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Predictors of young women's attitudes toward sexual health practices

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PREDICTORS OF YOUNG WOMEN'S ATTITUDES TOWARD SEXUAL HEALTH PRACTICES

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A Report Submitted in Partial Fulfilment of the Requirements for the Award of Bachelor of Arts (Psychology) Honours

Faculty of Community Studies, Education and Social Sciences, Edith Cowan University.

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Predictors of Young Women's Attitudes Towards Sexual Health Practices

The present study examined whether cognitive (beliefs), affective (emotions) and / or behavioural processes predicted young women's attitudes towards their sexual health practices. For pragmatic reasons, safer sex promotion has largely relied on the provision of factual information to promote behaviour change. Although the importance of emotional and behavioural influences has been indicated, these elements have not traditionally been included in sexual health interventions. In order to examine this issue, Zanna and Rempel's (1988) tripartite model of attitude formation was used. A convenience sample of female participants (N=98) aged 18 to 29 years was asked to rate their attitudes towards three sexual health behaviours; using condoms, having many short-term partners, and getting tested for Sexually Transmitted Infections (STIs). Participants reported and evaluated their own beliefs and emotions about the health behaviours, and indicated the frequency with which they had previously undertaken each behaviour. Standard multiple regressions indicated that past behaviour predicted attitudes towards all of the three health behaviours. In addition, emotions predicted using condoms and getting tested for STIs, and beliefs predicted having many short-term partners. The study supported the application of Zanna and Rempel's theory of attitude formation to the domain of sexual health. The importance of emotional and behavioural elements in the formation of attitudes towards sexual health practices was highlighted, suggesting the opportunity for intervention strategies to incorporate these elements to improve the promotion of safer sex behaviours. Finally, the importance of gender-sensitive sexual health promotion was emphasised.

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Submitted: October, 2002

Declaration

I certify that this thesis does not incorporate, without acknowledgment, any material previously submitted for a degree or diploma in any institution of higher education and that, to the best of my knowledge and belief, it does not contain any material previously published or written by another person except where due reference is made in text.

Signature: 

Date: 21/10/03.

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Introduction

Women face greater risk to their health from Sexually Transmitted Infections (STIs) than men, they are at greater risk than ever of contracting STIs, yet the success of efforts to prevent STIs has been limited. Women are disproportionately affected by STIs, including Human Immunodeficiency Virus (HIV) for several reasons. First, they are more at risk than men of contracting STIs: Vaginal intercourse with an infected partner puts a woman at greater risk of contracting STIs than the risk a man would face from same exposure with an infected partner (Bolan, Ehrhardt & Wasserheit, 1999). For example, in 2001, Chlamydia was diagnosed 1.5 times more frequently in women than in men (National Centre in HIV Epidemiology and Clinical Research, 2002). Second, when women are infected, they are more adversely affected by STIs. Relatively common infections such as Chlamydia and Gonorrhoea, if left untreated, place women at risk of infertility. Third, the Human Papilloma Virus (HPV), more commonly referred to as the wart virus, is associated with the development of cervical cancer. In Australia, over 1000 new cases of cervical cancer are diagnosed each year (NSW Cervical Screening Program, 1997). Fourth, as these infections are usually not accompanied by symptoms, women are often not aware of their presence. Consequently infections remain untreated, and their adverse effects become increasingly severe. Furthermore, if a woman is infected with an STI, she may be at increased risk of contracting HIV (Rottingen, Cameron & Garnett, 2001).

Women engage in sexual intercourse at an earlier age and have more sex partners than was the practice in previous decades. Consequently women are more exposed than ever to STIs (Johnson, Wadsworth, Wellings & Field, 1994). This may be illustrated by the following: (a) About half of school students aged 17 years (both male and female) have experienced sexual intercourse (Lindsay, Smith & Rosenthal, 1997); (b) Using a randomly

selected (census balanced) sample, Fisher & Boroditsky's (2000) Canadian study of single women showed a vast increase in the number of women reporting that they had had sexual intercourse after the age of 17. Of the study's 15 -17 years age group, 27% reported being sexually active (lower in comparison with Lindsay et al.'s Australian school students). In contrast, however, this figure increased to 82% for 18-24 year olds, and expanded further to 91% for 25 – 29 year olds; (c) In Britain, the average number of lifetime partners for women in 1990 was 3.4 (Johnson et al., 1994), whereas this figure increased to 6.5 in 2000 (Johnson et al., 2001).

Impelling as the physiological and quantitative sexual health risks for young women are, the case for gender sensitivity towards health goes further. Multidisciplinary research has begun to demonstrate how (greater than biological sex differences) gender, being the "sociocultural roles and expectations that attach to the sexes" (Khoury & Weisman, 2002, p. 62), affects both health problems and approaches to treatment (Amaro & Raj 2000; Forrest, 2001; Sheperd, Western, Peersman & Napuli, 2000; Wyn, 1994), which is apparent in the case of sexual health. Given the adverse effects of STIs for women, it is of concern that strategies aimed at reducing the rate of infection amongst young people have met with only limited success (Wyn, 1994). The following sections will describe some of the strategies for reducing these rates of infection.

Safer Sex

The promotion of 'safer sex' has been the strategy adopted internationally in efforts to prevent the transmission of STIs and in particular, HIV. Although largely associated with the use of male condoms (Donovan, 2000; Rosenthal & Reichler, 1994; Wyn & Stewart, 1991), safer sex promotion is not limited to the physical barrier that condoms provide during sexual intercourse. Safer sex strategies are numerous, and can include combinations of: abstaining

from sexual intercourse; having monogamous sexual relationships; reducing numbers of sexual partners; use of female condoms; STI testing prior to new sexual relationships; non-penetrative sexual interaction such as kissing, sensuous touching, and mutual masturbation (Donovan, 2000; Health Department of Western Australia, 2001; Quina, Harlow, Morokoff, Burkholder & Deiter, 2000; Rosenthal & Reichler, 1994). For example, a couple commenced their sexual relationship where their safer sex strategy was to engage in only kissing and sensual touching. As the relationship developed and included penetrative sex, the couple adopted the use of condoms. As the relationship progressed further, both partners were tested for STIs, with clear results, and the couple discontinued using condoms.

Although the promotion of condom use for safer sex is of paramount importance, the advancement of additional strategies is required for at least three reasons. Firstly, studies have consistently demonstrated that there is a range of social and interpersonal factors that are potential barriers to condom use (Berer, 1993; Harrison & Dempsey, 1997; Lindsay et al., 1997; Rosenthal & Reichler, 1994; Wyn & Stewart, 1991). Secondly, condoms do not guarantee the prevention of the spread of all STIs (Health Department of Western Australia, 2001). For example, the use of condoms reduces, though does not eliminate, the risk of contracting Herpes and Genital Warts. Thirdly, for condoms to provide effective prophylaxis, they need to be used consistently and effectively. Most studies on condom use do not report on the technical correctness of condom use (Myer, Morroni, Mathews & Tholandi, 2002). In addition, although research suggests that the incidence of condom failure during sex can be reduced to a negligible degree with experience and practical knowledge, reported breakage rates have been up to 6.7%, and falling-off the penis rates up to 5.4% (Albert, Warner, Hatcher, Trussel, & Bennett, 1995). For the greater number of safer sex strategies that a person has available, the more able they will be to use one or a combination of strategies in

ways that fit their personal situations and relationships (Berer, 1993; Latka, Gollub, French & Stein, 2000).

