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Self-Presentation and Social Physique Anxiety in Injury Rehabilitation Settings

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A thesis submitted in partial fulfillment of the requirements for the Doctor of Philosophy degree in Kinesiology

SELF-PRESENTATION AND SOCIAL PHYSIQUE ANXIETY IN INJURY REHABILITATION SETTINGS

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ABSTRACT

The objective of this dissertation was to provide an initial description of self-presentation in injury rehabilitation (i.e., physiotherapy). To accomplish this, one qualitative and two quantitative studies were conducted. The purpose of Study 1 was to increase our understanding of self-presentation in this setting. Female (n = 134) and male (n = 54) undergraduate students with a mean age of 20.64 years (SD = 1.99) completed measures of Social Physique Anxiety (SPA; Hart et al., 1989), self-presentational concerns, and preferences for features of the social and physical physiotherapy environment. An examination of the relationships between these variables revealed that people are concerned with how they are perceived by others within physiotherapy settings, and that these concerns are associated with the amount of physique anxiety that people experience. The self-presentational concerns reported were different for men and women. As their SPA increased, women reported greater preference for attending physiotherapy appointments with other females, wearing clothing that de-emphasized the physique, and receiving treatment on a curtained bed. As these results were based on hypothetical injuries and scenarios, Study 2 replicated Study 1 with women who were actually injured and were about to start a physiotherapy program (N = 62; M_{age} = 40.98, SD = 14.17). The results demonstrated relationships between SPA, self-presentational concerns, women's preferences for other female patients, and being treated in a private examination room. As this study measured variables based on anticipated situations that were imagined, investigations with women who were in the process of undergoing rehabilitation programs were warranted. Thus, Study 3 involved semi-structured interviews with women (N = 10; M_{age} = 41.30, SD = 16.86) who experienced SPA (M = 36.44, SD = 7.78), and were receiving physiotherapy. The findings revealed general apprehension about other people's judgements, while identifying specific

personal attributes that were believed to be a target for negative evaluation. The influence of the rehabilitation environment on women's self-presentational concerns and their adherence behaviour were demonstrated. Participants reported practical implications of these findings by identifying potential modifications that may be implemented within physiotherapy settings to help alleviate self-presentational concerns. Possible future directions were discussed.

KEY WORDS: Self-presentation, social physique anxiety, injury rehabilitation, physiotherapy, setting preferences, environment, women.

CO-AUTHORSHIP

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INTRODUCTION

Self-Presentation

Whether or not we admit to caring what other people think of us, our thoughts and subsequent actions are an expression of the manner in which we desire to present ourselves (Leary & Kowalski, 1990). Typically we present characteristics of ourselves that highlight positive attributes in order to increase the likelihood of generating favourable impressions upon others. On the other hand, we generally attempt to de-emphasize behaviours or aspects of ourselves that may result in undesirable impressions. The approach we take to monitor and control these impressions is called self-presentation, or impression management (Schlenker, 1980). The term self-presentation is used in the present research as it incorporates the reference to the self, which is fundamental in its description and definition.

Self-presentation consists of both the motivation to present a particular image of the self (i.e., impression motivation), and the behaviours that are necessary to convey the desired impression (i.e., impression construction) (Leary & Kowalski, 1990). People may be motivated to present themselves in a number of different ways, including, but not limited to, how they are perceived intellectually, socially, emotionally, and physically. In order to portray the image that is desired, a person must behave in a manner that increases the likelihood that other people will perceive them this way. An example of this was provided by student exercisers who reported lifting more weight than they were capable of lifting (impression construction) in order to appear attractive, brave and cool to other exercisers (impression motivation) (Martin & Leary, 2001).

Self-Presentational Measures

Differences in disposition and life experiences create the potential for people to experience different degrees of self-presentational concern (Leary, 1983). Watson and Friend

(1969) developed The Fear of Negative Evaluation Scale (FNE) to measure the amount of concern people have with being evaluated unfavourably by others. A person who scores high on FNE is more sensitive to others' perceptions and will try to prevent the possibility of being regarded in an undesirable way (Leary, 1983). Examples of this concern are trying harder to create positive impressions on others during conversations that are in person, and working harder when it is believed that the work will be assessed by others (Leary, 1983; Watson & Friend). A person's sensitivity to others' impressions of them is dependent upon the combined elements of the situation and also that person's nature (Leary & Kowalski, 1990).

In any social situation, when people doubt their ability to create the impression that they are trying to convey, they may experience social anxiety (Leary, 1992). Research has demonstrated that a heightened fear of negative evaluation is associated with increased social anxiety (Leary, 1983; Watson & Friend, 1969). Hart, Leary, and Rejeski (1989) found that one specific type of social anxiety, termed social physique anxiety (SPA), was significantly related to FNE. SPA refers to a person's anxiety over how his or her body or physique is perceived by others (Hart et al.). It has received considerable attention as a self-presentational variable, especially within the sport and exercise literature (refer to the 2004 special issue of the Journal of Applied Sport Psychology for a review; Prapavessis, 2004). Gammage and her colleagues have suggested that SPA is the "most widely studied aspect of self-presentation in exercise psychology research" (Gammage, Hall, & Martin Ginis, 2004, p. 1639).

In the development of a measure of SPA, the Social Physique Anxiety Scale (SPAS; Hart et al., 1989), relationships between this construct and participants' sex, height, weight, and feelings toward their bodies were demonstrated. Significant correlations were found between the SPAS and general measures of self-presentational concerns (e.g., FNE and interaction

anxiousness), as well as SPAS and assessments representative of weight and overall physical attractiveness. These relationships provided construct validation for the scale. Specifically, Hart et al. found that women who rated their SPA highest were heavier, had a higher percentage of body fat, and were taller than those who reported lower levels of SPA.

Further support for the validity of the original SPAS has been demonstrated through its employment in various studies in sport and exercise, including the examination of relationships between SPA and exercise setting preferences (Crawford & Eklund, 1994; Eklund & Crawford, 1994; Spink, 1992), motivation to exercise and exercise behaviour (Frederick & Morrison, 1996; Lantz, Hardy, & Ainsworth, 1997), and self-efficacy (McAuley, Bane, & Mihalko, 1995). However, the single factor structure of the original scale was, at one time, questioned by researchers (Eklund, Mack, & Hart, 1996). In their attempt to provide support for a unidimensional scale, Martin and her colleagues revised the SPAS to include only nine items (Martin, Rejeski, Leary, McAuley, & Bane, 1997). Since then, this 9-item version of the questionnaire has been used extensively in research investigating self-presentation in exercise (e.g., Gammage, Hall, et al., 2004; Gammage, Martin Ginis, & Hall, 2004; Katula, McAuley, Mihalko, & Bane, 1998; Kruisselbrink, Dodge, Swanburg, & MacLeod, 2004). The results of these studies have provided additional support for its improved validity and reliability compared to that of the original 12-item scale (Katula et al.).

In the development of the SPAS, it was revealed that female participants scored higher than males (Hart et al., 1989). A number of other studies have since supported this finding (Frederick & Morrison, 1996; Haase, Prapavessis, & Owens, 2002; Kruisselbrink et al., 2004; Lantz et al., 1997). That women score higher on SPA has been explained by differences between males and females on body image and body dissatisfaction (Miller, Linke, & Linke, 1980;

Silberstein, Striegel-Moore, Timko, & Rodin, 1988). The immense value that society places on the physical appearance of women has also contributed to differences in body image between men and women (Melbye, Tenenbaum, & Eklund, 2008). People in western culture define the ideal female body type as ultrathin, toned, and attractive (Melbye et al.). Women typically strive to achieve this often unattainable ideal body, and consequently suffer body dissatisfaction (Silberstein et al.). On the other hand, men may strive to achieve a body that is either thinner or more muscular depending on their values and original body type (Martin Ginis, Prapavessis, & Haase, 2008). Women have also been found to be more critical of their bodies, and tend to overestimate their size and shape (Hart et al.). Taken together, these findings support the notion that women are more prone to experience anxiety when they believe that their physique is being evaluated. This likely elicits greater impetus for women to manage the impressions that they convey to other people.

Self-presentation may occur in any social situation, including sport and exercise (Leary, 1992). In his review, Leary proposed that the activities an individual selects, the motivation to take part in these activities, and the quality of the performance may all be affected by the degree of self-presentational concern that is experienced. Leary also acknowledged that a person's choice of the setting where activity takes place may be influenced by his or her self-presentational concern. Further, he suggested that environments that act to mitigate concerns over potential evaluations from other people may be sought by those who are attuned to how other people perceive them (Leary, 1992). For example, some women explained that they chose not to exercise in public settings because of the apprehension they felt about being physically evaluated (Bain, Wilson, & Chaikind, 1989). At the extreme, some people may be completely discouraged from participating in physical activity due to their excessive self-presentational

concerns (Leary, 1992). For instance, young women who experienced great concern for how they would be perceived by their peers expressed that they would rather avoid participation in mandatory swimming classes and suffer punishment for their choice than participate in a situation that presented the potential for negative peer evaluation (James, 2000).

Conceived initially as a stable personality trait by Hart and colleagues (1989), SPA has also been shown to fluctuate with the demands of the situation (e.g., Gammage, Hall, et al., 2004; Gammage, Martin Ginis, et al., 2004; Kruisselbrink et al., 2004; Martin Ginis et al., 2008). The examination of situational or state-levels of SPA has highlighted a number of environmental factors that may act to heighten a woman's awareness of how her body is perceived by others in the exercise setting. For example, women have indicated increased SPA in response to exercise settings that included the presence of men (Kruisselbrink et al.), revealing or physique-salient clothing (Martin Ginis et al.), and mirrors and windows (Gammage, Martin Ginis, et al.). As was proposed by Leary (1992), the relationship between these environmental features and a person's self-presentational concerns may present the potential to deter some people from participating in exercise altogether. Research has provided evidence of some of the negative outcomes (i.e., non-adherence, non-participation, lack of enjoyment or satisfaction) that may result from exercising in environments that are full of evaluative potential, especially for those high in SPA (e.g., Gammage, Hall, et al.; Lantz et al., 1997). How self-presentational variables influence adherence to exercise programs is of particular importance because of the public health issue surrounding the current low physical activity participation rates (Hausenblas, Brewer, & Van Raalte, 2004).

Injury Rehabilitation

Injury rehabilitation (i.e., physiotherapy or physical therapy) is an area that is replete with non-adherence (e.g., Brewer, 1998; Vasey, 1990). Adherence to rehabilitation programs has most

often been measured in terms of patients' attendance at their physiotherapy sessions. Vasey (1990) found that 7.9% of patients did not start their prescribed rehabilitation program, while 14.3% did not complete the program requirements. In sport injury rehabilitation, adherence rates have been cited from a low of 40% to a high of 91% (Brewer, 1998). Successful completion of physiotherapy programs is at least partially responsible for optimum recovery from injury (Bassett & Prapavessis, 2007; Brewer, 1999; Fisher, Domm, & Wuest, 1988). In addition to attendance, the performance of specific behaviours within the physiotherapy rehabilitation setting also constitutes compliance, such as effectively performing rehabilitation exercises, and receiving manual treatment or modalities (Kolt, Brewer, Pizzari, Schoo, & Garrett, 2007). In general, the literature suggests that higher adherence is associated with more positive outcomes (Kolt et al.). Those who fail to attend appointments or complete these program requirements may suffer further injury, or re-injury resulting in missed days at work, or even unemployment due to disability. Thus, non-adherence to injury rehabilitation programs may present a significant public health dilemma.

In a review of the literature on adherence to sport injury rehabilitation, the personal and situational factors that have been found to relate to adherence were summarized (Brewer, 1998). In respect to the personal factors, a negative relationship was found between adherence and patients' trait anxiety. In contrast, some situational variables were found to relate positively to adherence, including: convenient appointment times, perceptions of exertion, social support, belief in treatment efficacy, and the patient's comfort within the rehabilitation clinic. Thus, it may be argued that people who do not feel comfortable in the facility where they are undergoing physiotherapy treatment, a possible outcome of heightened self-presentational concerns, may not adhere to their rehabilitation program.

Some researchers in health care have expressed the need for more thorough examinations of the social environment as it relates to health behaviour (Stokols, 1992), and have acknowledged the combined impact that "intrapersonal, social and cultural, and physical environment variables" may have on health behaviour (Sallis & Owens, 1997, p. 404). Although this relationship has yet to receive empirical attention, it is plausible that the injury rehabilitation environment may present the potential for increased self-presentational concerns which may in turn elicit non-compliant behaviour. Therefore, it is important to determine which features of the rehabilitation environment are most influential in patients' experience of self-presentation.

Thus, the purpose of the present program of study was to examine self-presentation within the domain of injury rehabilitation in order to increase our understanding of people's self-presentational concerns in this context. A secondary purpose was to investigate how characteristics of the physiotherapy clinic environment influenced people's self-presentational concerns, particularly with regard to their SPA.

As in exercise settings, physiotherapy clinics are typically large, open concept, gym-like areas where both males and females may perform exercises and receive treatment for their injuries. It is common for both of these environments to be crowded. They are both designed to provide substantial visual feedback to individuals by including mirrors, and there are often windows for observation or natural light. The clothing that is required for physiotherapy also mimics the attire worn by exercisers in a fitness facility. Finally, and most importantly, they are both social settings where the potential for negative evaluation from others may be accentuated.

Along with features of the environment, injury rehabilitation may possess even greater potential for evaluation because the people who participate in these programs are injured. Primarily, physiotherapy patients are constantly being observed by their physiotherapist or

kinesiologist in order to evaluate aspects of their injury, along with their performance of specific tasks. This constant evaluation is necessary to identify errors in injured patients' form or technique so that they may be corrected if necessary. Having their abilities and physical appearance scrutinized by others may intensify the physique anxiety and more general self-presentational concerns that people who are undergoing physiotherapy programs experience.

Additionally, it has been suggested that people with physical disabilities may be particularly prone to SPA due to beliefs that other people are negatively evaluating their limited functional ability (Prapavessis, Grove, & Eklund, 2004). Regardless of whether it is acute or chronic, the disruption to normal physical functioning caused by an injury may lead to increased susceptibility to the perceptions of other people in this setting. Presumably the experience of the injury itself, including pain and heightened emotional state may also provide rehabilitation patients, especially those who are already high in self-presentational concerns, with a greater likelihood of experiencing negative psychological states, such as increased social anxiety.

Social Environment

The characteristics of environments that have been associated with self-presentational concerns in exercise were used as a template for designing the questionnaires employed in the present research. The social exercise setting includes characteristics of the other people who are present in the environment, how they relate socially, and function as a whole. Hausenblas and associates (2004) have referred to the social environment as the "nature of the audience" (p. 10). In group dynamics research, the presence of others has been shown to both alleviate and heighten social anxiety (see Carron, Burke, & Prapavessis, 2004, for a review). A good example of this is apparent in a study conducted by Jackson and Latanté (1981). These researchers found that as the size of the audience increased, the social anxiety of their participants increased in response to

imagined scenarios of themselves performing the national anthem. However, when other people were performing alongside the participants, their social anxiety was reduced. The participants experienced further reductions in anxiety as the number of people performing with them increased. In exercise, it seems that the presence of others has the potential to alleviate social anxiety (Carron & Prapavessis, 1997). However, it has been proposed that exercise classes may represent a unique situation where social anxiety is actually intensified rather than reduced by the presence of others (Carron et al.).

In an examination of the group environment in an exercise class, Martin and Fox (2001) measured the social anxiety experienced by men and women who completed an aerobics class in one of two conditions: a group social environment that was termed either enriched or bland. They characterized the enriched group environment as "socially supportive, relaxed, and interactive", while the bland group environment was represented by "a lack of social interaction and warmth among group members" (p. 1002). Their hypothesis reflected relationships typically found in group environments (i.e., that people would experience decreased social anxiety in the enriched class). Contrary to their hypothesis, the participants who experienced the aerobics class that was highly interactive indicated feeling more social anxiety than those who experienced the less social aerobics class. The authors proposed that the enriched social environment may have provoked anxiety because of the individualized attention from the other participants. This focused attention may have increased their self-awareness, creating additional anxiety because of comparisons to the standards or ideals represented in the situation. This interpretation of the findings is consistent with the objective self-awareness theory proposed by Duval and Wicklund (1972). Similar to exercise class environments, physiotherapy clinics have the potential to be socially interactive, especially when there are a number of patients present who attend

appointments frequently. Patients may become familiar and friendly with each other and the staff, resulting in a highly social group environment. It is not known whether a high level of social interaction in injury rehabilitation would be anxiety-provoking, or help to reduce anxiety as is found in most exercise settings (Carron et al., 2004).

