person telling the story (Sam, a 19 year old Exeter University student)**. That is, try to imagine how you would feel if you were in this situation.

Remember, while you read the story in this campaign, try to imagine exactly how you would feel. Concentrate on the way you would feel. In your mind's eye visualise clearly and vividly how you would feel in the situation. Try not to concern yourself with attending to all the information presented. **Just imagine how you would feel in this situation.** Afterwards you will be asked to write a short paragraph about "a day in the life" of Sam.

Since the success of the study depends on how well you read from the requested perspective, please re-read the above instructions and be sure you have them clearly in mind before examining the poster. Once you have them clearly in mind, study the poster from this perspective.

Please tick to indicate that you have read and understood the above