The promotion of safer sex rests in the complexity of sexual interactions, which are by their nature entwined in cultural, social, interpersonal and individual meaning. In addition, biological influences are indicated by developmental signs of sexual behaviour that start at infancy (Ross, 1999). Regardless of the safer sex method used, it will involve negotiation and cooperation between two people. Researchers have suggested that in heterosexual interactions, women are not always negotiating from a position of equal power with men (Amora & Raj, 2000; Quina, et al., 2000; Wyn & Stewart, 1991), and that women bring different expectations to sexual relations than men (Bolan, et al., 1999). For example, a study by Abbott's (cited in Wyn & Stewart, 1991, p.10) of 16 to 18 year old women in the ACT showed that although 93% of the sample felt in control of whether they had sex or not, 38% reported that they had had sex when they did not want to. Further, 24% reported that they would be too embarrassed to ask for condoms to be used, and the same percent would be too embarrassed to buy condoms from a chemist.

Largely, safer sex promotion has relied upon the provision of cognitive information to encourage behaviour change. This information-giving model persists despite research having demonstrated that adequate knowledge of safer sex practices does not necessarily translate into safe behaviour (Boldero, Moore & Rosenthal, 1992; Rosenthal & Reichler, 1994). This health promotion method of limited effect, is considered to persist because information provision interventions are the most easily, and inexpensively delivered. In contrast, interventions teaching skills of safer sex negotiation, non-penetrative sexual practices, and increased self-efficacy with regard to safer sex, are time consuming, difficult to deliver, and

for some audiences, may be controversial (Committee on AIDS Research, 1990; Morrison, Baker & Gillmore, 1994).

From the safer sex strategies available, key health behaviours identified for the purpose of the present study were a combination of: using condoms, having a low number of sexual partners, and having STI check-ups. Despite the limitations discussed above, condom use remains a highly important safer sex strategy (Health Department of Western Australia, 2001; Berer, 1993). Having a reduced number of sexual partners is a method that was naturally adopted by people as a safer sex strategy since the discovery of HIV/AIDS (Feinleib & Michael, 1998; Longshore, Anglin & Hsieh, 1997), yet research on this strategy is limited. STI testing prior to sexual involvement between partners is a preventative behaviour (Health Department of Western Australia, 2001) that has also received little research attention.

Using Condoms.

Since the highly publicised discovery of HIV/AIDS in 1983 as a heterosexually life threatening disease, condoms use has not been as frequently as might be expected (Friedman et al., 2001; Ostergaard, 1997). For example, amongst 17-year-old Australian school students, 46% reported having not always used condoms in the previous year (Lindsay, et al., 1997). For Canadian young women, inconsistency of condom use in the past six months was reported by over two-thirds of women (Fisher & Boroditsky, 2000). In Britain, the proportion of 16 to 44 year olds who reported more than one partner in the last year, and did not use condoms consistently, increased between 1990 and 2000 to 15% for men, and 10% for women (Johnson et al. 2001).

There are many factors that have been shown to play a role in reducing likelihood of condom use. These impediments include, but are by no means limited to, condom availability

and accessibility (Harrison & Dempsey, 1997; Myer et al., 2002), low levels of knowledge of STIs and the importance of condoms (Garside, Ayres, Owen, Pearson & Roizen, 2001; Lindsay et al., 1997), perception of reduced sensation, spontaneity, pleasure or satisfaction with condom use (Rosenthal & Reichler, 1994; Wyn & Stewart, 1991), perceived expense of buying condoms (Harrison & Dempsey, 1997; Myer et al., 2002); lack of partner communication (Quina et al., 2000; Sneed et al. 2001), and embarrassment to buy condoms (Meekers, Ahmed & Molatlhegi, 2001). Of particular interest when considering gender differences affecting condom use, are issues of power imbalances in relationships (Amora & Raj, 2000; Crosby, Yarber & Meyerson, 2000), an expectation for women to take responsibility for contraception (Lindsay et al., 1997; Rosenthal & Reichler, 1994), level of self-efficacy or sexual assertiveness (Amora & Raj, 2000; Van Emplen et al., 2001), and 'seriousness' or 'closeness' of relationships (Fisher & Boroditsky, 2000; Ostergaard, 1997). For instance, it has been frequently reported that young women discontinue condom use over time as they form serially monogamous relationships with steady partners, even if they have not been tested for STIs (Fisher & Boroditsky, 2000; Wyn & Stewart, 1991).

Low Numbers of Sexual Partners.

The National Health and Social Life Survey (a probability sample of the United States adult population) showed that that 29 percent of US adults reported some change in their sexual behaviour as a result of AIDS awareness (Feinleib & Michael, 1998). The most commonly reported strategy, was to reduce number of sexual partners. This was adopted by 12 % of the sample, in comparison with 9% who increased condom use. However, despite the popularity of this naturally adopted strategy, research into this area has been minimal, making it apparent that considered investigation is required.

The intention to have sex with fewer partners among Injecting Drug Users (IDUs) was investigated by Longshore et al. (1997). Although this sample of participants was not representative of a broader population for a number of reasons, (such as an increased risk of HIV where injecting equipment had been shared, and the association between substance use and low levels of safer sex behaviours [Lindsay et al., 1997]), and subsequently the results have limited applicability to a non-IDU population, interesting findings emerged from the study. Results showed that an intended reduction in sex partners did exist, and was associated with fear of contracting AIDS, and peer behaviour norms.

Personal strategies for HIV prevention, including limiting sexual partners, was investigated by Sanderson, Maibach, DiIorio & Cantor (1999). The US college student sample was asked about their personal goals for reducing their risk of being infected with HIV. Of the five main strategies participants provided, limiting partners was the third most-frequently mentioned. Despite the fact that the majority of participants (70%) listed more than one strategy, the analysis of the data included only the first strategy provided by each participant. Thus, the authors treated each strategy as a sole method of safer sex, which was not true of most participants. The value of the results is limited because it is unknown whether reduced partners was a strategy relied solely upon by participants (not an effective safer sex measure), or whether it was part of a combination of strategies including condom use and STI testing. These results showed that participants with a strategy to limit partners had lower perceived vulnerability to HIV, were less likely to know someone with HIV, and were less likely to believe that they would feel good about themselves for using condoms. The results of this study should be interpreted with caution.

STI Testing.

STI testing is a primary prevention measure when both partners are tested as a precaution prior to sexual involvement. Additionally, testing provides secondary and tertiary prevention by early STI identification, early treatment where STIs are diagnosed, a reduction in the spread of STIs to future partners, and reduced transmission to partners' subsequent partners. Although women are generally more likely to seek health care than men, STI testing appears to be an exception (Bolan et al., 1999). Many reasons may account for this phenomenon, for example, women with STIs tend to have less symptoms than men. For anatomical reasons, women may not notice symptoms such as abnormal discharge or painless lesions. Furthermore, symptoms may be less clearly attributable to STIs than to competing diagnoses such as urinary tract infections, or vaginal infections of a non-sexual nature. Even when women do perceive that symptoms may need treatment, psychosocial factors such as stigma may prevent treatment seeking (Bolan et al., 1999).