Martin and Fox (2001) also suggested that the people who participated in their enriched exercise class may have liked the other group members more than participants in the less interactive class. Because of this, they may have felt the need to impress these people, consequently increasing their motivation to present qualities of themselves congruent with what they believed the other group members would value, thereby increasing their social anxiety (Martin Ginis & Leary, 2004).

The physical appearance of the other people who are present in the exercise environment has also been shown to play a role in affecting the self-presentational concerns experienced by females. Support for this has been accomplished by having female participants observe videos of exercise classes where the physique-salience of either the exercisers or instructors is manipulated (Crawford & Eklund, 1994; Eklund & Crawford, 1994; Fleming & Martin Ginis, 2004; Sinden, Martin Ginis, & Angove, 2003). All of these studies were based on social comparison theory (Festinger, 1954), which contends that people compare themselves to others in order to assess their personal attributes. Research has demonstrated that upward comparisons (i.e., comparisons made to people who exhibit superior qualities) may result in negative emotions and lead to reduced self-esteem (Martin Ginis et al., 2008). On the other hand, downward comparisons are made when comparing oneself with the qualities of someone who is perceived to be inferior, and are demonstrated to increase positive feelings and self-esteem (Major, Testa, & Bylsma, 1991). When women viewed exercise videos with exercisers who represented the cultural ideal (i.e.,

attractive, fit, and thin) they expressed less confidence in their ability to convey the impression that they were a fit and capable exerciser (i.e., termed self-presentational efficacy [SPE], Gammage, Hall, et al., 2004) than when they watched videos that included women who looked more like them (Fleming & Martin Ginis, 2004). Similarly, females who exercised to an aerobics video where they perceived a greater negative discrepancy between their own body and an exercise instructor's body reported higher situational SPA and lower satisfaction with their body than those who exercised to a video where discrepancy between the instructor's and participants' physique was reduced (Martin Ginis et al., 2008). Thus, in accordance with the tenets of social comparison theory, upward comparisons made in exercise class settings may result in greater self-evaluation and subsequently increase females' SPA. It is likely that the social anxiety experienced by people who are receiving physiotherapy may also be influenced by the physical appearance of the other people in the clinic, especially if these other people exhibit body types that are perceived to be superior to their own.

In exercise settings, clothing has been used to manipulate the visibility of the physique of the other people present in order to evaluate self-presentational attitudes (Crawford & Eklund, 1994; Eklund & Crawford, 1994; Sinden et al., 2003). In these studies, exercise videos were shown to participants, within which the exercisers and instructors dressed to either emphasize their physique, or de-emphasize their physique. The female participants' SPA and preferences for the two videos were examined. The findings of the first study revealed that as SPA increased, the females reported greater preference for the video that presented exercisers who were dressed in clothing that concealed their physique (Crawford & Eklund). A subsequent attempt to replicate this finding was not achieved (Eklund & Crawford). However, Sinden et al. demonstrated that older women felt negatively toward the physique-salient exercise video, and

this intensified as their activity level decreased. In injury rehabilitation, patients are often required to wear clothing that may emphasize or expose their physique in order for the physiotherapist to facilitate their working with and assessment of their patients. It is not known how people's self-presentational concerns are influenced by the clothing of the other patients in the clinic. Based on the findings in exercise, it is likely that the clothing worn by the other people may elicit negative feelings or act to heighten self-presentational concerns.

The SPA experienced by women may also be affected by the clothing they are required to wear themselves. In exercise settings, there may be social norms that exist to influence the type of clothing worn. For example, the norm for aerobics or dance attire may consist of tight-fitting spandex leotards which can be more revealing and form-fitting than the clothing worn in other types of exercise (e.g., gym apparel may consist of shorts and a t-shirt). It has been established that female exercisers with high SPA report a greater preference for wearing exercise clothing that de-emphasizes their physique compared to their low SPA peers (Eklund & Crawford, 1994). It is not known if there are certain apparel norms that exist within the context of injury rehabilitation. However, given that physiotherapists frequently require their patients to wear clothing that may be more revealing than they feel comfortable with, this may intensify the self-presentational concerns of their patients, especially for those who have high trait levels of SPA.

The sex of the other people who are present within the exercise environment has possibly received the most empirical attention (e.g., Eklund & Crawford, 1994; James, 2000; Kruisselbrink et al., 2004; Yin, 2001). These studies have found that female exercisers who possess high dispositional SPA report being more aware of the presence of men (Eklund & Crawford), and also prefer exercise settings that are exclusively female (Yin, 2001). The sex of the social group has been shown to influence females' state-levels of SPA as well (Carron,

Estabrooks, Horton, Prapavessis, & Hausenblas, 1999). That is, female participants were instructed to imagine that they were walking to the beach dressed in only their bathing suit, surrounded by a group of friends. Participants responded to a single-item measure of situational SPA based on three group scenarios: (1) an all-male group of friends, (2) an all-female group of friends, and (3) a mixed group of both male and female friends. The results showed that the women expressed significantly higher SPA when they imagined being surrounded by males rather than females, or a mix of the two. Based on the findings of this research, Kruisselbrink et al. examined the influence of same-sex and mixed-sex imagined exercise settings on the situational SPA of males and females. It was found that the women's SPA, but not the men's, increased significantly from an all-female, to a mixed-sex, to an exclusively male exercise environment. Contrary to the findings of Carron et al. (1999), this study demonstrated that participants reported greater SPA in the mixed-sex group compared to the all-female group, suggesting that an exercise environment exclusive to females may be best for reducing women's SPA. The study also examined the participants' intentions to exercise in each of these scenarios. Women who scored high in SPA reported that they intended to shorten their workout when males were present. Since participants' responses were elicited through imagined scenarios rather than actually experiencing the situations, the authors emphasized that their results may be amplified in real-life scenarios. Consequently, it may be that much more important for highly physique anxious women to exercise in an all-female setting in order to increase their exercise behaviour (Kruisselbrink et al.). As in most fitness facilities, injury rehabilitation clinics are co-ed. It is possible that if the presence of men affects women who are attending physiotherapy to the same extent and in the same manner as found in exercise (i.e., increasing their anxiety and reducing their behaviour), the results could be detrimental to their rehabilitation program

adherence. However, no research to-date has examined how the sex of the other people present in injury rehabilitation environments influences the SPA or the behaviour of women in this setting.

Physical Environment

The physical exercise setting is made up of features of the location as a whole, as well as specific elements that may be found within the environment. Characteristics of the physical exercise environment have been shown to influence a person's self-presentation. In general, women who are highly anxious tend to choose exercise environments where there is little potential for physical evaluation, preferring to exercise alone in private, rather than in public settings (Spink, 1992). Public exercise settings are avoided by obese women primarily because of their apprehension over their physical evaluation (Bain et al., 1989). Focht and Hausenblas (2004) demonstrated how women's perceptions of evaluative threat were influenced by exercising in a standard exercise facility (i.e., in a university fitness centre with the presence of other exercisers and mirrors) compared to a private laboratory condition (i.e., without mirrors or other exercisers). Their sample included women who reported high levels of dispositional SPA. They found that female exercisers reported significantly higher ratings of perceived evaluative threat and state anxiety in the fitness facility compared to the laboratory condition. These researchers concluded that "self-presentational aspects of the exercise environment can negatively impact the psychological responses to exercise" (p. 366). Their findings lend support to a previous study (Focht & Hausenblas, 2003) that demonstrated associations between state anxiety and SPA for inactive women who exercised in a typical exercise facility.

The specific features of the exercise setting that may provoke anxiety are the presence of mirrors and windows. These have both been shown to heighten women's awareness of their

physique, consequently increasing their situational SPA (Gammage, Martin Ginis, et al., 2004). Exercise that takes place in front of a mirror may also elicit negative feeling states (Martin Ginis, Jung, & Gauvin, 2003). Katula and associates (1998) focused on the use of mirrors to examine how differences in the evaluative potential of three environments influenced female exerciser's self-efficacy (SE) and how this relationship was affected by participants' dispositional SPA. The participants exercised in a lab condition, in the same lab condition with a mirror, and in an exercise setting. The women reported lower confidence in their ability to exercise (i.e., exercise SE) in the mirrored laboratory condition compared to the other two conditions. Additionally, it was found that the impact that the presence of a mirror had on the participants' SE was significantly predicted by their SPA. That is, those who experienced greater SPA indicated greater reductions in SE when they exercised in the mirrored condition. Thus, mirrors may present the potential to discourage women from exercising, particularly for those who are high in SPA.

Physiotherapy environments are often designed to include multiple mirrors in order to provide maximal visual feedback to patients who are often learning or re-learning stretches and strengthening exercises after an injury. Rehabilitation clinics may also have windows that are either open to the public, or simply allow people from outside of the room to see in. These physical features of the physiotherapy environment possess the potential to increase the threat of evaluation, as has been established in exercise (e.g., Focht & Hausenblas, 2003; Focht & Hausenblas, 2004; Gammage, Martin Ginis, et al., 2004; Katula et al., 1998). Unlike exercisers who may choose to avoid certain settings, people who require physiotherapy may not have the same choice in the location of the clinic. For example, they may be limited by transportation as a consequence of their injury, forcing them to attend a clinic because of proximity rather than

preference. Further, people who need injury rehabilitation may be referred to a specific clinic by their doctor. Once at a clinic, a person's preference for the location within the clinic where they would feel most comfortable being treated may be neglected. Sometimes options exist, although patients may not be aware of them. For example, some clinics are designed as one large open area, while others consist of a number of completely separate examination rooms. Other clinics have treatment beds within an open area, each divided by a curtain. The design of a clinic and the treatment areas that are available differ in the degree of potential for evaluation, and may influence a person's self-presentational concerns differently.

Overview of the Present Research

As noted above, the main purpose of the present program of study was to provide descriptive information on self-presentation within the injury rehabilitation environment. This was accomplished by conducting three studies that employed a combination of quantitative and qualitative methodologies. Each study was developed to progressively increase our understanding of the role that self-presentation plays in the context of physiotherapy. As this was a novel area of inquiry, the primary purpose of Study 1 was to provide initial insight into self-presentation in this setting using quantitative methods to examine relationships between self-presentational concerns, SPA, and preferences for features of the injury rehabilitation environment. Female and male undergraduate students served as the study participants. Study 2 sought to replicate Study 1 using a population most applicable for future intervention. Accordingly, injured women about to commence physiotherapy were the participants. The purpose of Study 3 was to provide an in-depth examination of this topic by conducting a series of semi-structured interviews with a sample of women who reported SPA and were in the process of receiving rehabilitation treatment for an injury.

The integrated format of this dissertation presents the potential for substantial repetition as each study is presented as a separate manuscript. The redundancy of the main introduction, general discussion, and the articles included within is recognized as a product of this format.

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STUDY 1

SELF-PRESENTATION, SOCIAL PHYSIQUE ANXIETY, AND INJURY REHABILITATION SETTING PREFERENCES OF UNIVERSITY STUDENTS[1]

Whether or not we admit to caring what other people think of us, our thoughts and subsequent actions are an expression of the manner in which we desire to present ourselves (Leary & Kowalski, 1990). Typically we present characteristics of ourselves that highlight positive attributes in order to increase the likelihood of generating favourable impressions upon others. On the other hand, we generally attempt to de-emphasize behaviours or aspects of ourselves that may result in undesirable impressions. The approach we take to monitor and control these impressions is called self-presentation, or impression management (Schlenker, 1980).

Self-presentation may occur in any situation that is inherently social, including exercise and sporting environments (Leary, 1992). An athlete's motivation to participate in physical activity, which activity they choose to participate in, the quality of their performance, as well as the setting where this activity takes place may all be affected by their self-presentational concerns (Leary, 1992). People who are highly aware and concerned with other people's impressions of them are more likely to choose physical activities and settings that reduce this apprehension (Leary, 1992). For example, someone who is concerned with being seen as overweight may choose to run on a treadmill at home, in private, rather than attend a gym where other people are present. Some people may be so concerned with what other people think of them that their fear prevents them from exercising altogether (Leary, 1992). Unfortunately, it is usually the people who avoid exercise who are the ones who could benefit most from physical activity (Hart, Leary, & Rejeski, 1989). People who report a high fear of negative evaluation

[1] A version of this study has been submitted for publication (Driediger & Hall, 2012).

tend to experience more social anxiety than those who are less concerned with others' evaluations (Leary, 1983; Watson & Friend, 1969). Social anxiety occurs when there are doubts about the ability to create a desired impression (Leary, 1992). Any situation that incorporates a social element may elicit social anxiety. In exercise, researchers who have examined this construct have focused much of their attention on one type of social anxiety, termed social physique anxiety (SPA; Hart et al., 1989). SPA relates to concerns over the evaluation of the physique (Hart et al.), and is a cognitive manifestation of more general self-presentational concerns.

Social Physique Anxiety

In developing a measure of social physique anxiety, the Social Physique Anxiety Scale (SPAS), Hart and colleagues (1989) found that women who reported higher SPA weighed significantly more, were taller, and had significantly higher percent body fat than those who scored low on the SPAS. With regard to differences between sexes, women generally report higher SPA than men (Frederick & Morrison, 1996; Haase, Prapavessis, & Owens, 2002; Hart et al.; Kruisselbrink, Dodge, Swanburg, & MacLeod, 2004; Lantz, Hardy, & Ainsworth, 1997). This is not surprising considering research on body image has demonstrated differences between the sexes (Miller, Linke, & Linke, 1980; Silberstein, Striegel-Moore, Timko, & Rodin, 1988). For example, compared to men, women are more critical of their bodies, and tend to overestimate their size and shape (Hart et al.). Also, women are socialized differently than men with women striving to meet an ideal body type that is thin, toned, and usually smaller than their current body type, while men may try to achieve a smaller frame or try to be more muscular and bigger than they typically are (Martin Ginis, Prapavessis, & Haase, 2008). Accordingly, women are more prone to anxiety when they believe that their physique is being evaluated.

Originally conceptualized as a stable personality trait (Hart et al., 1989), SPA has also been shown to fluctuate in different situations (e.g., Gammage, Hall, Martin Ginis, 2004; Gammage, Martin Ginis, & Hall, 2004; Kruisselbrink et al., 2004; Martin Ginis et al., 2008). For example, different types of environments have been shown to influence people's reported situational or state-SPA. Van Raalte, Cunningham, Cornelius, and Brewer (2004) examined the state-SPA of undergraduate students in three popular locations on a university campus: the library, dining hall, and fitness center. They found that the fitness center caused students to feel the highest levels of SPA, while the library produced the least anxiety. Research that has investigated the effect of different settings on people's SPA has focused primarily on the exercise environment. It has been established that women who are high in trait levels of SPA may be more sensitive to the social and physical elements of the exercise environment (Crawford & Eklund, 1994; Eklund & Crawford, 1994).

Gammage, Martin Ginis and Hall (2004) combined a number of social and physical setting characteristics in order to successfully manipulate exercise class participants' confidence in their ability to convey favourable impressions to others (i.e., their self-presentational efficacy; SPE) while examining the relationship between SPE and social anxiety. The researchers presented one of two aerobics studios to their sample in order to either reduce participants' efficacy or increase their efficacy. In the low efficacy condition, the mirrors and windows of the aerobics studio were left uncovered, and a video camera was present with a male confederate of the researchers who would be filming the class. The participants were told that the camera would focus on individuals, in addition to the class as a whole. Also, the exercisers were told that they had to wear typical aerobics attire including a spandex jogging bra with a cropped top and short spandex shorts. In contrast, the high efficacy condition included covered mirrors and windows,

and a video camera without anyone operating it. The participants were told the group as a whole was the focus of the film, and loose fitting t-shirts and shorts were the required attire. The fact that these researchers were able to successfully manipulate the self-presentational efficacy of the women in their study is of particular interest because the participants did not actually have to exercise in either of the aerobics studios displayed, nor did they have to wear the clothing shown to them. The mere suggestion of having to exercise in an environment designed to reduce self-presentational efficacy caused the women to experience increased social anxiety, physical appearance anxiety, and SPA compared to women in the high efficacy condition. This study provides evidence of the powerful effect that an environment can have on peoples' self-presentational concerns.