STI testing for women is usually a more involved process than it is for men, and potentially more uncomfortable and embarrassing. When a person seeks STI testing, the tests undertaken will depend upon the individual's circumstances, such as risk factors and symptoms, and the medical service they are attending. However, testing and treating STIs in men is usually relatively simple and inexpensive (Bolan et al., 1999). In contrast, STI detection and diagnosis in women is more difficult for several biological reasons, such as: The large number and variety of cells and bacteria normally present in the vagina can increase the difficulty of interpreting and testing for infections of a sexual nature; where menstrual blood is present it can interfere with diagnostic tests; obtaining cervical specimens can be hampered by cervical mucous or the anatomy of the cervix itself (Bolan et al., 1999). Similarly with men, women experience exposure of their genitals, but in addition, women

most often experience a speculum examination, a larger number tests, and a longer duration of examination than men.

Intrinsically associated with the biological considerations of STI testing, psychosocial elements of testing have been recognised. Little research in this area exists and is mainly qualitative in nature. Introductory investigations have provided insight, however broader investigation including quantitative methods is required.

Dixon-Woods et al. (2001) undertook a qualitative study to investigate how women choose services for sexual health. Their findings indicated that many women fear judgemental attitudes by medical practitioners, confidentiality and anonymity were of extreme importance, there was a fear of pain and of the unknown, and women experienced feelings of stigma and embarrassment in attending services for sexual health. During testing women felt nervous, exposed and vulnerable. Reports varied in the discomfort and pain they experienced during testing, and communication appeared to have an important role in mediating experiences.

Also using qualitative methodology, Scoular, Duncan & Hart (2001) examined more specifically the stigma experienced by young women who had recently been diagnosed with an STI, and the associated stigma of attending a genitourinary medicine (GUM) clinic. These authors suggested that having STIs is stigmatised because STIs are linked with sexual behaviour that is in turn associated with religious, cultural and political attitudes. In the study, women associated STIs with attributes deemed socially and morally unacceptable. Consequently, the women were shocked and disbelieving that they themselves were not invulnerable to conditions associated with a stereotypically negative image. Study participants recognised a societal inability to discuss more general issues surrounding sex. Results from the study suggested that the clinic shared the stigmatising connotations

associated with STIs, which was recognised to be a barrier to client access. Fear of GUM clinics appeared to be related to a fear of the unknown. However, while attending the clinic was stressful for clients, it did not correspond to participants' worst fears. Staff efforts to 'normalise' the experience of having an STI was associated with reduced anxiety.

The preceding discussion illustrates that concern about HIV / AIDS and to a lesser degree concern about STIs', has led to much research into condom use, with less investigation of reducing sexual partners and getting tested for STIs. As much of the research that does exist has been conducted outside of a theoretical framework, it is difficult to organise and apply in a practical way, such as to promote safer sex behaviour. An inherent difficulty in investigating sexual behaviour is that by nature it has complex determinants within a wide range of individual, relationship and contextual characteristics, as well as complexity in the ways in which sexuality is socially constructed. Consequently, no single model will account for the complexity of young people's sexual beliefs and practices (Rosenthal & Reichler, 1994). Regardless, there still remains the need to understand the ways in which young people conceptualise their sexual health practices, to enable the promotion of positive health behaviours. Therefore, attitude theory is proposed as framework in which to explore young women's experiences of using condoms, having many short-term partners, and getting tested for STIs.

Attitude Theory

The term "attitude" has been considered indispensable when attempting to understand concepts in different domains, such as various behavioural acts, and social and political groups (Eagly, 1992; Eagly & Chaiken, 1993). Despite the large amount of attention attitude theory has received throughout the history of social psychology, there has not been one commonly accepted definition of the term.

Within the large body of research into attitude theory, a broad range of definitions of the concept has been utilised. Subsequently, results of research into attitudes have varied in correspondence with which definition has been used (McGuire, 1985). For example, attitudes have been described as consequences of cognitive input: "a special type of knowledge, notably knowledge of which content is evaluative or affective" (Kruglanski, 1989, p. 139). Elsewhere, attitudes have been defined with an affective basis: "the affect associated with a mental object" (Greenwald, 1989, p. 432). In comparison, Campbell (1963) referred to attitude as an acquired behavioural disposition. Despite the breadth of these definitions, they all incorporate the idea that evaluation is a central aspect of attitudes. Thus, an attitude may generally be defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (Eagly & Chaiken, 1993, p.1).

Similar to the issue of definition of attitudes, variations in views exist regarding the structure of attitudes. Amongst attitude theories, two major viewpoints of structure are apparent; attitudes are seen as unidimensional or multidimensional. The unidimensional view is characterised by theories and conceptualisations of attitudes that are of varying singular bases. For example, Ajzen and Fishbein (1977, 1980) proposed the cognitively-based Theory of Reasoned Action. Briefly, the theory contends that people evaluate a behaviour, decide to engage in that behaviour, and then do so, hence the title, 'reasoned action'. In contrast, Zajonc's (1980) conceptualisations were affectively-based. Zajonc proposed that affect could be a direct reaction to sensory input without cognitive mediation and without preceding cognition. Further contrast is added by considering behaviourally-based work by Bem (1972). Bem's theory of self-perception describes the means by which information concerning past behaviour leads to attitude formation.

Alternatively, the multidimensional view considers that the evaluative element of attitudes can be divided into three classes of information: cognitive, affective and behavioural (Rosenberg and Hovland, 1960). Rosenberg and Hovland attributed the origin of these tripartite elements in attitude theory to Mc Dougall in 1908. Applied more broadly than social psychology, McGuire (1969, 1985) points out that recognition of the importance of this distinction extends further back to early western philosophy and eastern religion. In addition, the distinction has also been applied more recently to counselling psychology (Egan, 1998).

The construct validity of the tripartite elements of attitude, although in dispute for a period of time, is supported by current evidence. Earlier in the history of the tripartite distinction, Campbell & Fiske (1959) identified the empirical issues of construct validity, with particular attention on convergent and discriminant validity. Convergent validity of the tripartite elements: beliefs, affect and behaviours has been well supported (Bagozzi, 1978; Kothandapani,1971; Ostrom,1969). That is, the results from measuring the same element, for example beliefs, using different measurement methods, are in agreement. However, discriminant validity, the degree to which a concept differs from other concepts, has been in dispute. For discriminant validity to exist in the tripartite model, responses within each of the three categories should relate more strongly with responses in the same category, than to responses in the other two categories. For example, beliefs measured in several ways should correlate more highly with each other, than with measures of emotions and behaviours. In other words, each of the components should have unique variance not shared with the other two. The importance of this distinction is that high consistency between the three classes implies that there is actually one underlying dimension, rather than three.

In order to test the discriminant validity of the tripartite elements, Ostrom (1969) obtained four measures each of beliefs, affects and behaviour as antecedents of attitudes

towards the attitude object, "the church". Using Campbell and Fiske's (1959) multitrait-multimethod matrix, numerous comparisons of correlation coefficients were made between and within each tripartite element. It was concluded that correlations were higher within elements, than between elements, to a degree greater than would be expected by chance (.50), and so discriminant validity was supported by the pioneering statistical technique. Kothandapani (1971) also found support for the tripartite elements using the multitrait-multimethod matrix to investigate the attitude object "birth control". In addition, exploratory factor analysis supported the presence of the three elements.

Despite this early apparent support for tripartite factors, Bagozzi (1978) re-analysed Ostrom (1969) and Kothandapani's (1971) data using confirmatory factor analysis. Bagozzi found that Ostrom's data weakly supported the tripartite elements, while Kothandpani's failed to support them. This new evidence left the validity of the tripartite elements in question.

Breckler (1984) considered that previous tests of discriminant validity of the tripartite elements were not adequate because they relied on: (a) verbal measures of beliefs, affects and past behaviours, and (b) symbolic or mental representations of the attitude object, because the attitude object was not physically present at the time attitudes were measured. To address these limitations, Breckler measured participants' responses to the attitude object "snake", when a snake was physically present. Additionally, both verbal (e.g. adjective checklists) and nonverbal (e.g. heart rate, extent of contact with snake) measures of cognitive, affective, and behavioural responses were assessed. Results analysed using structural equation modelling, found a three dimensional model statistically acceptable, where a one-dimensional model was not. Further support for Breckler's assertions resulted from a second study, where a snake was not present. Instead participants responded to the verbal label of snake, and only verbal

self-reports were used to measure beliefs, affects and behaviours. Under these circumstances, the tripartite model was rejected.

The preceding discussion illustrates that the present state of evidence supports the empirical separability of three classes of evaluative responses (Eagly & Chaiken, 1993). Further, that the discriminant validity of the tripartite elements is affected by methods of data analysis, direct or indirect modes of attitude object presentation, the verbal or nonverbal measurement of responses, and the type of attitude objects being measured.

Importance of Attitudes.

The importance of attitudes has often been defined in term of its relationship with behaviour. Beginning in the 1930s, empirical studies suggested weak relations between attitudes and seemingly relevant behaviour (Eagly & Chaiken, 1993). Since this time, views on the attitude-behaviour link have varied from a weak relationship (e.g., McGuire, 1985) to one that is moderately high (e.g., Ajzen & Fishbein, 1980).

Despite the focus in empirical studies of the attitude-behaviour link, some authors (Eagly & Chaiken, 1993; Jamieson & Zanna, 1989) would contend that to reduce the importance of attitudes to their effect on action, would be to under-state their importance. Jamieson and Zanna (1989) suggested that attitudes may contribute best in understanding the ways in which individuals try to achieve clarity, structure and consistency in their world. They considered that attitudes form the basis of the desire to clarify one's world view, and aid in its explanation. In addition, Eagly and Chaiken (1993) considered that attitudes must be placed in a theoretical structure that includes the major non-attitudinal determinants of behaviour, such as habits, self-identity, and behavioural norms.

Zanna and Rempel's (1988) Tripartite Model of Attitude.

Based on the tripartite elements, Zanna and Rempel (1988) proposed a tripartite model of attitude formation. The model represented in Figure 1, espouses that an attitude is formed by, one or a combination of: cognitive information (beliefs), affective information (emotions) and (past or intended) behavioural processes. The theory suggests that each of the three classes of information can determine evaluations regarding an attitude object separately, or in combination. Zanna and Rempel considered that when attitudes are based primarily on one of the classes, the tripartite model could be reduced to formulations similar to those proposed by unidimensional theories: That is, when attitudinal evaluations are based primarily on beliefs, the tripartite model can be reduced to a cognitive formulation similar to that proposed by Fishbein and Ajzen (1975). When evaluations are based primarily on affect, the model can resemble the theory proposed by Zajonc (1980). Where evaluations are based primarily on past behaviour, the model can be similar to Bem's (1972) theory of self-perception.

Support for Zanna and Rempel's (1988) model has been demonstrated in various domains, such as men's sexual health (Wright, 2001), palliative care (Cohen, O'Connor & Blackmore, 2002), environmental issues (Pooley, 1996), social issues (Eagly, Mladnic & Otto, 1994), and social groups (Esses, Haddock & Zanna, 1993).

Methodological Considerations.

When determining beliefs and affects regarding an attitude object, researchers conventionally have provided participants with a list of attributes (e.g., clean / dirty, warm / cold, etc.). The attributes provided, often obtained from pre-testing with representatives of the population to be sampled, contained features that participants might commonly ascribe to the

attitude object. Participants rated the extent to which the attitude object could be described by each of those attributes. Fishbein and Ajzen (1975) referred to these as "modal salient beliefs". Use of this technique has resulted in obtaining moderately high correlations between beliefs and attitudes (Eagly et al., 1994).

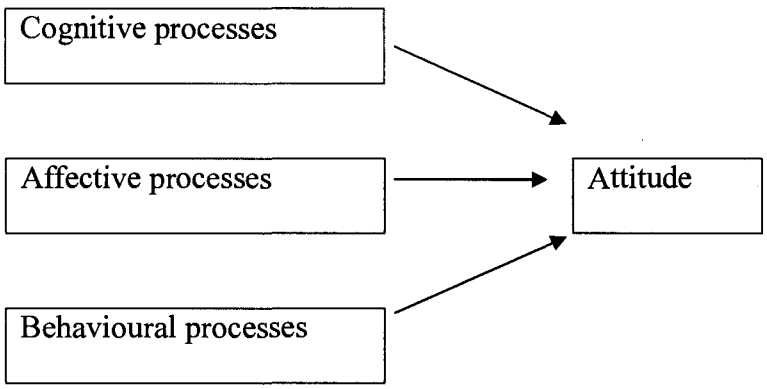

Figure 1. A diagrammatic representation of Zanna and Rempel's (1988) theory of attitude formation (Eagly & Chaiken, 1993, p.15)

Despite respectable correlations, however, researcher-provided beliefs have been criticised as not validly eliciting participant beliefs. Cronen and Conville (1975) argued that such scales did not measure participants' *own* salient beliefs. Similarly, Eagly et al. (1994) contended that there was not any indication that participants had ever considered the relevance of the researcher-provided attributes in relation to the attitude object, prior to involvement in the study. These assertions are supported in several studies such as Smith and Clark (1973) who tested researcher-provided attributes upon which participants rated their beliefs. In a pre-test, Smith and Clark elicited attributes ascribed to both African-American people, and "ideal persons". The study showed that the two sets of characteristics were equally useful in predicting attitudes toward African-Americans. Research by Eagly and

Mladnic (1989) added similar support when participants' attitudes towards men and women were predicted by gender-stereotypical characteristics. However, the same gender-stereotypes also predicted attitudes towards Democrats and Republicans.

Beliefs obtained using researcher-provided attributes have been considered not as elements representative of participants' beliefs, but rather as further indications of participants' attitudes. Eagly et al. (1994) contend that this method has measured attitudes, to some degree, twice, rather than measuring both attitudes and beliefs. Furthermore, these limitations of researcher-provided attributes do not adequately allow the differentiation of the cognitive and affective bases of attitude.