The physical and social elements of an exercise environment are very similar to those found in an injury rehabilitation setting (i.e., physiotherapy clinic). First, both fitness centers and physiotherapy clinics are similar in that they are typically busy, large open areas where people perform exercises surrounded by other people, including males and females. There are often a number of mirrors in both settings, as well as windows that are usually open for others to look through. Most importantly, they are both social environments, and thus hold the potential to elicit self-presentational concerns.

The aim of the present study was to provide an initial examination of men's and women's self-presentational concerns in order to increase our understanding of the role that this variable plays in injury rehabilitation. Male and female undergraduate students' dispositional SPA and ratings for self-presentation variables were measured along with their preferences for characteristics of the social and physical injury rehabilitation environment. The relationships

between their preferences and cognitive manifestations of their self-presentational concerns (i.e., SPA) were evaluated.

No studies to date have investigated self-presentation in injury rehabilitation. However, a number of studies have been conducted in exercise. Therefore, the literature describing relationships between self-presentational variables, including SPA and exercise settings is outlined below. Due to the difference in self-presentation consistently reported by males and females (e.g., Hart et al., 1989; Lantz et al., 1997), the majority of research on this topic focuses on women. Consequently, we hypothesized that the females would report greater concern for how they are perceived by others and higher SPA than the males in our study. Thus, the proposed hypotheses representative of environmental preferences, which are outlined in the following sections, were made with regard to females only.

Social Environment

The social environment possesses the potential to influence a person's self-presentational concerns and the important consideration is the other people who are present in that environment. Hausenblas, Brewer, and Van Raalte (2004) referred to this as the "nature of the audience" (p. 10). Perhaps the most studied characteristic of the social environment in exercise settings is the sex of the other people who are present (e.g., Eklund & Crawford, 1994; James, 2000; Kruisselbrink et al., 2004; Yin, 2001). These studies have found that women exercisers who possess high SPA report being more aware of the presence of men (Eklund & Crawford, 1994), and also prefer exercise settings that are exclusively female (Kruisselbrink et al.; Yin, 2001).

In a study that examined the influence of same-sex and mixed-sex exercise settings on the SPA of males and females, it was found that the women's SPA, but not the men's, increased

significantly from an all-female, to a mixed-sex, to an exclusively male exercise environment (Kruisselbrink et al., 2004). The study also examined the participants' intentions to exercise in each of these imagined scenarios. Women who scored high in SPA reported that they intended to shorten their workout when males were present. As this study employed hypothetical scenarios, rather than authentic situations, the authors concluded that even the suggestion of the presence of men was enough to amplify women's physique anxiety, and that exercising in an all-female setting may help to reduce women's SPA and increase their exercise behaviour.

As in most fitness facilities, injury rehabilitation clinics may be attended by members of the opposite sex. It is suggested that if the presence of men influences women who are attending physiotherapy in the same manner as in exercise (i.e., increasing their anxiety and reducing their behaviour) the results could be detrimental to their rehabilitation program adherence. This could have negative consequences for women's ability to recover quickly and completely from an injury (Bassett & Prapavessis, 2007). However, it is not currently known whether women who are rehabilitating an injury prefer to be treated in a same-sex setting. Therefore, the present study evaluated undergraduate students' preferences for same-sex and mixed-sex injury rehabilitation settings. It was hypothesized that the women, in particular those who report higher SPA, would prefer same-sex rehabilitation environments more than settings that include men. Preference for the sex of the physiotherapist was also assessed. It was proposed that women would prefer to be treated by a female physiotherapist, and that greater preferences would be expressed with higher SPA.

The degree of social interaction among the other people who are present in the exercise setting can also act to heighten a women's social anxiety. Martin and Fox (2001) examined the social anxiety experienced by male and female participants who completed an aerobics class in

one of two conditions: a group social environment that was termed either enriched or bland. They characterized the enriched group environment as "socially supportive, relaxed, and interactive", while the bland group environment was represented by "a lack of social interaction and warmth among group members" (p. 1002). Contrary to their hypothesis, the participants who experienced the aerobics class that was highly interactive indicated feeling more social anxiety than those who experienced the less social aerobics class. The authors proposed that the enriched social environment may have provoked anxiety because of the individualized attention. This focused attention may have increased their self-awareness, creating additional anxiety. It was also suggested that the participants may have liked the other group members more causing them to feel the need to impress these people, thereby increasing their social anxiety.

Similar to some exercise class environments, physiotherapy clinics have the potential to be quite socially interactive, especially when there are a number of patients present who attend appointments frequently. Patients may become familiar and friendly with each other and the staff, resulting in a highly social group environment. It is not known whether a high level of social interaction in injury rehabilitation would be anxiety-provoking or help to reduce anxiety (the presence of fellow group members has also been shown to alleviate anxiety. See Carron, Burke, & Prapavessis, 2004, for a review). In the present study, the relationship between participants' SPA and their preference for either a high or low amount of social interaction was measured, along with whether the other people were those whom the women felt the need to impress. It was hypothesized that female students would prefer a high level of social interaction unless they reported elevated SPA. It was presumed that women with high SPA would prefer less social interaction among the other people present, and that they would dislike attending physiotherapy appointments with people whom they felt the need to impress.

The physique and the physical ability of the other people who are present in the social environment have also been shown to play a role in influencing the anxiety experienced by female exercisers. For instance, women reported heightened SPA when they perceived a greater negative discrepancy between their own body and an exercise instructor's body (Martin Ginis et al., 2008). Similarly, women who viewed aerobics videos with exercisers who represented the cultural ideal (i.e., attractive, fit, and thin) experienced less confidence in their ability to create the impression that they were a competent exerciser (i.e., SPE; Gammage, Hall, et al., 2004) compared to when they watched videos that included women who looked more like them (Fleming & Martin Ginis, 2004). Furthermore, undergraduate women who were high in dispositional SPA reported that they preferred exercising with people who appeared less fit than they were (Eklund & Crawford, 1994). It is likely that the social anxiety experienced by people who are receiving physiotherapy may also be influenced by the physical appearance and ability of the other people in the clinic. Due to the physically demanding nature of sport, it is often athletes who require injury rehabilitation. Therefore, it is likely that one would find athletes in a physiotherapy clinic. Compared to the general population, athletes are typically more fit and may demonstrate a high level of physical ability and coordination despite being injured. Participants in the current study were asked to indicate their preference for the physique/ physical ability of the people (i.e., athletic versus non-athletic) who were present in the clinic with them during a hypothetical physiotherapy appointment. Again, the relationship between their preference and SPA was examined. It was hypothesized that the women who indicated a high level of SPA would prefer attending physiotherapy appointments with non-athletic others.

The social physique anxiety experienced by women may also be affected by the clothing they are required to wear. In specific exercise settings, there are social norms that exist,

influencing the type of clothing worn. For example, the norm for aerobics or dance attire may consist of tight-fitting spandex leotards which can be more revealing and form-fitting than the clothing worn in different types of exercise (e.g., gym apparel typically consists of shorts and a t-shirt). Multiple studies have used clothing that is either physique-salient (i.e., tight-fitting, revealing) or physique non-salient (i.e., loose-fitting) to evaluate the relationship between clothing and SPA (Crawford & Eklund, 1994; Eklund & Crawford, 1994; Gammage, Martin Ginis, et al., 2004; Martin Ginis et al., 2008; Sinden, Martin Ginis, & Angove, 2003). These studies have found that women with high trait SPA prefer wearing exercise clothing that de-emphasizes their physique (Crawford & Eklund; Eklund & Crawford; Sinden et al.), and they demonstrate greater state SPA when they are required to wear clothing that accentuates their bodies (Gammage, Martin Ginis, et al.; Martin Ginis et al.).

In injury rehabilitation, physiotherapists often ask patients to wear clothing that may be more revealing than they feel comfortable with. Physiotherapists make this request in order to facilitate their working with and assessment of their patients. This request, however, has the potential to provoke feelings of physique anxiety. Therefore, the current study assessed preferences for different types of attire that may be required in physiotherapy. The relationship between SPA and the clothing worn in the injury rehabilitation environment has not yet been examined. Nonetheless, it was expected that women would prefer clothing that de-emphasized their physique as their level of SPA increased.

Physical Environment

Elements of the physical exercise environment have also been shown to influence a person's self-presentation. In general, women who are highly anxious tend to choose exercise environments where there is little potential for physical evaluation, preferring to exercise alone

in private, rather than in public settings (Spink, 1992). Obese women indicate that they avoid exercising in public primarily because of the anxiety they feel about being physically evaluated by other people (Bain, Wilson, & Chaikind, 1989). Specifically, the presence of mirrors and windows has been shown to heighten women's awareness of their physique and consequently increases their SPA (Gammage, Martin Ginis, et al., 2004; Katula, McAuley, Mihalko, & Bane, 1998). Physiotherapy environments are often designed to include multiple mirrors in order to provide substantial visual feedback to patients who are often learning or re-learning stretches and strengthening exercises after an injury. Rehabilitation clinics may also have windows that are either open to the public, or simply allow people from outside of the room to see in. These physical features of the physiotherapy environment possess the potential to increase patients' self-presentational concerns. Unlike exercisers who may choose to avoid certain settings, people who require physiotherapy may not have the same choice in the location of the clinic. For example, they may be limited by transportation as a consequence of their injury, forcing them to attend a clinic because of proximity rather than preference. Further, people who need injury rehabilitation may be referred to a specific clinic by their doctor. Once at a clinic, a person's preference for the location within the clinic where they would feel most comfortable being treated may be neglected. Sometimes options exist, although patients may not be aware of them. For example, some clinics are designed as one large open area, while others consist of a number of completely separate examination rooms. Other clinics have treatment beds within an open area, each divided by a curtain. The design of a clinic and the treatment areas that are available differ in the degree that they may influence a person's self-presentational concerns.

The present study evaluated students' preferences for three different clinic designs (i.e., open concept, curtained beds within an open concept, and separate examination rooms). Each of

these clinical settings was intended to represent different degrees of evaluative threat. That is, the open concept clinic was thought to possess the most potential for evaluation by others, whereas the clinic with separate rooms was thought to reflect the least potential for evaluation. The clinic described as having curtains surrounding the beds represented evaluative threat somewhere in between these two extremes. It was hypothesized that female participants who reported high SPA would prefer treatment settings that act to protect them from being evaluated by the other people in the clinic. It was expected that these women would prefer separate treatment areas (i.e., curtained beds or private examination rooms) more than the open concept setting.

SPA has been most extensively examined in exercise, but may be particularly salient in the injury rehabilitation setting because of the focus placed on the examination of the body. Since previous research in exercise has demonstrated a relationship between SPA and more general self-presentational concerns (e.g., Hart et al., 1989), it was hypothesized that these variables would also be related within physiotherapy. Due to the potential negative implications of heightened self-presentation in exercise (e.g., non-participation, reduced compliance), and the likelihood that these same concerns are present within injury rehabilitation, the primary purpose of the present study was to increase our understanding of the role that self-presentation plays in this context for men and women. It was hypothesized that both males and females would be concerned about how they are perceived by others in a rehabilitation setting. However, it was anticipated that females would report more extensive self-presentational concerns and higher SPA. The second objective was to explore students' preferences for characteristics of the social and physical treatment environments of injury rehabilitation settings. The relationships between their reported social physique anxiety and their environmental preferences were also examined.

Method

Participants

Male (n = 54) and female (n = 135) kinesiology students aged 18 to 39 (M = 20.64, SD = 1.99) were recruited from three separate undergraduate classes at Western University. Participants reported being involved in a wide variety of physical activities with soccer, running, hockey, and weight training cited most often. Participants' self-reported height, and weight were collected, and their Body Mass Index (BMI) was calculated by multiplying their weight in pounds by 703 divided by their height in inches squared (Roizen et al., 2009). More than half of the participants (n = 110, 58.2%) had received physiotherapy treatment previously. These experienced subjects had attended more than six appointments (n = 88) for between two and five injuries (n = 68). Knee (n = 32), ankle (n = 21), and shoulder (n = 15) injuries were reported most often. Approximately half of the participants had been to physiotherapy within the past year (n = 58) while the remainder had not been for more than one year (n = 52). Of those who had not received physiotherapy treatment previously (n = 79), the majority of these students (n = 54) had been in a physiotherapy clinic or had looked into one from the outside.

Measures

Once ethics approval had been obtained from Western University's Research Ethics Board (see Appendix A for approval notice), the students were asked to provide detailed demographic information including their age, sex, height, weight, and the primary sport or activity in which they participated. In addition, the participants were asked about their experience with physiotherapy. Specifically, the students were asked if they had ever been to physiotherapy for treatment (i.e., yes or no), the number of injuries that had been treated, the anatomic location of these injuries (e.g., knee), the number of physiotherapy appointments that

they had attended, and the last time they had received treatment. For participants who had not previously received physiotherapy treatment, they were asked about any exposure they may have had to physiotherapy clinics. Participants were asked to check off the items that applied to them from a list of four options. These included (a) I have accompanied someone else (b) I have been in a clinic (c) I have seen one on television, and (d) I have looked into one from the outside.

Social Physique Anxiety Scale (SPAS). This scale measures a person's concern with the evaluation of his or her figure or physique. Initially developed as a 12-item scale (Hart et al., 1989), the present study employed the more psychometrically sound 9-item version revised by Martin, Rejeski, Leary, McAuley, and Bane (1997; see Appendix B). An example of an item is: "In the presence of others, I feel apprehensive about my physique or figure." Participants are asked to rate how characteristic each statement is to them on a 5-point scale ranging from 1 (not at all characteristic of me) to 5 (extremely characteristic of me). This scale represents a single construct, thus allowing the calculation of a total score that is equal to the sum of item scores. Total SPA can range from 9 to 45. The reliability coefficient for the present study was excellent ($\alpha = .91$).

Self-Presentation in Injury Rehabilitation Questionnaire (SPIRQ). This 32-item questionnaire was developed for the present study (see Appendix C) in order to assess a person's self-presentational concerns in the context of physiotherapy. The items were generated from an examination of the sport and exercise literature on self-presentation, informal discussions with physiotherapy patients, as well as the researchers' personal and research-oriented experiences with injury rehabilitation. Two previously developed measures of self-presentation in sport and exercise were also used to guide the development of the SPIRQ: the Self-Presentation in Sport Questionnaire (SPSQ; Wilson & Eklund, 1998), and the Self-Presentation in Exercise

Questionnaire (SPEQ; Conroy, Motl, & Hall, 2000). In a re-examination of the factor structure and composition of both of these questionnaires, weaknesses were highlighted, and improvements to each measure were proposed (e.g., McGowan, Prapavessis, & Wesch, 2008; Gammage, Hall, Prapavessis, et al., 2004). Thus, we attempted to overcome some of the problems that were identified, while adhering to the strengths of these measures when developing the SPIRQ. Specifically, conceptual problems found with the SPEQ emphasized the need to include items that represented more than just physical appearance concerns (Gammage, Hall, Prapavessis, et al.). The revised SPSQ (McGowan et al.) provided examples of other types of items that may be included in a self-presentational measure as it is made up of items that represent four self-presentational concerns (i.e., appearing athletically untalented, physical appearance, fatigued/ lacking energy, and mental composure inadequacies). Therefore, the items of the SPIRQ include those that represent a variety of general self-presentational concerns (e.g., emotional state, physical ability), not limited to physical appearance. The researchers also highlighted the need to ensure that self-presentational behaviours and their underlying motives were depicted independently within the items (Gammage, Hall, Prapavessis, et al.). To overcome this, they recommended presenting the context of the situation before the items. Although the SPIRQ does not include items that represent specific motives or behaviours, we did adopt the suggestion made by Gammage and her colleagues of setting the context prior to the questions.

Participants were asked to imagine that they were undergoing injury rehabilitation for the injury outlined in their questionnaire package. A written description of a typical, yet hypothetical physiotherapy clinic was provided, along with information about the people who were present in the clinic while they were receiving this hypothetical treatment. A generic physiotherapy appointment was described next (see Appendix C). Participants then viewed photographs that

depicted a physiotherapy clinic similar to the one described in writing without people present (see Appendix D).

After reading the descriptive paragraph and observing the photographs, participants were instructed to imagine how the other people in the clinic would perceive them by rating each item on a scale ranging from 1 (not at all true) to 5 (completely true). Each item begins with the item stem: "I believe the other people in the clinic would perceive me as…" The items consist of one word or a short phrase that describes characteristics of a person in physiotherapy (e.g. self-conscious, uncoordinated, and unable to perform exercises). In an attempt to minimize response-bias, fifteen of the items represent positive characteristics (e.g., confident, healthy, perform exercises well).

Injury rehabilitation social environment preferences questionnaire. This 14-item questionnaire was developed for the present study (see Appendix E) to evaluate people's preferences for aspects of the social environment of a physiotherapy clinic. The items consist primarily of characteristics pertinent to the other people present in the clinic (i.e., sex [n = 3], physique/ physical ability [n = 2], level of interaction [n = 2], need to impress [n = 2], and sex of therapist [n = 2]) as well as three items that refer to the clothing that participants may be required to wear. An example of an item is: "The other patients in the clinic are the same sex as you". Participants were instructed to rate their preference for each item on a 5- point scale with the anchors *not preferred* (1), *no preference* (3), and *completely prefer* (5).

The paragraphs describing the physiotherapy clinic that were incorporated as part of the SPIRQ were also included at the beginning of this questionnaire in order to provide the sample with the same reference point from which to respond to each item. Again, participants were

instructed to refer to the same photographs previously described and to imagine that they were receiving physiotherapy treatment for the specific injury depicted in their package.

Injury rehabilitation treatment environment preferences questionnaire. This 3-item questionnaire was also developed for the present study (see Appendix F) to assess the participants' preference for specific treatment settings within a physiotherapy clinic. Items included a written description along with an accompanying photograph. The items were generated after examination of the self-presentation in exercise literature, and with the investigators' personal and research-based experiences with physiotherapy in mind. Each item depicts the design and characteristics of specific treatment settings that regularly occur within injury rehabilitation facilities. Descriptions of generic physiotherapy treatment regimens are incorporated within the items. The design features and treatment descriptions included in each item illustrate three different degrees of potential for evaluation from the other people in the clinic. The first item describes a physiotherapy clinic with as much potential for evaluation as realistically possible:

> The physiotherapy clinic is one large open space. There are treatment beds around the perimeter of the gym-like area where hands-on (i.e., manual) treatment, modalities (i.e., IFC or ultrasound), and ice or heat are provided by the physiotherapist. Patients perform their exercises in the center of the open space. There are mirrors on most of the walls and there are windows that allow people outside of the clinic to see in.

The second item depicts a typical clinic that presents potential for evaluation, but also provides some protection from the view of others:

> The physiotherapy clinic consists of multiple open spaces divided by partitions with treatment beds in one area which are each divided by a thin curtain. Hands-on (i.e., manual) treatment, modalities (i.e., IFC or ultrasound), and ice or heat occurs on the beds behind the curtains. Others cannot see you, but are able to hear you. Exercises are completed in shared exercise areas. The exercise areas have mirrors on only one wall. There are a few windows in the clinic and they are covered so that no one outside can see in.

The third item represents a clinic with very little potential for evaluation. The item reads:

> The physiotherapy clinic consists of many small, completely separate offices where patients are treated behind a closed door. Hands-on (i.e., manual) treatment, modalities (i.e., IFC or ultrasound), and ice or heat occurs on the treatment beds within each room. Exercises are also completed in the individual rooms. There are no mirrors or windows in the rooms.

Participants were initially instructed to read over the written descriptions for each item without providing a rating. They were then asked to observe the photographs, after which they were asked to rate each treatment setting item based on 5 points with the anchors *not preferred* (1), *no preference* (3), and *completely prefer* (5).

Procedure

Investigators approached each class at the beginning of a lecture. The students were provided with a verbal description of the study as well as a paper copy of the letter of information (see Appendix G). Those who were not receiving physiotherapy treatment at the time were asked to volunteer to participate. Individuals were ineligible if they were currently undergoing rehabilitation treatment for an injury.

Those who volunteered to participate were randomly assigned colour-coded questionnaire packages that contained a description of one of two hypothetical injury scenarios. Because these students were not actually injured, the injury scenarios not only provided a reference point from which to respond to the questionnaires, but also attempted to manipulate their self-presentational concerns. It was thought that an injury to a more intimate location on the body that is often covered by clothing would produce greater anxiety than an injury to a body part that is frequently exposed. Therefore, one set of questionnaires (54%) sought to induce a high level of evaluative threat by describing the physiotherapy treatment required for an injury to the buttocks (i.e., piriformis syndrome; see Appendix H). The second set of questionnaires (46%) depicted the treatment for an injury to the wrist (i.e., wrist tendonitis; see Appendix I),

representing a low level of potential for evaluation. The participants were asked to imagine that they had sustained the injury described and were receiving the treatment depicted when completing the SPIRQ and the social and treatment environment preference questionnaires. The demographic information and the SPAS (Hart et al., 1989) were included in the questionnaire package prior to the injury and rehabilitation scenarios, and were therefore not expected to be influenced by these scenarios.

Results

Prior to any statistical analyses, data were screened and cleaned using the series mean to replace missing values. The data set from one subject was omitted because of an incomplete questionnaire package and another was omitted because his or her sex was not reported. The total sample (N = 188) included 70.9% females (n = 134) and 28.6% males (n = 54). The majority of the sample were considered in the normal weight range (18 – 24.99; M = 22.58, SD = 2.78). The participants reported average levels of SPA, with the men displaying less (M = 21.20) than the women (M = 24.86). Table 1 presents descriptive statistics for age, height, weight, BMI, and SPA for males and females.

Type of Injury

The injury scenarios that were provided within each questionnaire package depicted either a wrist injury (i.e., tendonitis) or an injury to the buttocks (i.e., piriformis syndrome). It was hypothesized that the injury to the buttocks would provoke greater concern for others' evaluations, influencing subjects' ratings for characteristics of the social and physical treatment environments. An analysis of variance revealed that these hypothetical injuries did not act to manipulate the subjects' self-presentational concerns as expected ($p > .05$). Because of this, the two injury scenarios were collapsed across the entire sample for the remainder of the analyses.

Self-Presentational Concerns and SPA

The main goal of the present study was to increase our understanding of self-presentational concerns in injury rehabilitation. Since it has been suggested that SPA and general self-presentational concerns should be related (Leary & Kowalski, 1990), and researchers have demonstrated that this relationship is present within exercise (e.g., Hart et al., 1989), the relationship between the participants' dispositional SPA and their ratings on the SPIRQ were examined. Before conducting any statistical analyses, two positively worded items on the SPAS, and 15 positively worded items on the SPIRQ were reverse-scored so that higher scores reflected greater self-presentational concerns. Since the SPIRQ did not represent a singular construct, each item was analyzed independently. Thus, bivariate correlations were calculated for the participants' SPAS total score and each of the 32 SPIRQ items. Men and women were analyzed independently since it has been established that their self-presentational concerns differ in degree and direction in other domains, such as exercise (e.g., Hart et al.; Lantz et al., 1997).

A significant relationship was found between SPA and some of the SPIRQ items. For the men, 15 of the 32 SPIRQ items proved to be significantly related to SPA, while 20 of the SPIRQ items were significantly related to SPA for the women. A number of SPIRQ items that were found to relate to SPA were different for men and women. For example, the men's scores demonstrated positive significant relationships between SPA and the SPIRQ items that represented that the other people in the clinic would perceive them as: (a) uncoordinated, (b) coordinated, (c) tired, and (d) unable to control emotions. As their SPA score increased, their ratings for these self-presentation variables also increased. The women did not experience the same elevation in self-presentation on these particular variables. However, the women's SPA scores were found to relate to a number of items that were not found for men. Specifically, for

the SPIRQ items that indicated that the women felt the other people in the clinic would perceive them as: (a) healthy, (b) fit, (c) energized, (d) difficult to work with, (e) composed, (f) unable to handle pressures, (g) frustrated, (h) needy, and (i) perform exercises well. On the other hand, a number of SPIRQ items were related to SPA for both sexes. These items included: (a) weak, (b) anxious, (c) self-conscious, (d) relaxed, (e) unable to perform exercises, (f) tense, (g) unfit, (h) focused, (i) confident, (j) unhealthy, and (k) independent. Pearson correlation coefficients for both men and women are reported alongside descriptive statistics for the SPIRQ in Table 2. Pearson *r* values ranged from -1.00 to .47 for women, and from .04 to .59 for the men. These results demonstrate that a positive, significant relationship exists between SPA and a number of self-presentation variables found in injury rehabilitation. In support of our hypothesis, these findings illustrate that this relationship is different for men and women in this setting.

Injury Rehabilitation Environment Preferences

The SPIRQ was not employed as the primary instrument in examining associations between self-presentation and participants' preferences for features of the rehabilitation environment as it did not represent specific factors, or a singular construct, and thus could not be assessed psychometrically, or compared to other measures without incurring substantial inflated error. Alternatively, the SPAS has been established as a valid and reliable measure (e.g., Hart et al., 1989; Martin et al., 1997), that has been used to provide evidence of more general self-presentational concerns (e.g., Gammage, Hall, et al., 2004). Thus, SPA total scores were used to provide an indication of the participants' more general self-presentation in the present study.

In order to determine differences in the social physique anxiety experienced by males and females, a one-way ANOVA was performed with sex as the independent variable and total SPA score as the dependent variable. As expected, a significant difference between men and women

was found, with women reporting significantly higher SPA than men, $F(1, 187) = 10.25$, $p < .01$, $\eta^2 = .05$. This finding, combined with similar results consistently reported in the exercise literature (Hart et al., 1989; Kruisselbrink et al., 2004; Lantz et al., 1997), led to the decision to conduct the remaining analyses with data from the female participants only ($n = 134$). A closer look at the social and physical environment preferences of undergraduate men demonstrated ratings that were either much lower, or in the opposite direction compared to ratings by the women. This discrepancy provided an additional reason to omit the men from the final analyses, which was not unprecedented (Hart et al.; Kruisselbrink et al.). The means and standard deviations for environmental preference ratings of males and females are presented in Table 3.

In order to increase our understanding of the role that self-presentation plays in injury rehabilitation, participants' preferences for features of the social and physical injury rehabilitation treatment environments and how these preferences related to their dispositional SPA were examined. Bivariate correlations were calculated to evaluate the relationship between women's SPA and their injury rehabilitation environment preferences. Pearson *r* values are presented in Table 3. Significant, positive relationships were demonstrated for preference items that included: (a) that the other patients in the clinic were of the same sex, (b) being required to wear a track suit, or (c) baggy shorts and a baggy t-shirt, and (d) being treated on a curtained bed. That is, as women's SPA increased, their preference for these items also increased. Significant, negative correlations were found for the preference items that included: (a) that the other patients present were of the opposite sex, or (b) mixed sex, (c) being required to wear a short, tight-fitting spandex top and bottoms, and (d) being treated in an open concept setting. These findings show that as SPA increased the women's preference for these items decreased.

It was expected that women who expressed high and low SPA would differ in the direction of their preference for characteristics of the social and physical treatment settings. The women were divided into low (10 – 20), medium (21 – 28), and high (29 – 41) groups using an approximate tertile split that resulted from natural breaks in the data. The use of the extreme groups approach (EGA) has been widely criticized in that it amplifies power and effect size while reducing reliability (Preacher, Rucker, MacCallum, & Nicewander, 2005). However, Preacher and colleagues also suggest that the use of EGA may be beneficial if the study is exploratory in nature, and is attempting to establish the existence and direction of an effect, but not the strength of this effect. Based on the exploratory nature of this study, along with the significant correlations already depicted across the entire sample of women, the decision was made to employ the tertile split, recognizing that the results may be inflated.

The participants in the medium SPA group (n = 47, M = 24.53, SD = 2.42) were omitted from the final data analysis. Women who scored on the low (n = 44, 32.8%, M = 16.70, SD = 2.66) and high (n = 43, 32.1%, M = 33.56, SD = 3.55) end of the SPAS were retained. An analysis of variance was performed with SPA (high vs. low) as the independent variable and the social and physical preference items as the dependent variables. Means and standard deviations for the preference ratings of women who reported high and low SPA can be found in Table 3. Results showed that women with high SPA scored significantly higher on their preference for the other patients in the clinic to be of the same sex, $F(1, 86) = 4.46$, $p = .038$, $\eta^2 = 0.05$, compared to participants who scored low on SPA. Alternatively, low SPA scorers preferred the other patients present to be of the opposite sex significantly more than the high SPA scorers, $F(1, 86) = 7.77$, $p = .007$, $\eta^2 = .08$. Those who reported high SPA preferred being required to wear baggy shorts and baggy t-shirts compared to those who scored low on SPA, $F(1, 86) = 12.04$, $p = .001$,

η^2 = .12, while women who scored lower on SPA preferred being required to wear a short, tight-fitting spandex top and bottoms more than women who scored high on SPA, $F(1, 86) = 11.86$, $p = .001$, $\eta^2 = .14$. Additionally, a significant difference between high and low reports of SPA were found for women's preference for the open concept treatment setting, $F(1, 86) = 7.27$, $p = .008$, $\eta^2 = .08$. That is, women who scored low on SPA preferred this type of treatment environment more than those who reported high SPA. A less conservative cut-off value of $p \leq .05$ was employed because of the exploratory nature of the study.

Table 1

Descriptive Statistics for Demographic Information of Male and Female Students

	Men		Women	
Variable	*M*	*SD*	*M*	*SD*
Age	20.83	1.65	20.56	2.12
Height (inches)	71.07	2.26	65.81	2.56
Weight (pounds)	172.26	24.68	135.79	17.51
BMI	23.94	2.99	22.03	2.50
SPA	21.20	6.21	24.86	7.40

Note. BMI = Body Mass Index; SPA = Social Physique Anxiety.

Table 2

Ratings for SPIRQ Items and Correlation with SPA for Male and Female Students

Item	Women			Men		
	M	*SD*	Pearson *r*	*M*	*SD*	Pearson *r*
1. Weak	1.66	.90	.19*	1.67	.85	.31*
2. Anxious	1.85	.99	.29**	1.94	.83	.29*
3. Self-conscious	2.13	1.08	.46**	1.98	.94	.59**
4. Relaxed	2.53	1.09	.33**	2.33	.89	.27*
5. Uncoordinated	1.80	.96	.15	1.43	.77	.40**
6. Unable to perform exercises	1.66	.83	.17*	1.54	.93	.29*
7. Healthy	2.16	.86	.33**	2.02	.74	.21
8. Fit	2.33	.91	.42**	2.04	.78	.27
9. Unfocused	1.67	.84	.05	2.02	.96	.10
10. Energized	2.57	.96	.28**	2.63	.78	.19
11. Difficult to work with	1.22	.62	.20*	1.28	.60	.18
12. Tense	2.28	1.06	.20*	2.13	.93	.39**
13. Strong	2.79	.98	.16	2.57	.77	.15

14. Composed	2.41	.77	.17*	2.26	.73	.09
15. Unable to handle pressures	1.61	.87	.19*	1.63	.78	.11
16. Frustrated	2.05	1.01	.21*	2.24	1.18	.23
17. Unconcerned	2.16	1.02	-1.00	2.28	1.19	.09
18. Coordinated	2.46	.94	.06	2.11	.90	.27*
19. Unfit	1.69	.96	.46**	1.67	.99	.46**
20. In control of my emotions	2.03	.86	.11	1.83	.67	.15
21. Focused	2.08	.77	.20*	2.04	.64	.31*
22. Tired	2.29	.96	.04	2.33	.75	.35*
23. Confident	2.46	.90	.42**	2.22	.74	.44**
24. Dumb	1.23	.68	.16	1.28	.60	.09
25. Unhealthy	1.46	.77	.47**	1.46	.88	.35**
26. Easy to work with	1.78	.82	.15	1.80	.66	.04
27. Knowledgeable	2.15	.73	.15	1.96	.64	.16
28. Able to handle pressures	2.19	.85	.17	2.17	.72	.11

29. Unable to control emotions	1.53	.94	.01	1.67	.91	.37**
30. Needy	1.55	.92	.21*	1.59	.94	.24
31. Perform exercises well	2.17	.74	.26**	1.94	.86	.08
32. Independent	2.05	.87	.32**	2.15	.79	.32*

Note: Pearson *r* values depict the correlation between SPIRQ items and SPA. SPIRQ = Self-Presentation in Injury Rehabilitation Questionnaire. SPA = Social Physique Anxiety.
*$p < .05$, **$p < .01$.