In response to the limitations of researcher-provided beliefs, Esses et al. (1993) used a 'free-response' methodology, which had previously been applied to the relationship of beliefs and attitudes, but had not been utilised in the relationship of affects and attitudes (Cronen & Conville, 1975; Eagly & Mladinic, 1989). Esses et al. used the methodology to elicit beliefs and affects from each individual participant, regarding several social groups (English Canadians, French Canadians, Native Indians, Pakistanis, and homosexuals). Considering each social group individually, participants were asked to list emotions and feelings they experienced when they saw, met, or thought about members of that group. A mean emotion score was obtained for each ethnic group. Beliefs were similarly assessed by responses regarding values, customs and traditions that participants believed were blocked or facilitated by the group.

In support of the utility of the free response methodology, standard multiple regression showed that both beliefs and emotions contributed to attitudes. In addition, conclusions were drawn regarding the tripartite model. Rather than generalising from their findings about the relative contributions of beliefs and emotions, Esses et al. (1993)

considered that these contributions would depend on (a) the attitude object being measured, (b) the type of individual whose attitude the study is attempting to predict, and (c) salient situational forces. The authors' recommendations for future research included the investigation of the applicability of Zanna and Rempel's (1988) tripartite model of attitudes in other domains of research, particularly with of free response as a useful methodology. Additionally, the need to include the measurement of a behavioural element was identified, in order to fully implement the tripartite model.

Internal consistency of the free-response methodology was assessed by Eagly et al. (1994). They concluded that it's application to the cognitive and affective bases of attitudes was successful. Attitudes to four social groups (men, women, democrats and republicans), and three social policies (abortion, affirmative action, and welfare assistance) were investigated. A free-response methodology, similar to that used by Esses et al. (1993), was utilised. In addition, responses were obtained on a 'conventional' semantic differential scale. Participants rated each social group and social policy on a list of values for which it might have consequences, and a list of emotions that it might elicit. To assess the internal consistency of the free-response results, coefficient alphas were calculated by treating participants' scored evaluations of their beliefs or emotions, as a set of items. These scores, ranged from .61 (affects regarding women) to .94 (affects regarding Republicans), and were considered acceptable. Further, these scores were comparable with the coefficient alphas obtained for the semantic differential scale, namely .80 (regarding women) and .95 regarding affirmative action. Although affects were generally less important than cognitions in their findings, Eagly et al. supported Esses et al. (1993) in that the relative importance of beliefs and affects would depend upon the particular attitude object under investigation, the target

population, and situational factors. The extension of the free-response methodology to other domains of research was recommended.

Application of Zanna and Rempel's (1988) model.

Since earlier investigation, a range of research has subsequently investigated Zanna and Rempel's (1988) tripartite model, and the free-response methodology in varying domains. Pooley and O'Connor (2000) found that both cognitive and affective bases contributed to environmental attitudes. Similarly, in investigating the attitudes of nurses working in nursing homes, towards the palliative care of clients, Cohen et al. (2002) found that both cognitions and affects predicted attitudes. In addition, this study also included a measure of past behaviour. Results indicated that the attitudes of those nurses currently working in palliative care were more positive than those who were not. Further, these attitudes did not appear to persist, as nurses who had worked in palliative care in the past did not have significantly more positive attitudes than nurses who had not. The technique used for assessing past behaviour was limited, however, as it did not allow for an equivalent comparison of past behaviour with the other elements of the tripartite model; beliefs and affects.

The domain of men's sexual health has also been investigated using Zanna and Rempel's model and the free-response methodology. Wright (2001) included a measure that allowed the unique contribution of past behaviour to attitude, to be compared with beliefs and affects. This addition progressed the assessment of applicability of the tripartite model. The six aspects of men's health examined were: (a) using condoms, (b) having many short-term partners (5+), (c) talking about STIs with a partner, (d) taking drugs and/or getting drunk then having sex, (e) asymptomatic screening for STIs, and (f) carrying condoms. Participants were

The research questions are as follows:

1. Do beliefs, affects and past behaviours significantly and independently predict attitudes of young women regarding three key sexual health behaviours: *using condoms*, *having many short-term partners*, and *getting tested for STIs*?

2., What beliefs and emotions are generated by young women regarding using condoms, having many short-term partners, and getting tested for STIs, using the free response methodology?

Method

Participants

Participants were 98 females aged between 18 and 29 years ($M = 23.21$, $SD = 3.59$). This convenience sample was recruited from the general population of Perth, Western Australia. Four hundred and thirty seven questionnaires were distributed, giving a response rate of 22%.

Demographic information presented in Table 1 shows that almost half of the participants were single, a third had completed university education, and approximately three quarters were employed. Participants were from a broad range of occupations, such as. teaching, customer service, and youth work.

Materials

The questionnaire measured participant attitudes, beliefs, emotions and past behaviours regarding the three key health behaviours: using condoms, having many short-term partners (short-term partners was operationally defined on the questionnaire as one sexual partner at a time, for less than six months), and getting tested for STIs.

The questionnaire contained five tasks:

- Task 1 measured the overall attitude to each of the three health behaviours. A seven-point Likert scale for each health behaviour was used: -3 (*opposed to*) to +3 (*in favour of*).

Table 1

Participant Demographic Information (N = 98)

Demographic Measure	*N*	(%)
Marital Status		
Single	45	(45.9)
Defacto / Long-term relationship	36	(36.7)
Married	9	(9.2)
Separated	2	(2.0)
Other	6	(6.1)
Highest Education Level Completed		
University	36	(36.7)
Technical College	10	(10.2)
Year 12 High School	41	(41.8)
Year 10 & 11 High School	10	(10.2)
Employment		
Employed	75	(76.5)
Not Employed	21	(21.4)
No Response Given	2	(2.0)

- Task 2 asked participants to consider and list up to eight beliefs that came to mind about each health behaviour. Each behaviour was headed on a separate page, with eight boxes for the beliefs below. To the right on each box was a scale for participants to rate each belief: -3 (*unfavourable*) to +3 (*favourable*).
- Task 3 requested demographic information
- Task 4 was the same as task two, except participants were asked to consider, list and rate emotions that came to mind about each health behaviour.
- Task 5 measured past behaviour regarding each of the three health behaviours. Participants were asked to rate the frequency with which they had engaged in each behaviour: 1 (*never*) to 5 (*always*).

Two versions of the questionnaire were distributed. These were identical except Version 1 measured beliefs prior to emotions, whereas Version 2 measured emotions prior to beliefs (see Appendix A for Version 1 of the questionnaire). As the return by participants of each version of the questionnaire was similar (51% for Version 1, and 49% for Version 2), the potentially confounding effect of salience was considered to have been avoided.

Data Coding

Attitude scores were taken directly from participant responses to the questionnaire items regarding attitudes towards each health behaviour. Scores for beliefs regarding each behaviour were obtained by averaging each participant's responses. For example, if a participant listed six beliefs regarding a behaviour, the ratings for each belief were summed and divided by six. Scores for emotions regarding each behaviour were obtained by the same method used to average beliefs. Past behaviour scores were taken directly from participant responses to the questionnaire items regarding past behaviour for each health behaviour.