Table 3

Environmental Preference Ratings for Males, Females, and a Subset of Women with High and Low SPA

	Men		Women		
	n = 54	*n* = 134	*n* = 87		
Item	*M (SD)*	*M (SD)*	Pearson *r*	SPA	*M (SD)*
Social					
1. The other patients in the clinic are the same sex as you.	2.89 (.74)	3.37 (.75)	.18*	Low	3.25 (.61)
				High	3.56 (.76)
2. The other patients in the clinic are of the opposite sex.	3.33 (.80)	2.66 (.85)	-.27***	Low	2.96 (.83)
				High	2.44 (.88)
3. There are an equal number of males and females in the clinic.	3.06 (.68)	3.07 (.67)	-.17*	Low	3.16 (.65)
				High	2.93 (.59)
4. The other patients who are in the clinic are all very athletic-looking.	3.00 (.87)	2.82 (.84)	-.14	Low	2.96 (.81)
				High	2.77 (1.02)
5. The other patients who are in the clinic do not look very athletic.	2.65 (.85)	2.99 (.82)	.07	Low	2.93 (.79)
				High	3.02 (.91)
6. The other people who are in the clinic are very social (e.g., talk to each other a lot).	3.46 (1.04)	3.69 (1.10)	.00	Low	3.68 (.96)
				High	3.58 (1.28)
7. The other people who are in the clinic are not very social.	2.30 (.96)	2.06 (1.04)	.04	Low	2.05 (.99)
				High	2.19 (1.14)
8. The other people in the clinic	2.67 (.97)	2.44 (1.03)	-.11	Low	2.46 (.93)

are all people you would like to impress.				High	2.16 (1.04)
9. The other people in the clinic are people you do not feel you need to impress.	3.41 (.88)	3.58 (1.00)	.14	Low	3.53 (.98)
				High	3.81 (.98)
10. You are required to wear loose-fitting long pants and a long sleeve shirt (e.g., a track suit).	2.94 (.90)	2.86 (1.14)	.18*	Low	2.64 (1.04)
				High	3.02 (1.30)
11. You are required to wear baggy shorts and a baggy t-shirt.	2.89 (.98)	3.05 (1.12)	.23**	Low	2.55 (1.07)
				High	3.37 (1.16)
12. You are required to wear a short, tight-fitting spandex top and bottoms.	1.98 (1.16)	2.20 (1.07)	-.31***	Low	2.55 (1.00)
				High	1.81 (.98)
13. Your physiotherapist is the same sex as you.	3.06 (.63)	3.40 (.84)	.15	Low	3.27 (.62)
				High	3.44 (.96)
14. Your physiotherapist is of the opposite sex as you.	3.17 (.80)	2.79 (.77)	-.16	Low	2.89 (.49)
				High	2.70 (.77)
Physical					
1. The physiotherapy clinic is one large open space.	3.06 (1.11)	3.11 (1.18)	-.23**	Low	3.46 (1.07)
				High	2.79 (1.23)
2. The physiotherapy clinic consists of multiple treatment beds divided by a thin curtain.	3.77 (.90)	3.79 (1.00)	.18*	Low	3.52 (1.07)
				High	3.93 (1.01)
3. The physiotherapy clinic consists of many small, completely separate offices where patients are treated behind a	2.47 (1.09)	2.28 (1.31)	.09	Low	2.14 (1.13)
				High	2.54 (1.42)

closed door.

Note. The Pearson *r* values depict the correlation between preferences and SPA. SPA = Social Physique Anxiety.
*$p < .05$, **$p < .01$, ***$p < .001$

Discussion

The purpose of the present study was to increase our understanding of self-presentational concerns within an injury rehabilitation setting. The relationship between males' and females' SPA and items representative of self-presentational concerns in injury rehabilitation (i.e., the SPIRQ) were assessed. The findings support the position that self-presentational concerns are present in conjunction with physiotherapy, and are different for men and women. To ascertain our secondary objective of exploring preferences for features of the injury rehabilitation environment, the relationships between women's SPA and their preferences for characteristics of the social and physical treatment settings were examined. The findings demonstrate that females' preferences for physiotherapy treatment environments are influenced by the amount of concern they have over others' evaluations of their physique.

Type of Injury

The injury to the buttocks was intended to heighten the participants' concern for being physically evaluated due to the intimate location on the body, and was therefore expected to intensify participants' reported self-presentational concern and preference for more protective features of the injury rehabilitation environment more so than the wrist injury. However, significant differences in responses were not demonstrated based on injury. This finding may represent an unsuccessful manipulation, or it may indicate that people's self-presentation and preferences for treatment settings are independent of the injury they are being treated for. Nevertheless, the hypothetical nature of the injuries may not have allowed for an accurate

portrayal of the relationship that exists between anatomical injury location and self-presentational concerns. Therefore, further research on the influence of injury location on self-presentational variables is warranted with a population who is actually injured.

Self-Presentation and Social Physique Anxiety

Hart and associates (1989) have provided evidence that SPA is associated with measures of general concerns over other people's judgements (i.e., FNE and interaction anxiousness). As hypothesized, the findings demonstrated that SPA and self-presentation were related, supporting the notion that people are concerned about how they are perceived by others in injury rehabilitation. A significant relationship was found between dispositional SPA and the items of the SPIRQ for both men and women. This relationship suggests that those who report higher degrees of SPA may also display a number of self-presentational concerns within the physiotherapy setting.

The self-presentation items that were found to relate to SPA were different for males and females. As was expected, the women in this sample experienced a more extensive array of self-presentational concerns compared to the men, likely due to their elevated SPA. That is, as hypothesized the undergraduate men demonstrated significantly lower SPA scores compared to the undergraduate women. Research on self-presentation in other domains has demonstrated that men and women experience different degrees of concern, particularly in regard to SPA (Frederick & Morrison, 1996; Haase et al., 2002; Hart et al., 1989, Lantz et al., 1997; Martin, Leary, & O'Brien, 2001). The present findings imply that men not only experience less concern over the presentation of their physique, but may also experience a different set of more general self-presentational motives in injury rehabilitation. The self-presentation items that the males reported and the women did not revealed concerns over being evaluated in terms of physical

ability (e.g., coordination), and displaying emotion or fatigue (e.g., control over emotions, seeming tired), while the items that the women reported reflected concerns for being evaluated based on appearance in terms of their health or fitness (e.g., unfit, unhealthy), their psychological or emotional state (e.g., unable to handle pressures, anxious, self-conscious), and their physical ability (e.g., unable to perform exercises). Future studies could develop gender-specific questionnaires aimed at evaluating the self-presentation of men and women independently in injury rehabilitation. The questionnaire employed in the current study may provide some insight into the types of items that may be included in such a measure.

In the present study SPA was evaluated as a trait, not specific to rehabilitation. Studies in exercise have shown that SPA may fluctuate depending upon characteristics of the exercise setting (Gammage, Hall, et al., 2004; Gammage, Martin Ginis, et al., 2004; Kruisselbrink et al.; Martin Ginis et al., 2008). For example, the SPA of women was found to increase temporarily when presented with an exercise scenario that incorporated a number of features that emphasized evaluation, especially in terms of physique (Gammage, Martin Ginis, et al.). It has been proposed that SPA may not be the stable personality trait that it was initially conceptualized as by Hart and her fellow researchers (Kruisselbrink et al.). Therefore, it is suggested that research investigate how a women's situational SPA is influenced by different aspects of the injury rehabilitation environment, both in settings that increase and reduce the potential for evaluation. The preference items that were employed in the present study may provide an indication of the setting characteristics that may be used in such future investigations.

Women's SPA and Environment Preferences

Social environment preferences. Relationships between women's SPA and their preferences for features of the social and physical rehabilitation environment were found. With

regard to the social setting of the clinic, SPA was found to relate to women's preferences for the sex of the other patients present, and the clothing that was required. In support of our hypotheses, as women's SPA increased, they reported a greater preference for attending a clinic where the other patients were female, while reporting a lesser preference for the other patients to be of the opposite sex, or a mix of males and females. This finding mirrors that of Kruisselbrink and colleagues (2004) who found that women's situational SPA increased in response to hypothetical exercise scenarios in which the other exercisers present were either a combination of males and females, or all males. The present results suggest that women who are undergoing injury rehabilitation likely experience similar anxiety to situations that include members of the opposite sex.

In exercise, when women were compared based on high or low scores on SPA, high SPA scorers were more aware of the presence of men, and preferred exercise classes that were co-ed less than women who experienced low SPA (Eklund & Crawford, 1994). Support for this finding was provided when preferences for the other patients' sex were compared using women who indicated extreme scores on the SPAS. It was found that women who expressed high SPA reported a significantly greater preference for attending physiotherapy with exclusively females compared to their low-scoring counterparts. Conversely, those who scored low on SPA rated the preference item that included male patients significantly higher than those with high SPA. Apparently the women who did not experience the same level of SPA were relatively unaffected by the presence of men in a physiotherapy setting. The literature shows that the presence of men in an exercise environment may act to reduce the amount of time that women exercise for (Kruisselbrink et al., 2004), or limit the enjoyment that they derive from exercise (Gammage, Martin Ginis, et al., 2004). The effects are most salient for women who experience the greatest

concern over the evaluation of their physique (Kruisselbrink et al.). Thus, the implication of the present finding is that a male presence may influence some women's rehabilitation behaviour. However, it is currently unknown how their behaviour will be affected. If the relationship functions in a similar manner to that of exercise, it may affect women's adherence to, and satisfaction with, their rehabilitation program, especially for those who report high levels of SPA. When adherence rates are low, the possibility of full recovery from injury is reduced. Therefore, an important direction of inquiry is the examination of how women's rehabilitation behaviour is affected by the relationship between SPA and the presence of males in physiotherapy clinics. Also, it would be interesting to determine if adherence rates could be improved by the development of exclusively female physiotherapy clinics.

As hypothesized, as their level of SPA increased, the women showed greater preference for being required to wear clothing that de-emphasized their physique (i.e., loose- fitting long pants and a long sleeve shirt, or baggy shorts and a baggy t-shirt), and demonstrated less preference for clothing that emphasized their physique (i.e., a short, tight-fitting spandex top and bottoms). Similarly, in exercise, a significant positive relationship was found between SPA and women's partiality towards a video of an aerobics class in which the exercisers wore traditional t-shirts and shorts, whereas a negative relationship was found between the women's SPA and their preference for a video in which the aerobics class participants were wearing tights and thong leotards (Crawford & Eklund, 1994). Eklund and Crawford (1994) attempted to replicate these findings with a sample of physical education students. Although they did not find similar favourability ratings for the aerobics videos, they did measure female student's preferences for physique-salient and non-salient aerobics attire. Consistent with the present results, women in their study preferred to wear clothing that de-emphasized the physique (i.e., loose-fitting

clothing) rather than clothing that emphasized it (i.e., tight-fitting clothing). Evidently, the preference for attire that is loose-fitting extends into the situation of injury rehabilitation. In exercise, women reported higher situational SPA when presented with an exercise setting that required them to wear a short, spandex outfit versus attire that consisted of a loose t-shirt and shorts (Gammage, Martin Ginis, et al., 2004). Considering that attention in physiotherapy is concentrated on the body, it is not surprising that the women who experienced the most physique anxiety rated the baggy shorts and t-shirts attire higher than those who scored lowest on SPA. The loose-fitting clothing may provide a protective barrier from further physical evaluation for these women. Wearing clothing to camouflage the body has been identified as a protective self-presentational strategy that some female exercisers employ to reduce their anxiety about negative physical evaluation (Brewer, Diehl, Cornelius, Joshua, & Van Raalte, 2004).

Alternatively, women who expressed the least SPA indicated a greater preference for wearing a short, spandex outfit compared to their high-SPA peers. It seems that the women who do not experience a high degree of SPA are unconcerned with the clothing that they may be required to wear to physiotherapy appointments. Nonetheless, physiotherapists often request that patients wear clothing that is revealing in order to gain access to their patients' injured body part. For those who are already highly physique anxious, the clothing required may produce additional anxiety. While the current findings suggest that this is the case in imagined rehabilitation settings, it has yet to be confirmed with women who have actually sustained an injury.

None of the other social setting preference items that were assessed were found to relate to the women's SPA, nor did they demonstrate any significant differences between women who reported extremely high or low SPA. These items included descriptions of characteristics of the other people who were present in the clinic at the same time. They consisted of whether or not

the other patients were athletic-looking, social, or included people whom they would like to impress. These results do not support the hypotheses, suggesting that these items were rated independent of the level of SPA experienced by the women. It is highly likely that imagined physiotherapy scenarios do not generate the same feelings that real-life situations may provoke. Thus, the need to examine injury rehabilitation setting preferences with women who are experiencing this situation is emphasized.

Unexpectedly, the sex of the physiotherapist was not found to be related to SPA. It was hypothesized that as SPA increased, women's preference for a physiotherapist of the same sex would also increase. However, this was not indicated by the women in the current sample. Although it seems contradictory that the women who report high levels of physique anxiety are affected by the presence of male patients, but not a male physiotherapist, this finding supports that found in exercise with regard to the sex of an exercise instructor (e.g., Lamarche & Gammage, 2009). That is, when researchers examined the influence of male and female exercise instructors on participants' SPA, they found no difference in reported SPA when the instructors were either male or female (Lamarche & Gammage). It is suggested that the knowledge and experience that a physiotherapist demonstrates, as well as other characteristics more pertinent to effective treatment may override a women's concern over his or her sex. A greater understanding of the type of physiotherapist that makes women feel most comfortable is necessary. Future self-presentation studies need to examine this issue in greater detail, especially with women who are highly physique anxious.

Physical treatment environment preferences. The women's preferences for two out of three of the physical treatment settings described were found to relate to SPA. It was hypothesized that as SPA increased, women would exhibit a greater preference for treatment

environments that acted to minimize the potential for negative evaluation, such as the more private setting options of a curtained bed or an examination room. In accordance with this hypothesis, we found that as SPA increased, the women demonstrated a greater preference for being treated on a curtained bed, and a lesser preference for being treated in an open concept setting. The latter finding was not surprising since this treatment environment possessed the most potential for evaluation. Research in exercise has shown that mirrors and windows may act to amplify some women's SPA, primarily for those who experience high levels of this self-presentation variable to begin with (Gammage, Martin Ginis, et al., 2004). The presence of mirrors in exercise settings has been shown to reduce women's exercise self-efficacy (Katula et al., 1998). Leary (1992) initially suggested that characteristics of the environment that possess more potential for evaluation may act to de-motivate certain women from participating in exercise programs. It is probable that the same features of a physiotherapy clinic (i.e., mirrors and windows) may be responsible for reduced motivation to continue or complete their rehabilitation programs, or worse, may deter some women from starting their program in the first place. The specific characteristics of a physiotherapy setting that influence self-presentational concerns need to be determined.

Other women seem to not be affected by the treatment environment. For instance, when high and low SPA scoring women were compared, those who indicated a low level of SPA rated their preference for the open concept clinic environment significantly higher than those who were high in SPA. Apparently females who experience very little anxiety in terms of the evaluation of their physique would actually prefer to receive physiotherapy in a setting that is open concept. Perhaps these women enjoy the social nature of the open concept clinic, and obviously do not have an issue with the potential for evaluation. The design of physiotherapy

clinics is often open concept to make simultaneous treatment of multiple patients more manageable. For women low in SPA, this does not appear to be of concern. However, for women who do experience physique anxiety, our findings suggest that an open concept clinic may intensify their anxiety. Once this relationship is clarified with women who are actually receiving injury rehabilitation, research may then address the influence of different types of treatment environment options on situation-specific SPA. By increasing our understanding of this relationship, the importance of providing treatment setting options to women who feel uncomfortable in certain situations can be emphasized and physiotherapists' practice of presenting these options encouraged.

No significant relationship was found between SPA and the setting that described being treated behind a closed door, in a separate examination room. The absence of a significant relationship between women's SPA and this treatment setting option was unexpected since this environment offered the most privacy and protection from evaluative others. Also, previous research in exercise has demonstrated that women who reported high SPA were found to choose exercise settings that were private rather than public (Spink, 1992). It is not known why the highly physique anxious women in the present study did not indicate a preference for the most private treatment option. Perhaps the isolation depicted by the description of the separate examination room with a closed door provoked the female students to respond as they did. Further examination of how this particular setting relates to SPA is encouraged, particularly in authentic rather than imagined scenarios.

Limitations

The study was not without limitations. First and foremost, data were collected from students who were not actually injured or receiving physiotherapy at the time they participated in

the study. Although it is interesting that we were able to demonstrate self-presentational concerns based on hypothetical scenarios, there is an obvious need for the results to be replicated with women who have sustained an injury. It is likely that a sample of women who are in reality undergoing physiotherapy treatment for an injury will provide a more accurate representation of self-presentational concerns and environmental preferences in injury rehabilitation.

Second, exercise researchers have recognized that samples of students from physical education backgrounds may be desensitized to the evaluative potential of various exercise settings because of the type of educational experience they have had (Eklund & Crawford, 1994). It is likely that the present sample of kinesiology students may have also had increased exposure to rehabilitation environments simply by attending classes where physiotherapy is the topic of discussion. In addition, the majority of participants in our sample reported that they had been treated for at least one injury with physiotherapy. This exposure and experience may have acted to reduce their reported self-presentational concerns. Some researchers have found that increased exercise participation, and subsequent experience with exercise programs may influence SPA (McAuley, Bane, & Mihalko, 1995). It is possible that those who have more experience with rehabilitation environments may be desensitized to the evaluative potential of these environments and will consequently report less SPA. However, it is not known how experience affects SPA in injury rehabilitation. By comparing the self-presentational concerns of women who have had injury rehabilitation experience to those who have no experience, researchers could determine the relationship between these variables in this situation.

Finally, this sample included students who were likely more active than the general population and displayed BMI scores that indicated that they were of normal weight. That self-presentational concerns exist in this sample demonstrates the pervasiveness of these concerns.

Evidently it is not just those who are inactive and overweight who experience high levels of SPA and are affected by self-presentational concerns (Eklund & Bianco, 2000). Additional studies are needed to investigate the relationship between self-presentation and injury rehabilitation with a diverse sample of injured women who are more representative of the general population.

Summary and Practical Implications

The purpose of providing an increased understanding of self-presentational concerns in the context of injury rehabilitation was satisfied. The findings demonstrated that people report concern for how they are perceived by others in a rehabilitation setting, and these concerns are different for men and women. As such, the female participants were the focus of the current analyses. The women identified the personal attributes that they perceived as a potential target for evaluation within physiotherapy environments (e.g., items related to appearance, physical ability, and emotional state). The results also demonstrated inverse relationships between women's SPA and preference for the presence of males, clothing that accentuates the physique, and open concept treatment settings. Taken together, these findings imply how women's self-presentational concerns may be influenced by the social and physical injury rehabilitation environment. Importantly, this study highlights some of the key areas for future exploration and hopefully provides the impetus for further investigation into the role that self-presentation plays for women who are actually receiving physiotherapy. The findings should generate incentive for physiotherapists to become more aware of the self-presentational concerns that their patients may experience, so that they can provide treatment setting options, or develop strategies to combat these concerns in clinics where treatment setting options do not exist. Specifically, these results show that it is likely that physiotherapy clinics that cater exclusively to females and offer curtains that may be drawn around treatment beds may help improve some women's comfort

within this social setting. Also, by encouraging females to wear clothing that is loose and concealing, patients may feel less apprehensive about others' evaluations of them in injury rehabilitation.

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STUDY 2

INJURED WOMEN'S SOCIAL PHYSIQUE ANXIETY, SELF-PRESENTATIONAL CONCERNS AND SETTING PREFERENCES IN REHABILITATION[2]

Self-presentation, or impression management, is the effort people make to control how they are perceived by others (Leary & Kowalski, 1990; Schlenker, 1980). People differ in their degree of self-presentation (Leary, 1983). Those who experience a great deal of concern over how they are evaluated may experience social anxiety due to a lack of congruence between the impressions they wish to convey and their perceived ability to present these impressions (Leary, 1983). Social anxiety that is restricted to concerns over the evaluation of the physique is termed social physique anxiety (SPA; Hart, Leary, & Rejeski, 1989). SPA has been most extensively explored in exercise, but may be particularly relevant in injury rehabilitation because of the focus placed on the examination of the body. The present study evaluates SPA and the self-presentational concerns of women who are injured and require physiotherapy.

Research in sport and exercise has demonstrated that women's self-presentational concerns, most notably their SPA, consistently exceed and differ from those expressed by men (Frederick & Morrison, 1996; Haase, Prapavessis, & Owens, 2002; Hart et al., 1989; Kruisselbrink, Dodge, Swanburg, & MacLeod, 2004; Lantz, Hardy, & Ainsworth, 1997). This has been explained by differences in the way in which males and females are socialized and women objectified (Melbye, Tenenbaum, & Eklund, 2008), as well as differences in their body dissatisfaction (Silberstein, Striegel-Moore, Timko, & Rodin, 1988). Men have reported trying to alter their figure in both directions (i.e., striving for either a thinner or bigger, more muscular physique), whereas women typically strive for the culturally ideal body type of being thin and toned (Brownell, 1991; Furnham, Badmin, & Sneade, 2002; Stanford & McCabe, 2002).

[2] A version of this study has been submitted for publication (Driediger, Hall, Echlin, Rodgers, & Lebrun, 2012).

Recently, Driediger and Hall (2012) examined the self-presentation and physique anxiety of male and female undergraduate students based in the hypothetical context of injury rehabilitation. The results were consistent with those found in sport and exercise, and indicated that women's SPA was more pronounced, and their self-presentational concerns differed from those reported by men. For these reasons, only females were recruited for the purpose of the present study.

Exercise Environment

Research in exercise has linked self-presentational concerns to low exercise adherence rates, and may even act to discourage people from exercising altogether, especially when the environment is viewed as threatening (Leary, 1992; Hausenblas, Brewer, & Van Raalte, 2004). Certain features of the social and physical exercise environment have been shown to heighten women's fear of negative evaluation, making these situations more threatening.

The social environment consists of characteristics of the other people who are present in that setting. Research has focused considerable attention on the relationship between female exercisers' state and trait levels of SPA and the sex of the other exercisers (Eklund & Crawford, 1994; James, 2000; Kruisselbrink et al., 2004; Yin, 2001). For example, the presence of men in imagined exercise settings has been shown to significantly increase women's state levels of SPA, and may even act to reduce the amount of time they spend exercising (Kruisselbrink et al.). Also, women who experienced greater dispositional SPA reported being more aware of the presence of men and they indicated a preference for exercise settings that were not co-ed (Eklund & Crawford). Therefore, it is not surprising that women who exhibited higher trait levels of SPA chose to exercise in areas of a fitness center that were exclusively female over locations that were co-ed (Yin, 2001). Researchers have proposed that exercise environments that cater

exclusively to females may help to alleviate the anxiety that women with high SPA experience (Kruisselbrink et al.).

Another element of the exercise social environment that has been investigated is the appearance, physique or physical ability of the other people who are present. When presented with exercise videos of attractive people, women's confidence in their ability to convey the impression that they were a competent exerciser decreased (i.e., their self-presentational efficacy, [SPE]; Fleming & Martin Ginis, 2004). Also, women have been shown to report higher levels of situation-specific SPA in response to perceived dissimilarity between their body and an exercise instructor's body (Martin Ginis, Prapavessis, & Haase, 2008). Finally, females who experienced greater SPA have indicated that they prefer not to exercise with others who are more fit than them (Eklund & Crawford, 1994).

The social interaction that exists in an exercise environment may also act to influence women's self-presentational concerns. Typically, the presence of others within exercise settings has been found to alleviate social anxiety (Carron, Burke, & Prapavessis, 2004). However, some studies have found that the presence of others in exercise classes may actually increase an exerciser's social anxiety, particularly in regard to the evaluation of their physique (Martin & Fox, 2001). For instance, Martin and Fox compared the social anxiety of exercise class participants who attended a socially interactive class versus one that was socially neutral and unsupportive. It was found that the more socially interactive and supportive class generated greater social anxiety in exercise participants than the less social group environment. One explanation that the researchers provided was that the participant's awareness of the potential for their evaluation was heightened by the enhanced social interaction thereby increasing the anxiety they experienced. It was also suggested that the participants may have liked the other group

members more which resulted in additional pressure to impress them, and consequently heightened participants' anxiety.

Despite having many options, the clothing that exercise participants wear has been found to influence women's anxiety over the evaluation of their physique. In general, clothing that emphasizes a woman's physique results in elevated SPA, not only for those who wear it, but also for women who anticipate wearing this type of clothing, and those who are merely observing people wearing such clothing (Crawford & Eklund, 1994; Eklund & Crawford, 1994; Gammage, Martin Ginis, & Hall, 2004; Martin Ginis et al., 2008). In a study conducted by Gammage and associates, the female participants who were told that they were required to wear typical aerobics attire described as a spandex jog bra with a cropped top and short spandex shorts for an upcoming aerobics class displayed greater state SPA than women who were told that they would be required to wear loose-fitting t-shirts and shorts. The women never had to wear the clothing that they were shown. Thus, the simple suggestion of having to wear clothing that was possibly more revealing than they would have typically worn provoked the women's anxiety. Similarly, women reported heightened SPA after they had observed videos of female exercise instructors who wore attire that emphasized their physique compared to videos where the instructor wore more concealing clothing (Martin Ginis et al., 2008). Therefore, it is not surprising that women with high trait-levels of physique anxiety have indicated that they prefer to wear exercise attire that is loose-fitting and de-emphasizes their physique (Crawford & Eklund; Eklund & Crawford). The clothing that is required has the potential to make women feel less excited about forthcoming exercise sessions (Gammage, Martin Ginis, et al., 2004), and may possess the potential to discourage participation altogether.

In conjunction with the social exercise setting, the physical exercise environment has also been shown to increase the perceived threat of evaluation. Consequently, women with high levels of SPA tend to choose exercise locations where there is less chance of physical evaluation, preferring to exercise in private rather than in public (Spink, 1992). Overweight women stated that they chose to exercise in private primarily because of the fear they had over how they were perceived by others (Bain, Wilson, & Chaikind, 1989). Specific features of the physical exercise setting have been shown to influence a woman's social anxiety. One such element is the presence of mirrors. In their successful manipulation of female exercisers' self-presentational efficacy (SPE), the presence of mirrors and windows in an aerobics class setting increased women's situational SPA and decreased their confidence in their ability to present the image that they were a competent exerciser (i.e., SPE; Gammage, Martin Ginis, et al., 2004). Similar results were found for women who exercised in a lab environment in front of a mirror (Katula, McAuley, Mihalko, & Bane, 1998). That is, when women exercised in the mirrored condition, they reported less confidence in their ability to exercise, and this was predicted by the degree of SPA they experienced. These researchers suggested that the inclusion of mirrors in exercise environments may have detrimental effects on the exercise behaviour of women, primarily for those who report high levels of SPA.

Rehabilitation Environment and SPA

The physical and social characteristics of injury rehabilitation clinics are often very similar to those found in exercise settings (e.g., open concept, mirrored walls, co-ed). Therefore, it is likely that the negative outcomes associated with self-presentation in exercise may also exist in injury rehabilitation. Driediger and Hall (2012) provided preliminary evidence of the relationships that may exist between women's SPA and various characteristics of the

rehabilitation environment. As the female students' social physique anxiety increased, they showed greater preference for the other people in the clinic to be of the same sex, and greater preference for wearing clothing that de-emphasized their physique, such as baggy t-shirts and shorts, or track suits. This undergraduate student sample of women also rated their preference for the physique or physical ability of the other patients present during their physiotherapy appointments, the social interaction between these patients, and whether or not they were people whom the women hoped to impress. Preferences for the sex of the physiotherapist were also evaluated. No significant relationships between these social setting characteristics and SPA were found. There were, however, significant relationships between SPA and women's preference for the physical treatment setting. Specifically, as their SPA increased, they reported greater preference for being treated within a clinic that employed curtained beds, and less preference for an open concept setting.

Purpose and Hypotheses

Preliminary evidence (Driediger & Hall, 2012) suggests that women experience self-presentational concerns in the context of injury rehabilitation. This finding, however, was based on hypothetical scenarios rather than authentic situations. Therefore, the primary purpose of the present study was to replicate our previous study (i.e., to increase our understanding of self-presentational concerns in injury rehabilitation) with women who were actually injured and initiating physiotherapy. In accordance with our earlier findings (Driediger & Hall), it was hypothesized that as women demonstrated higher levels of dispositional SPA, their general self-presentational concerns would also increase.

The secondary purpose was to examine the relationships between injured women's SPA and their preferences for the social and physical elements of the injury rehabilitation setting.

Women who experienced higher levels of trait SPA were expected to rate their preferences for characteristics of the treatment environment that act to protect them from additional physical evaluation higher than features that draw attention to their physique. It was anticipated that the women would express similar preferences to those reported by our previous sample of female kinesiology students. That is, the participants were expected to favour other female patients and clothing that de-emphasized their physique.

Despite the lack of significant findings for other features of the social setting reported by Driediger and Hall (2012), based on the exercise literature it was hypothesized that the injured women would demonstrate less preference for attending physiotherapy sessions with other patients who are athletic-looking, social, and people they want to impress, as their SPA increased. Additionally, it was anticipated that women who scored higher in SPA would indicate greater preference for being treated by a female physiotherapist. Finally, consistent with Driediger and Hall, it was hypothesized that highly physique anxious women would prefer to be treated in an area of the clinic that was more private than an open concept setting.

Method

Participants

Participants were injured women (N = 62, M_{age} = 40.98, SD = 14.17) who had recently been prescribed physiotherapy by a primary care practitioner, but had not yet started their rehabilitation program. Women were ineligible to participate if they did not speak or read English, or they were currently receiving treatment from a physiotherapist. Patients were recruited from physiotherapy clinics in London, Ontario and Edmonton, Alberta.

The women who were aware of when they had sustained their injury reported injuring themselves within the previous six months. The injuries that were reported most often were knee

(*n* = 13), back (*n* = 13), shoulder (*n* =13), and ankle (*n* = 8). The majority of participants experienced their injury through overuse (63%) rather than trauma. Many of the women were unsure of their diagnoses (*n* = 26). However, those who knew the name of their injury reported primarily sprains (*n* = 9), torn ligaments (*n* = 4), pulled muscles (*n* = 4), and nerve damage (*n* = 4). The most common physical activities that the women reported participating in were walking (*n* = 15), attending the gym (*n* = 9), and running (*n* = 8). Only six women declared that they were not active. The majority of participants (65%) indicated that they had been to physiotherapy for treatment in the past, most stating that they had been for a minimum of ten appointments. The women indicated that they had experienced one or two injuries, and their last appointment was more than a year ago. Participants who had never received physiotherapy treatment (35%) indicated any exposure they may have had to an injury rehabilitation environment.

Measures

Women were asked to provide detailed demographic information including their age, height, and weight. Their Body Mass Index (BMI) was calculated by multiplying their weight in pounds by 703 divided by their height in inches squared (Roizen et al., 2009). They were asked to indicate the primary sport or activity that they participated in, their current injury, including the body part that was affected, the type of injury (i.e., overuse or trauma), and when they had sustained this injury. In addition, they were asked about their experience with physiotherapy; specifically, if they had ever been to physiotherapy for treatment previously (yes or no), the number of physiotherapy appointments they had attended, the number of injuries that had been treated, and the last time they had received treatment. For participants who had never received physiotherapy treatment, they were asked to indicate any exposure they may have had to physiotherapy clinics, in general. Participants were asked to check off the items that applied to

them from a list of four options: (a) I have never been myself, but I've accompanied someone else, (b) I have never received treatment, but I've been in a physiotherapy clinic before, (c) I have never been in a physiotherapy clinic, but I've seen one on television, and (d) I have never been in a physiotherapy clinic, but I've looked into one from the outside.