Procedure

Approval for the study was obtained from the Ethics Committee for the Faculty of Community Services, Education and Social Sciences at Edith Cowan University.

Participants were recruited by four different methods: (a) the researcher addressed various student and community groups and invited women to participate; (b) advertisements for volunteers to participate in the study were placed at a university campus, a health centre notice board, and community notice boards; (c) a register of people willing to participate in research was obtained from the School of Psychology at Edith Cowan University, and women within the appropriate age range were contacted and invited to participate; (d) using a snowball technique, participants who had agreed to be involved in the study, were asked if they knew any other women who may be interested to participate in the study. These other women were requested by research participants to contact the researcher.

All participants were informed of the following information and ethical considerations: (a) the nature of the study; (b) participation in the study was voluntary, so participants could withdraw from the study at any stage, or decline to answer any part of the questionnaire; (c) participation was anonymous, so names or other identifying information would not be requested; (d) participation was confidential, so participant responses would be viewed only by the researcher and the research supervisor. Questionnaires were handed to participants in person, posted or emailed. Half of the participants completed Version 1 of the questionnaire, and the other half Version 2. Participants returned the completed questionnaire via reply-paid envelopes.

Results

Research Question One

Data were entered for analysis into SPSS Version 11.The first research question concerned whether beliefs, affects and past behaviour independently and significantly predict young women's attitudes towards three sexual health behaviours; using condoms, having many short term partners, and getting tested for STIs. In order to answer this question, correlations and a standard multiple regression were conducted for each of the three health behaviours. Attitude towards the behaviour was the dependent variable, and beliefs, affects, and past behaviours were the independent variables.

Data screening.

Prior to analysis, the data was examined for accuracy of data entry, missing values, and the assumptions of multiple regression. Patterns of missing data were found to be random. Where data was missing for an analysis, cases were omitted from that analysis. Five univariate outliers were identified by examination of extreme z scores: three outliers for attitudes toward using condoms, one for attitudes toward getting tested for STIs, and one for beliefs about getting tested for STIs. Each of these values was changed to the next closest value towards the mean for that variable, as suggested by Tabachnick and Fidell (2001). One case was identified through Mahalanobis distance as a multivariate outlier with $p < .001$ and was deleted from further analyses.

Following data screening and the subsequent reduction in participant numbers in each analysis, the sample size ($N = 98$) met the requirements for standard multiple regression, namely $50 + 8m$, where m is the number of predictors. This resulted in 74 participants required as the minimum sample size for the present study (Tabachnick and Fidell, 2001).

Assumptions of normality, linearity, homoscedasticity, and singularity were considered satisfactory. Further, SPSS regression analysis adds confidence regarding mulitcollinearity, as all variables were entered in to the equation, thus, the programme's tolerance criteria for multicollinearity were not violated.

Statistical Analyses.

As shown in Table 3, attitudes towards using condoms and getting tested for STIs were extremely positive: means were 2.29 and 2.43 (*SD*s = 1.36, .94) respectively, from a maximum score of 3. Attitudes towards having many short-term partners were slightly negative with a mean of .93 (*SD*= 1.54). As having many short-term partners was measured as a risk behaviour, and using condoms and getting tested for STIs were measured as risk-*reduction* behaviours, attitudes across the three behaviours were considered to be congruent.

Mean past behaviour scores (see Table 3) show that participant rated themselves as moderately experienced with all three health behaviours. Correlations between the dependent and the independent variables were low to moderate (see Table 2). Correlations between beliefs and emotions for all three behaviours were moderately high.

The standard multiple regression analyses presented in Table 4 show that, *R* for regression was significantly different from zero for each of the three health behaviours. For having many short-term partners, the tripartite elements accounted for much of the attitudinal variance. For the other behaviours, the amount of variance accounted for was less. There were two significant predictors for each health behaviour. Past behaviour predicted all three health behaviours. In addition, emotions predicted using condoms and getting tested for STIs, and beliefs predicted having many short-term partners.

Research Question Two

The second research question asked what beliefs and emotions are generated by young women to using condoms, having many short-term partners, and getting tested for STIs, using the free response methodology. Content analysis was undertaken where emotions or beliefs significantly predicted the attitude for each health behaviour, that is; emotions regarding using condoms and getting tested for STIs, and beliefs regarding having many short-term partners. Frequencies were obtained by listing all of the beliefs or emotions that were provided by participants (tasks two or four of the questionnaire). This resulted in 172 different emotions listed for using condoms, 189 beliefs regarding having many short-term partners, and 143 emotions for getting tested for STIs. The emotions and beliefs provided by participants were seemingly both positive and negative in nature. Summaries of the most frequently mentioned emotions and beliefs are provided in Tables 5, 6 and 7.

Table 6

Content Analysis for Beliefs About Having Many Short-term Partners

Beliefs	Response Frequency	Percent of Total Responses
Higher risk of STIs	19	4.87
Individual's choice	14	3.59
Associated with low self-esteem / self-worth	10	2.56
Fun	9	2.31
Associated with finding 'right' person	9	2.31
Viewed negatively by others	8	2.05
High risk of STI	8	2.05
Sexual learning / experience	8	2.05
Learning / experience	8	2.05
Called a slut	6	1.53
Dangerous	6	1.53
Total	105	26.90

Table 7

Content Analysis for Emotions about Getting Tested for STIs

Emotions	Response Frequency	Percent of Total Responses
Scared (of testing and / or results)	32	9.55
Safe	20	5.97
Embarrassed	19	5.67
Nervous	17	5.07
Responsible	14	4.18
Worried	11	3.28
Relieved	11	3.28
Anxious	8	2.39
Happy	6	1.79
In control	6	1.79
It's necessary	6	1.79
Positive	6	1.79
Safer	6	1.79
Uncomfortable	6	1.79
Total	168	50.15

Discussion

Zanna and Rempel's (1989) tripartite model of attitude formation proposed that attitudes were derived from one or a combination of three sources of information: (a) cognitive information, (b) affective information, and (c) (past or intended) behavioural processes. Using this conceptualisation as a guide, two research questions were generated for the present study: First, are young women's beliefs, affects and past behaviour independent and significant predictors of attitudes to three key sexual health behaviours: using condoms, having many short-term partners (*short-term partners* was operationally defined as one sexual partner at a time for less than six months), and getting tested for STIs? Second, what beliefs and emotions are generated by young women regarding using condoms, having many short-term partners, and getting tested for STIs, using the free response methodology?

Findings regarding each research question will be discussed separately, followed by consideration of implications of the present study's results for the domain of sexual health, the methodological considerations of the present study, and recommendations for future research directions will be considered.

Are beliefs, affects and past behaviour independent and significant predictors of the attitudes of young women towards sexual health?

Present study results indicated that beliefs, affects and past behaviour all contributed to some degree, to the prediction of attitudes for the three health behaviours: using condoms, having many short-term partners, and getting tested for STIS. These results contribute additional empirical support to Zanna and Rempel's (1989) tripartite model of attitude formation, to support provided in previous studies (Cohen et al., 2002; Pooley & O'Connor, 2000). Findings of the present study are congruent with Zanna and Rempel's suggestion that

perceived unfavourably, and emotions play a greater unique role towards more favourably viewed groups. In further support of this explanation, it is possible that participants were rating having many short-term partners as a social issue, rather than as a personal health behaviour. Anecdotally it was noted that participant responses regarding beliefs were often written in the second or third-person; for example, "many people have short-term partners" (Participant 11), "people that don't have a boyfriend need sex" (Participant 12); "it won't make you happy"(Participant 13).