Social Physique Anxiety Scale (SPAS). This scale measures a person's concern with others' evaluation of his or her figure or physique. The 9-item version (Martin, Rejeski, Leary, McAuley, & Bane, 1997) was employed since it has demonstrated superior reliability and validity compared to the original 12-item scale (Hart et al., 1989). Participants are instructed to read each item carefully and to indicate how characteristic each statement is of them. Items are rated on a 5-point scale ranging from 1 (not at all characteristic of me) to 5 (extremely characteristic of me). An example of an item is: "I wish I wasn't so up-tight about my physique or figure." This scale represents a single construct, permitting the calculation of a total score that is equal to the sum of item scores (ranging from 9 to 45). The reliability coefficient for the present study was found to be acceptable ($\alpha = .86$).

Self-Presentation in Injury Rehabilitation Questionnaire (SPIRQ). This 32-item questionnaire measures self-presentational concerns in the context of an injury rehabilitation environment. The SPIRQ was adapted from its original version (Driediger & Hall, 2012) to reflect that the participants in the present study were injured. Thus, the wording of one sentence in the descriptive paragraph at the beginning of the questionnaire was changed accordingly (i.e., "Imagine that you are receiving treatment for your current injury").

The questionnaire begins with a description of a typical, yet hypothetical physiotherapy clinic, along with information about the other people who are present in the clinic while receiving treatment. The procedure for a standard physiotherapy appointment is described next.

Participants were instructed to imagine that they were receiving treatment for their current injury in the setting described. As they responded to each item, the participants were asked to imagine how they think they would be perceived by the other people in the clinic. Each item begins with the item stem: "I believe the other people in the clinic would perceive me as…" Items consist of one word or a short phrase that describe potential traits of a person in physiotherapy (e.g., anxious, uncoordinated). Items are rated on a scale ranging from 1 (not at all true) to 5 (completely true). Fifteen of the items include positive characteristics (e.g., confident, fit), while the remaining 17 items have a negative connotation (e.g., weak, self-conscious). For a thorough description of item generation and questionnaire development refer to Driediger and Hall (2012).

Injury rehabilitation social environment preferences questionnaire. This 14-item questionnaire assesses preferences for a number of features relevant to the social environment of a physiotherapy clinic (Driediger & Hall, 2012). The items consist of characteristics of the other people present in the clinic (i.e., sex [n = 3], physique [n = 2], level of interaction [n = 2], need to impress [n = 2], and sex of the therapist [n = 2]), as well as three items that refer to clothing required. Participants were instructed to rate their preference for each item on 5 points with the anchors *not preferred* (1), *slight preference* (2), *no preference* (3), *much preferred* (4), and *completely prefer* (5).

The same paragraphs that described a hypothetical physiotherapy clinic and procedure for a typical rehabilitation appointment that were used as part of the SPIRQ were also included at the beginning of this questionnaire in order to provide each participant with the same reference point from which to respond. Participants were reminded to respond to each item imagining that they were receiving treatment for their current injury in the scenarios described.

Injury rehabilitation treatment environment preferences questionnaire. This 3-item questionnaire evaluates preferences for treatment settings that may be located within a physiotherapy clinic (Driediger & Hall, 2012). Each item includes a detailed written description and photographs of a standard treatment setting. Participants were instructed to read the descriptions and examine the photographs while imagining that they were attending appointments and receiving treatment for their current injury within these environments. The first item describes a situation that offers as much potential for evaluation as possible:

> The physiotherapy clinic is one large open space. There are treatment beds around the perimeter of the gym-like area where hands-on (i.e., manual) treatment, modalities (i.e., IFC or ultrasound), and ice or heat are provided by the physiotherapist. Patients perform their exercises in the center of the open space. There are mirrors on most of the walls and there are windows that allow people outside of the clinic to see in.

The second item depicts a location that presents the potential for evaluation, but also provides some protection from the view of others:

> The physiotherapy clinic consists of multiple open spaces divided by partitions with treatment beds in one area which are each divided by a thin curtain. Hands-on (i.e., manual) treatment, modalities (i.e., IFC or ultrasound), and ice or heat occurs on the beds behind the curtains. Others cannot see you, but are able to hear you. Exercises are completed in shared exercise areas. The exercise areas have mirrors on only one wall. There are a few windows in the clinic and they are covered so that no one outside can see in.

The third item represents a clinic setting with little to no potential for evaluation. The item reads:

> The physiotherapy clinic consists of many small, completely separate offices where patients are treated behind a closed door. Hands-on (i.e., manual) treatment, modalities (i.e., IFC or ultrasound), and ice or heat occurs on the treatment beds within each room. Exercises are also completed in the individual rooms. There are no mirrors or windows in the rooms.

Participants were instructed to rate their preference for each item based on 5 points with the anchors *not preferred* (1), *slight preference* (2), *no preference* (3), *much preferred* (4), and *completely prefer* (5).

Procedure

Ethical approval was obtained from the Research Ethics Boards at Western University and the University of Alberta (see Appendix A). Potential participants were identified and approached by their primary care practitioner at the health care facilities where data collection took place (i.e., AIM Health Groups in London, Ontario, and Glen Sather Sports Medicine Clinic in Edmonton, Alberta). The sport medicine physician provided potential participants with an overview of the study, and invited them to meet with one of the researchers immediately following their appointment. Participants who accepted were directed to a private consultation room where the researcher was waiting. The women were provided with a brief verbal description of the study, along with the letter of information to read and keep (see Appendix J). Once they volunteered to participate and their written consent was obtained, they completed the questionnaires in the package given to them by the researcher. Alternative meeting times were arranged with potential participants who were unable to meet immediately following their referral appointment. These participants typically completed the questionnaire prior to their initial physiotherapy appointment, in the same clinic where they had received primary care.

Results

Prior to data analysis, the positive items on the SPAS and SPIRQ were re-coded so that higher scores reflected higher self-presentational concerns. Next, each variable was screened and cleaned. Seven cases had missing values on the social environment preferences questionnaire as one page in each of these seven questionnaire packages were missing during data collection. These participants were retained due to the small sample size, and the missing values (less than 10%) were replaced by the series mean.

Descriptive statistics were calculated for the participants' age, height, weight, BMI, and SPA (Table 4). The women in this sample were of average height (M = 65.25 inches) and weight (M = 156.90 pounds). However, their BMI scores indicated that they were overweight (i.e., BMI > 25). Also, they reported a considerable amount of SPA (M = 25.46). Means and standard deviations for scores on the SPIRQ and environmental preference items are displayed in Table 5 and Table 6, respectively.

Bivariate correlations were conducted between SPA and age, weight, height, BMI, experience with physiotherapy, and injury sustained. Significant relationships were found for BMI and weight only (Table 4). As BMI and weight increased, so did SPA.

Self-Presentational Concerns

It has been suggested that SPA and general self-presentational concerns should be related (Leary & Kowalski, 1990), and researchers have demonstrated that this relationship is present within exercise (e.g., Hart et al., 1989). In order to evaluate the hypothesis that injured women who require rehabilitation display greater self-presentational concerns as their SPA increases, the relationship between the women's dispositional SPA and their ratings on each of the SPIRQ items were assessed. The items of the SPIRQ were analyzed individually since this questionnaire does not represent a singular construct. Pearson r values indicated a significant, positive relationship between SPA and eight of the 32 items of the SPIRQ. Correlation coefficients are presented in Table 5. These items were: (a) anxious, (b) self-conscious, (c) unfocused, (d) tense, (e) unable to handle pressures, (f) frustrated, (g) unfit, and (h) unhealthy. These items represent the psychological and physical manifestations of anxiety (e.g., anxious, self-conscious, tense), as well as descriptions of a person's physique (e.g., unfit, unhealthy). Synonyms, or antonyms of these words are also incorporated into the items of the SPAS (e.g., up-tight, fit, nervous,

uncomfortable). Therefore, it makes sense that these two constructs were found to be related on these particular items, and confirmed the hypothesis that women who are injured are concerned about how they are perceived by others in a rehabilitation setting and these concerns are related to the amount of physique anxiety they experience.

Environment Preferences

It also was hypothesized that as their SPA increased, the participants would report greater preference for characteristics of the social and physical treatment environments that could protect them from evaluation. Accordingly, the bivariate correlations between SPA and ratings of preference for each of the items on the social and physical treatment environment questionnaires were assessed (Table 6). In terms of the social environment, a significant relationship was found between SPA and the item that described the other patients as female. That is, as the women's SPA increased, their preference for the other patients to be female also increased. No other social environment preference items were found to relate significantly to SPA.

For the physical environment, significant relationships were found between SPA and the open concept treatment setting, as well as the separate examination room. Specifically, as physique anxiety increased, the women's preference for the open concept treatment setting decreased, while their preference for the more private examination room increased. The relationship between SPA and the curtained bed treatment setting was not found to be significant.

Table 4

Descriptive Statistics for Demographic Information of Injured Women

Variable	*M*	*SD*	*n*	Min	Max	Pearson *r*
Age	40.98	14.17	62	17	73	.04
Height (inches)	65.25	3.02	61	58	73	.07
Weight (pounds)	156.90	32.97	60	105	270	.30*
BMI	26.03	5.63	59	19	42	.29*
SPA	25.46	7.54	62	11	45	

Note: Pearson *r* values depict correlation with SPA. BMI = Body Mass Index; SPA = Social Physique Anxiety.
*p < .05.

Table 5

Descriptive Statistics of SPIRQ Items and Correlation with SPA for Injured Women

		Women		
Item	Range	*M*	*SD*	Pearson *r*
1. Weak	1-5	1.95	1.06	.15
2. Anxious	1-5	1.98	1.19	.27*
3. Self-conscious	1-5	2.16	1.18	.49**
4. Relaxed	1-5	3.07	1.23	.14
5. Uncoordinated	1-5	2.19	1.24	.18
6. Unable to perform exercises	1-5	2.15	1.16	.03
7. Healthy	1-5	3.03	1.13	.17
8. Fit	1-5	3.21	1.09	.24
9. Unfocused	1-5	1.86	1.07	.42**
10. Energized	1-5	3.39	1.15	.02
11. Difficult to work with	1-5	1.36	.75	.22
12. Tense	1-5	2.19	1.20	.28*
13. Strong	1-5	3.23	1.02	.09
14. Composed	1-5	2.77	1.12	.23
15. Unable to handle pressures	1-4	1.61	.88	.52**
16. Frustrated	1-5	1.92	1.09	.37**
17. Unconcerned	1-5	1.95	1.06	-.01
18. Coordinated	1-5	3.03	1.06	.02
19. Unfit	1-5	2.37	1.19	.43**

20. In control of my emotions	1-5	2.44	1.20	.08
21. Focused	1-5	2.47	1.30	.05
22. Tired	1-5	2.55	1.24	.21
23. Confident	1-5	2.76	1.11	.08
24. Dumb	1-5	1.53	.90	.21
25. Unhealthy	1-5	2.02	1.14	.39**
26. Easy to work with	1-5	2.16	1.28	.15
27. Knowledgeable	1-5	2.63	1.06	.18
28. Able to handle pressures	1-5	2.39	1.11	.24
29. Unable to control emotions	1-5	1.87	1.09	.17
30. Needy	1-5	1.73	1.06	.11
31. Perform exercises well	1-5	2.82	1.15	-.10
32. Independent	1-5	2.40	1.22	-.05

Note: Pearson *r* values depict correlation between SPIRQ items and SPA. SPIRQ = Self-Presentation in Injury Rehabilitation Questionnaire. SPA = Social Physique Anxiety.
*$p < .05$, **$p < .01$.

Table 6

Descriptive Statistics for Environment Preference Items and Correlation with SPA for Injured Women

Item	*M*	*SD*	Range	Pearson *r*
Social				
1. The other patients in the clinic are female.	3.23	.89	1-5	.28*
2. The other patients in the clinic are male.	2.16	.94	1-3	-.10
3. There are an equal number of males and females in the clinic.	2.97	.85	1-5	-.19
4. The other patients who are in the clinic are all very athletic-looking.	2.57	.88	1-4	-.24
5. The other patients who are in the clinic do not look very athletic.	2.77	.84	1-5	-.09
6. The other people who are in the clinic are very social (e.g., talk to each other a lot).	2.78	1.10	1-4	-.13
7. The other people who are in the clinic are not very social.	2.20	1.09	1-5	.03
8. The other people in the clinic are all people you would like to impress.	2.09	.93	1-3	-.10
9. The other people in the clinic are people you do not feel you need to impress.	3.29	1.14	1-5	.06
10. You are required to wear loose-fitting long pants and a long sleeve shirt (e.g., a track suit).	3.22	.94	1-5	-.18
11. You are required to wear baggy shorts and a baggy t-shirt.	2.98	1.09	1-5	-.06
12. You are required to wear a short, tight-fitting spandex top and bottoms.	1.38	.71	1-3	-.18

13. Your physiotherapist is female.	3.13	.89	1-5	.02
14. Your physiotherapist is male.	2.66	.75	1-5	-.07
Physical				
1. The physiotherapy clinic is one large open space.	2.39	1.23	1-5	-.30*
2. The physiotherapy clinic consists of multiple treatment beds divided by a thin curtain.	3.36	1.11	1-5	.03
3. The physiotherapy clinic consists of many small, completely separate offices where patients are treated behind a closed door.	2.24	1.38	1-5	.35**

Note: Pearson *r* values depict correlation with SPA. SPA = Social Physique Anxiety.
*$p < .05$, **$p < .01$.

Discussion

The primary purpose of the present study was to increase our understanding of the self-presentational concerns of women who were injured and required physiotherapy. Such concerns were shown to be present and these findings replicate and extend the results of our earlier work that employed hypothetical injuries and rehabilitation scenarios (Driediger & Hall, 2012).

Self-Presentational Concerns

In exercise, the associations between SPA and general measures of a person's self-presentation have been demonstrated (Hart et al., 1989). Also, SPA scores have been employed to provide an indication of the degree of self-presentational concerns that women experience (e.g., Gammage, Hall, & Martin Ginis, 2004). Accordingly, the present study examined relationships between SPA and self-presentational concerns, as well as SPA and women's preferences for injury rehabilitation environment features.

As hypothesized, the findings demonstrated that SPA and self-presentation were related, supporting the notion that women are concerned about how they are perceived by others in this setting, and their concerns are influenced by the degree of physique anxiety that they experience. Positive, significant relationships were revealed between SPA and a number of self-presentation variables associated with physiotherapy. Although the items on the SPIRQ were not intended to reflect specific factors or a singular construct, the items that were found to relate to SPA represent the psychological and physical manifestations of anxiety (e.g., anxious, self-conscious, tense, unfocused), as well as variables that may symbolize appearance or physical fitness (e.g., unfit, unhealthy). That these were the items that were found to relate to SPA was not surprising since the SPAS measures anxiety toward the physique. The variables that were significantly related to SPA in our first study (Driediger & Hall, 2012) were also significant in the current study, with the exception of one variable (i.e., unfocused). Given two quite different samples were employed in these two studies, this implies that there may be some persistent self-presentational variables that evoke concern for females regardless of their age, fitness, or SPA in the physiotherapy setting. However, fewer items were found to relate significantly to SPA in the present study (8 items) when compared to the original study (20 of a total 32 items). This discrepancy may be attributed to the differences between the samples used in each investigation.

First and foremost, the women in the current study were injured, and were legitimately initiating a physiotherapy program at the time that they participated in the study. Consequently, their perspective was real rather than imagined, possibly providing a more accurate portrayal of the self-presentational concerns of women in rehabilitation. Second, they represented a wide range of ages (18 - 73), with a mean age that was higher than that of the Driediger and Hall (2012) study. It is not known how age influences self-presentational concerns in this setting, and

studies that have included age as a moderator variable in exercise have found equivocal results (e.g., Lantz et al., 1997; Treasure, Lox, & Lawton, 1998). Third, the present sample of women was recruited from the community, rather than strictly a university population, ensuring that the sample was more representative of the general population. Because of this, the sample of injured women was substantially smaller (N = 62) than the convenience sample of female students (N = 134). This difference alone may have contributed to the discrepancy in number of SPIRQ items that were found to relate to SPA.