An alternative explanation for the lack of co-prediction of beliefs and affects regarding attitudes arises from examination of obtained correlation coefficients. For all three behaviours, beliefs and emotions had moderately high correlations, and were correlated more closely with each other than to attitudes. This pattern suggests that there may be an issue of discriminant validity. For example, one may consider the regression equation for having many short-term partners. Given the moderately high correlation between beliefs and emotions (r = .77), and the similar degree to which both beliefs (r = .68) and emotions (r = .61) correlated with attitudes, it is possible that the variance from emotions (15%), if considered in the absence of beliefs (41%), would have contributed to the prediction of attitudes to a larger degree than was found. However, as emotion was entered in to the regression equation with beliefs, the variance of emotion was possibly "monopolised" by the slightly larger variance of emotions.

This discriminant validity explanation is in line with findings by Wright (2001). On a measure of the behaviour "taking drugs and / or getting drunk then having sex", Wright's results showed a similar pattern of correlation as was found in the present study: Emotions and beliefs were significantly and moderately correlated, and were correlated to a higher degree with each other, than with attitudes. Despite a significant F-statistic for the tripartite

elements predicting attitudes on the regression model, none of the predictors contributed significantly to attitudes. This regression result, combined with the correlation pattern, led Wright to conclude that measurement error had occurred, namely, discriminant validity. In addition to these conclusions by Wright, two further aspects of her results are noteworthy. First, in her study, emotions and beliefs did not co-predict attitudes for any of the six behaviours investigated. Second, for the six behaviours measured, beliefs and emotions were more highly correlated with each other, than they were with attitudes. Further modelling using regression equations would be required to test the acuity of this possible explanation.

Role of past behaviour in predicting attitudes.

The prominent role of past behaviour in the prediction of attitudes in the present study is interesting in light of the little prior research on this tripartite element. Previous research has concentrated on beliefs and affects (e.g., Eagly et al., 1994; Esses et al., 1993). Wright's (2001) was the first study to include past behaviour in such a way that allowed its contribution in predicting attitudes to be equitably compared with the contribution of beliefs and affects. Wright found that past behaviour was a predictor of attitude (in combination with beliefs) for two of the six health behaviours investigated: talking about STIs with my partner, and carrying my own condoms. A limitation of Wright's methodology, however, was that it used a behaviour-composite measure of past behaviour. In contrast, the present study included a measures of beliefs, affects, and past behaviour specific to each sexual health behaviour.

On average, the present study sample rated that they had a moderate amount of experience with each of the three health behaviours. In addition, they had strong positive attitudes towards the health behaviours of using condoms and getting tested for STIs, and mildly negative attitudes to the risk behaviour of having many short-term partners. Given

levels of participant experience, and past behaviour as a significant predictor for each health behaviour, it is suggested that participants utilised the experience of their past behaviour in determining their attitudes towards the health behaviours.

A limitation of the present study, however, was that it used only one item to measure participant past behaviour. Thus, the reliability and the validity of this measure may be questioned. However, as past behaviour was significant in the prediction of the attitudes towards all three of the health behaviours, it is suggested that in this study, a representative measure was used. Future research with multiple measures of past behaviour would be recommended.

What were the beliefs and emotions generated by young women regarding sexual health?

Many different beliefs and emotions were elicited regarding the three health behaviours under investigation: using condoms, having many short-term partners, and getting tested for STIs. It appears that the young women in this sample possessed a high awareness of the risk of contracting STIs and safety, as these elements were largely apparent in the broad range of beliefs and emotions elicited. The beliefs and emotions generated were seemingly both positive and negative in nature. In addition, many of the emotions provided by participants were elicited commonly for both using condoms and getting tested for STIs. This may suggest that safer sex behaviours are generally associated with a common set of emotions These emotions included a sense of safety, responsibility, discomfort, happiness, relief, being positive, and being in control.

The Present Study and Sexual Health.

Findings of the present study indicate that cognition, affect and past behaviour all contribute to sexual health. Historically, safer sex promotion has largely relied on the

provision of cognitive information to encourage behaviour change (Committee on AIDS Research, 1990; Morrison et al., 1994), to the exclusion of emotional or behavioural elements. This emphasis on cognition has prevailed even though research has demonstrated that adequate knowledge of safer sex practices does not necessarily translate into safe behaviour (Boldero et al., 1992). The particular emotions and beliefs that were elicited in the present study provide insight as to the cognitive, affective and behavioural information that could be included to provide a more balanced and effective safer sex promotion strategy. Furthermore, considered in light of the findings of Wright's (2001) study of young men's sexual health, it is possible to compare the cognitive and affective responses of men and women.

The result that affective information played a significant part in predicting attitudes towards condom use is congruent with previous research. Fear of STIs and anticipated worry and regret has been associated with condom use (Moatti et al. 1991; Richard, van der Pligt & de Vries, 1995). Similar emotions elicited in the present study in relation to using condoms included those of feeling safe, protected, and relieved. Emotions elicited in the present study, such as feeling annoyed and uncomfortable, may be accounted for by a perception that condoms reduce the sensation, spontaneity, pleasure or satisfaction of sex (Rosenthal & Reichler, 1994; Wyn & Stewart, 1991).

Also congruent with the present study, prior research regarding STI testing suggests that emotions play a large role in this health behaviour. Similar to qualitative findings by Dixon-Wood et al. (2001) and Scoular et al. (2001), participants in the present study were scared of testing and of receiving results, embarrassed, nervous, worried, anxious and uncomfortable. It is note-worthy to add, that in addition to the negative elements found in prior research, the present study found positive affective elements to being tested for STIs;

discussed above as important to women, may be useful elements in health promotion programmes aimed at women. These findings provide support for gender sensitivity in research and promotion of safer sex behaviours (Khoury & Weisman, 2002, Wyn, 1994).

Limitations and Methodological Implications of the Present Study

A number of methodological considerations and limitations of the present study have been identified:

1. Attitudes and past behaviour were each measured by a single item on the questionnaire. This draws into question the reliability of the responses these items elicited. The obtained contribution of these factors in the correlation coefficient matrix, and in the regression equation adds support to these measures as reliable and valid, however, it would be recommended for future research to include several measures of both attitudes and past behaviour.

2. The discriminant validity of the measurement of beliefs and emotions was questioned. Consequently, it is uncertain as to whether beliefs and emotions were actually measured as distinct factors in the study, or whether one single component was being measured. Four suggestions for future research are proposed to address this uncertainty. First, it may be possible to include instructions to participants that illustrate the distinction between feelings and beliefs (Kothandapani, 1971). However, this method may be less suitable for use with participants of a lower literacy level. Second, modelling using regression equations may allow a more extensive exploration of predictor variables. Assessing the prediction of attitudes by beliefs in the absence of emotions, and emotions in the absence of beliefs, may assist to further determine the unique and significant contributions of each tripartite element. The final two suggestions arise from research by Breckler (1984), who found that

discriminant validity was improved when the attitude object was physically present, and non-verbal (in addition to verbal) behavioural responses were measured. These suggestions are certainly not practical for measurement of behaviours such as using condoms and having many short-term partners, however they may be possible for investigating STI testing. As a means of having the attitude object present, the study sample would be people attending a medical service for STI testing. Measures could be taken prior to testing, and include physical measures, such as heart rate, as well as verbal responses.

3. As the participants were recruited as a convenience sample, a limitation of the present study is that results are not generalisable to the larger population. However, the present study does provide an indicator of such results in the sexual health domain.

Future Research Directions

In addition to the previously discussed recommendations for future research based on the limitations of the present study, one additional recommendation of theoretical importance is suggested. The behavioural element in Zanna and Rempel's (1989) model included both past behaviour and *intended* behaviour. Given the contribution of past behaviour in predicting attitudes in the present study, the investigation of the contribution of *intended* behaviour towards attitudes in Zanna and Rempel's model would be of theoretical benefit.

Conclusion

Several conclusions may be drawn from the present study, regarding both attitude theory and women's sexual health. Starting with theoretical considerations, cognitive, affective, and behavioural elements were all found to be independently important in the prediction of attitudes, thereby validating Zanna and Rempel's (1988) model of attitude formation. Application of the free response methodology (Eagly et al., 1994) to the domain of

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Appendix: Quesionnaire with Covering Letter.

Dear Participant,

I am currently completing an Honours degree in Psychology at Edith Cowan University in Joondalup. My research, which has been approved by the Ethics Committee of the Faculty of Community Services, Education and Social Sciences at Edith Cowan University, is designed to find out what your attitudes are to sexual health practices. I would be very grateful if you would complete the questionnaire which is attached to this letter. Please note that by doing so, you are implying consent to take part in the study.

Taking part in this study is entirely voluntary. You are free to withdraw at any time and need not complete any part of the questionnaire. You will not be asked to give your name and address, and you do not have to complete anything that you do not wish to. You will not be individually identified. The information you give will only be seen by myself and my research supervisor.

All of the information collected will be used for my thesis, the results of which will hopefully be useful for future educational programmes. If you have any queries, please feel free to contact me, Alison Dougall, on or my supervisor, Dr Lynne Cohen on 9400 5575.

Thanks so much for your time and effort.

Alison Dougall.

QUESTIONNAIRE ON WOMEN'S ATTITUDES TO THEIR SEXUAL HEALTH PRACTICES

Thank you for volunteering to complete the attached questionnaire. I am an Honours student studying Psychology at Edith Cowan University, conducting this study for my thesis. The attached questionnaire is to be used in the study to determine women's attitudes to their sexual health practices. Once you have completed the questionnaire, please return it to this address. You do not need to use a postage stamp.

Women's Health Survey
PO Box 275
Reply Paid 275
SCARBOROUGH WA 6922

Confidentiality will be maintained at all times and no names and addresses are required. You are free to withdraw at any time and need not complete any part of the questionnaire. Information supplied will be used only for this research.

My name is ALISON DOUGALL and I can be contacted on or by email: adougall@student.ecu.edu.au. The supervisor for my project is Dr Lynne Cohen who can be contacted on 9400 5575.

TASK 2

This task is asking about what you **believe** to be true about the actions that you just rated.

Instructions:

- Just think about the action for a few moments and then write down whatever you **think** is true about the action (for example, you may have a belief about the effects of the action, or you may have a belief about who supports the action).
- There will be several boxes for you to write in, write one belief in each box.
- You have 8 boxes for each action, though this does not mean that you have to write 8 beliefs for each action. Write as many beliefs as you think are important.
- Next to each of your beliefs please indicate, on the scale provided, if this belief leads you to be favourable or unfavourable to the practice

-3 indicates your belief makes you unfavourable toward the practice

+3 indicates your belief makes you favourable toward the practice

0 indicates your belief makes you neither favourable nor unfavourable toward the practice.

To help explain, an example is shown over the page

EXAMPLE:

For the issue of ***Commercial Whaling***, in the first box you may write:

I believe --	This belief leads me to be
it is inhumane	Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to commercial whaling

This belief would probably make you opposed to commercial whaling, so you would circle –1 or –2 or -3 at the **unfavourable** end of the scale. There are no right or wrong answers. You simply write down what you personally believe is true about commercial whaling.

In the second box you may write

I believe --	This belief leads me to be
there may be scientific value	Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to commercial whaling

This belief would probably make you in favour of commercial whaling, so you would circle the corresponding number at the **favourable** end of the scale. There are no right or wrong answers. You simply write down the beliefs you personally experience in relation to the practice.

Now please continue over the page ↳

Having many Short-term Partners

Please list UP TO 8 **beliefs** that you have about this action and rate them.

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

Getting Tested For STIs

Please list UP TO 8 **beliefs** that you have about this action and rate them.

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

I believe --	This belief leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

TASK 4

This task is asking about what you **feel** about the issues presented in tasks 1 & 2.

Instructions:

- Take a moment to reflect on the issue and try to put into words the actual **feelings** that you experience in relation to the action.
- Please try to use descriptive words, rather than just 'good' or 'bad'.
- There will be several boxes for you to write in. Write one feeling in each box.
- You have 8 boxes for each action, though this does not mean you have to write 8 emotions for each issue. Write as many emotions that you feel are important.
- Next to each of your emotions please indicate, on the scale provided, if this emotion is favourable or unfavourable to the practice

-3 indicates your emotion is unfavourable toward the practice

+3 indicates your emotion is favourable toward the practice

0 indicates your emotion is favourable nor unfavourable toward the practice.

To help explain, an example is shown over the page ↻

Using Condoms

Please list UP TO 8 **emotions** you typically feel about this action and rate them.

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to using condoms

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to using condoms

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to using condoms

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to using condoms

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to using condoms

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to using condoms

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to using condoms

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to using condoms

Having Many Short-term Partners

Please list UP TO 8 **emotions** you typically feel about this action and rate them.

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to having many short-term partners

Getting Tested For STIs

Please list UP TO 8 **emotions** you typically feel about this action and rate them.

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

When I reflect on this action I feel --	This emotion leads me to be Unfavourable -- favourable -3 -2 -1 0 +1 +2 +3 to getting tested for STIs

TASK 5

Instructions:

- Please complete the following task by circling the response next to the action which best indicates your past behaviour.
- By circling the number 5 you are indicating that you have always done that action. By circling the number 1 you are indicating that you have never done that action. If you circle the number 3 you are indicating that you have done that action about half the time (50%).

EXAMPLE:

If you have mostly used condoms (more than half the time), but not every time, you would circle the number 4.

	Never				Always
Using condoms	1	2	3	4	5

There are no right or wrong answers, please just circle the number that indicates what you have done in the past.

Please go on to the task...

Action	Never				Always
Using condoms	1	2	3	4	5
Many short-term partners	1	2	3	4	5
Getting tested for STIs	1	2	3	4	5

THANK YOU FOR TAKING THE TIME TO COMPLETE THIS QUESTIONNAIRE