In exercise, a positive relationship between SPA and body composition has been determined for women (Hart et al., 1989). Similarly, significant positive relationships were demonstrated for SPA and BMI, as well as SPA and weight in the present study. These results emphasized that as a woman's weight increased, the degree of SPA she experienced also increased. The females in the present study reported slightly greater SPA (M = 25.46) than the kinesiology student participants in the Driediger and Hall study (M = 24.86), but less SPA than described by undergraduate students in exercise (M = 28.38; Gammage, Martin Ginis, et al., 2004). Possibly, the women who volunteered to participate in this study were not women who experienced the highest levels of SPA. It has been proposed that women who suffer from the greatest physique anxiety may not participate in exercise-related studies in an attempt to avoid further increases in SPA (McAuley, Marquez, Jerome, Blissmer, & Katula, 2002). This may be accentuated in the context of physiotherapy because an injury may increase women's vulnerability to concern over the evaluation of their physique.

Injury Rehabilitation Environment

The results of this study supported research in exercise (Kruisselbrink et al., 2004) and that of our recent study with female university students (Driediger & Hall, 2012). In support of

our hypothesis, women who exhibited higher physique anxiety indicated a greater preference for attending physiotherapy appointments with other female patients. Based on our previous findings (Driediger & Hall), we also anticipated an inverse relationship between SPA and preference for the other patients to be male. Our current results failed to demonstrate this. An examination of the mean scores, however, indicated that the women in the present study had an obvious dislike for the presence of male patients, independent of the degree of SPA they experienced. This finding is in accord with preferences expressed by women in exercise classes (Eklund & Crawford, 1994; Kruisselbrink et al.). Thus, it is apparent that women who are about to receive treatment for an injury prefer to attend their physiotherapy appointments with other females. It is suggested that physiotherapy clinics that cater exclusively to women may make females feel more at ease, regardless of whether or not they experience physique anxiety.

Despite demonstrating a distinct preference for female patients, the women in this study did not express a preference for their physiotherapist to be female. This did not support our current hypothesis. However, there were also no significant relationships between SPA and the sex of the physiotherapist in our previous study (Driediger & Hall, 2012). An explanation for these results is that other characteristics of the therapist, such as knowledge and empathy, may be more important to patients when they are receiving treatment for an injury than the therapist's sex. In order to understand the traits that women favour in regard to their physiotherapist, more information is required. Qualitative inquiry may provide the necessary depth of information to help us draw conclusions on this matter.

Driediger and Hall (2012) found that as their SPA increased, female students' preference for short, tight-fitting clothing decreased while their preference for baggy, loose-fitting clothing increased. Thus, it was expected that the women in the present study would report similar

clothing preferences based on their SPA. However, no significant relationship existed between participants' SPA and their preferences for attire. In contrast, exercise research has demonstrated that SPA is negatively related to clothing that de-emphasizes the body, and is positively related to clothing that reveals or emphasizes the physique (Crawford & Eklund, 1994; Eklund & Crawford, 1994; Gammage, Martin Ginis, et al., 2004; Martin Ginis et al., 2008). It is not known why similar relationships did not emerge in the present study; however, an inspection of the descriptive data for clothing items revealed that the women rated the clothing that concealed their physique (i.e., baggy shorts and t-shirt, or track suit) higher than the description of an outfit that emphasized their figure (i.e., short spandex top and bottoms). Therefore, in the context of injury rehabilitation, participants reported greater preference for clothing that concealed their physique, but these ratings were made regardless of the physique anxiety they experienced. Depending on the location of their injury, patients are often instructed to wear clothes that are more revealing than a regular t-shirt and shorts. Consequently, physiotherapists' awareness of patients' clothing preferences may help them to develop alternative options to instructing women to wear clothing that may expose more than they feel comfortable with.

Similar to what Driediger and Hall (2012) reported, yet contrary to our hypothesis, no significant relationships emerged between SPA and the social setting items that described the physique of the other patients present, their degree of social interaction, and whether or not they were people whom the women felt the need to impress. Based on the exercise literature, these attributes were expected to relate to a heightened fear of negative physical evaluation (e.g., Martin & Fox, 2001; Martin Ginis et al., 2008). However, in these investigations the participants observed videos, or participated in exercise classes rather than simply reading written descriptions of social environments (e.g., Crawford & Eklund, 1994; Eklund & Crawford, 1994;

Fleming & Martin Ginis, 2004; Gammage, Martin Ginis, et al., 2004; Martin & Fox; Martin Ginis et al.). Therefore, we propose that our findings may have been different had the women been attending physiotherapy appointments with other patients who portrayed these characteristics, rather than imagining these forthcoming social situations. Future research should examine how women's situational SPA is influenced by the features of the other people who are present while they are actually attending a physiotherapy appointment. By doing so, our understanding of the exact elements of the social rehabilitation setting that elicit self-presentational concerns may be enhanced.

In regard to the physical features of an injury rehabilitation clinic, the hypothesis that women would prefer treatment settings that provided the most protection from evaluative others was supported. That is, as SPA increased, so did the preference for the private examination room. This relationship was not found by Driediger and Hall (2012). The current results suggest injured women who are older, overweight, and report higher SPA prefer the treatment environment that provides the most privacy. It is not known however, which variable (i.e., age, weight, fitness, or injury) is primarily responsible for prompting women to respond in this way. It would be worthwhile to examine how women's preferences for specific treatment settings vary depending upon their age, weight, fitness, and the location of their injury.

Limitations and Future Directions

These results have provided further evidence that self-presentational concerns are present within the context of injury rehabilitation. Nevertheless, as in any study, there were some limitations.

First, the questionnaire employed to measure self-presentation was exploratory in nature. Since it did not represent a singular construct, nor did it incorporate any specific factors, it was

difficult to compare participants' more general self-presentational concerns to their preferences for features of the physiotherapy environment. Consequently, the development of a valid and reliable measure of self-presentation in injury rehabilitation is warranted. Once this is accomplished, researchers could assess how women's concerns over other aspects of her self-presentation, not only physique, relate to the elements of the social and physical rehabilitation setting. Hopefully the questionnaire employed in this study may provide some insight into the type of items that may be included in a more psychometrically sound research tool.

Second, despite efforts to recruit a larger sample, the present study was underpowered. The small sample size may have been responsible for some of the non-significant findings, especially with regard to the social setting characteristics. It is therefore suggested that this study be replicated with a larger number of women.

Finally, the women who participated in this study reported considerable experience with physiotherapy treatment and physiotherapy environments. Self-efficacy theory posits that experience with a situation can result in increased confidence in that particular situation (Bandura, 1997). Research has indicated a negative relationship between self-presentation and a person's self-efficacy. That is, as self-efficacy increases, their SPA decreases (Katula et al., 1998). Thus, we propose that future investigations surrounding self-presentation compare women who have experience with injury rehabilitation to women who have no experience with this situation.

The exploratory nature of our research to date has revealed more questions than delivered answers. Our initial studies provide an indication of what women who are about to undergo physiotherapy treatment prefer in terms of the environment, but we are still unaware of the features of the rehabilitation setting that heighten women's physique anxiety while they are

attending a physiotherapy session. More importantly, we need to determine how this elevated SPA may influence women's rehabilitation behaviour, particularly with respect to their adherence. Additionally, there is a need to uncover the mechanisms that underlie the proposed relationships between self-presentation and aspects of the injury rehabilitation environment. For example, how does the presence of other patients generate self-presentational concerns in women who are attending physiotherapy? The perspectives of women who demonstrate high levels of social physique anxiety would be of particular value. Therefore, we propose that the next step in deciphering the role that self-presentation plays in injury rehabilitation is to conduct qualitative studies with women who are in the process of receiving physiotherapy treatment for an injury. The information derived from this type of study may clarify the direction that future research should take to bring us closer to the goal of developing modifications for physiotherapy settings that minimize the self-presentational concerns of women who are most at risk.

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STUDY 3

ATTITUDES AND PERSPECTIVES OF INJURED WOMEN WITH SOCIAL PHYSIQUE ANXIETY[3]

The attempt to present oneself in a particular manner has been termed self-presentation (Leary & Kowalski, 1990; Schlenker, 1980). Typically people present characteristics of themselves that highlight positive attributes in order to increase the likelihood of generating favourable impressions upon others. On the other hand, attempts are made to de-emphasize behaviours or aspects of the self that may result in undesirable impressions. People differ in the degree of concern they have over how they are perceived by others (Leary, 1983). Some individuals are highly motivated to present themselves in a particular way, while other people seem unaffected by the evaluations of others (Leary, 1992). People who are concerned with how they are perceived may suffer social anxiety when they doubt their ability to present themselves as desired (Leary, 1983). Social anxiety that results from concerns about physical evaluation is called social physique anxiety (SPA; Hart, Leary, & Rejeski, 1989). SPA is a cognitive manifestation of an individual's self-presentational concern, and has received extensive attention within the exercise psychology literature (Prapavessis, 2004).

General self-presentational concerns, including concerns that are specific to others' evaluations of the physique, may occur in any situation that is social (Leary, 1992), and have been shown to influence the thoughts, attitudes, and behaviours of people in settings such as exercise (Hausenblas, Brewer, & Van Raalte, 2004). Recent research suggests that these two variables also operate in the context of injury rehabilitation (or physiotherapy) (Driediger & Hall, 2012; Driediger, Hall, Echlin, Rodgers, & Lebrun, 2012). That self-presentation and SPA are present in injury rehabilitation is not surprising given the focus placed on the examination of the

[3] A version of this study has been submitted for publication (Driediger, Hall, Echlin, & Tobin, 2012).

body in this setting. Driediger and Hall (2012) examined the self-presentation and SPA of male and female undergraduate students based in the hypothetical context of injury rehabilitation. The results were consistent with those found in exercise, indicating that women reported higher SPA and different self-presentational concerns compared to men. Research in exercise has firmly established that women consistently report higher SPA than men (Frederick & Morrison, 1996; Haase, Prapavessis, & Owens, 2002; Hart et al.; Kruisselbrink, Dodge, Swanburg, & MacLeod, 2004; Lantz, Hardy, & Ainsworth, 1997). These differences have led researchers to examine the self-presentational concerns of women independently from men. Thus, the present study focused on women rather than men.

SPA and Environment

In a review of the research that has examined self-presentation in exercise, Hausenblas and colleagues (2004) demonstrated that certain features of the environment may act to intensify or alleviate the concern that women have over the perceived potential for critical evaluation from other people (e.g., Gammage, Martin Ginis, & Hall, 2004). Specifically, women's degree of anxiety regarding the potential for physical evaluation has been shown to influence her sensitivity toward aspects of the social and physical exercise environment (e.g., Crawford & Eklund, 1994; Eklund & Crawford, 1994). Importantly, research has provided evidence of some of the negative outcomes (i.e., non-adherence, non-participation, lack of enjoyment or satisfaction) that may result from exercising in environments that are full of evaluative potential, especially for those who are high in SPA (e.g., Lantz et al., 1997; Gammage, Martin Ginis, et al.).

Recently, researchers have examined the relationship between women's SPA and various characteristics of the injury rehabilitation environment (Driediger & Hall, 2012; Driediger et al.,

2012). These studies demonstrated positive, significant relationships between a dispositional measure of SPA and women's preference for attending physiotherapy sessions with other females, wearing clothing that de-emphasizes the physique, and receiving treatment in areas of the clinic that provide some or total protection from the critical stares of other people, such as behind a curtain, or in a separate examination room with the door closed.

The studies by Driediger and her colleagues (Driediger & Hall, 2012; Driediger et al., 2012) provide an indication of what women who anticipate physiotherapy treatment prefer in terms of the environment, but we are still unaware of the features of the rehabilitation setting that heighten women's concerns for how they are perceived while they are attending a physiotherapy session. More importantly, we need to determine how these elevated self-presentational concerns may influence women's rehabilitation behaviour, particularly with respect to their adherence. Additionally, there is a need to uncover the mechanisms that underlie the demonstrated relationships between social physique anxiety and aspects of the injury rehabilitation environment. Therefore, the purpose of the present study was to provide an in-depth examination of the self-presentational concerns of physique anxious women who were undergoing injury rehabilitation. A secondary purpose was to increase our understanding of how women's preferences for features of the injury rehabilitation environment were influenced by these self-presentational concerns. Accordingly, qualitative semi-structured interviews were conducted with women who exhibited SPA and were in the process of receiving physiotherapy treatment for an injury.

The interviews concentrated on the women's thoughts and feelings about how they are perceived by other people in the rehabilitation setting, and their attitudes and preferences toward characteristics of the social and physical features of the rehabilitation environment. How their

perceptions influence their rehabilitation behaviour, their confidence in conveying favourable impressions, and their suggestions for improving physiotherapy settings were also considered.

The self-presentation literature describes characteristics of the environment in terms of the social setting (i.e., the other people present) and the physical setting (i.e., features of the location in which the task takes place). The extensive findings based in exercise (see Hausenblas et al., 2004, for a review), as well as the recently conducted studies in rehabilitation (Driediger & Hall, 2012; Driediger et al., 2012) provide background and justification for our current examination of specific setting characteristics.

Social anxiety, including concerns over the evaluation of the physique, may be influenced by the number of people who are present, and whether these people are part of a cohesive group, or simply other people who are performing similar tasks close together, referred to as social aggregates or coactors (Carron, Burke, & Prapavessis, 2004; Carron & Hausenblas, 1998). Thus, the presence of other people may act to intensify or alleviate the anxiety that is experienced in social situations. A good example of this is apparent in a study conducted by Jackson and Latanté (1981). These researchers found that as the size of the audience increased, the social anxiety of their participants increased in response to imagined scenarios of themselves performing the national anthem. However, when other people were performing alongside the participants, their social anxiety was reduced. The participants experienced further reductions in anxiety as the number of people performing with them increased. Therefore, it was hypothesized that the women in the present study would view the other people present within the injury rehabilitation environment as an audience, and would consequently express greater self-presentational concern as the number of other people present increased.

In exercise, studies have illustrated that having others present in certain settings, such as aerobics classes, may actually provoke additional anxiety, including SPA (e.g., Martin & Fox, 2001; Diehl et al., 2001). Even when the other people present were supportive, positive and encouraging, the exercisers experienced increased social anxiety (Martin & Fox). However, in general, it seems that the presence of others has the potential to alleviate social anxiety (Carron & Prapavessis, 1997). Consequently, it was hypothesized that the women in the present study would prefer a socially interactive rehabilitation environment.

Martin and Fox (2001) suggested that the males and females who experienced elevated anxiety because of the socially interactive nature of the exercise class may have liked the other group members more, causing them to feel the need to impress these people, which resulted in heightened social anxiety. Therefore, the present study included an examination of women's attitudes toward the presence of important others. It was hypothesized that the women in the present study would not want to attend physiotherapy appointments with people whom they felt were important, or those whom they felt the need to impress.

In terms of the sex of other people who are present, research has demonstrated that women who report high levels of SPA prefer to exercise in environments that are exclusively female (Yin, 2001), and may even reduce the amount of time they spend exercising when males are present (Kruisselbrink et al., 2004). These women indicate being more aware of the presence of men (Eklund & Crawford, 1994), and consequently display significant increases in situational SPA in response to exercise environments that include members of the opposite sex (Kruisselbrink et al.). In injury rehabilitation, a positive significant relationship was found between dispositional SPA and preference for females only (Driediger & Hall, 2012; Driediger et al., 2012). Specifically, as women's physique anxiety increased, they indicated a greater

preference for the other patients who were present to be female. Thus, it was expected that the women in the present study would also indicate a preference for attending physiotherapy sessions with other females rather than males.

Interestingly, the sex of the physiotherapist has not been shown to influence women's self-presentational concerns in injury rehabilitation (Driediger & Hall, 2012; Driediger et al., 2012). These researchers proposed that other characteristics of the therapist may be more important than their sex. The present study questioned women who experienced SPA about their preferences regarding certain qualities of their physiotherapist. Consistent with the proposition made in earlier studies, it was anticipated that the physiotherapists' knowledge and skill, supportiveness and compassion would outweigh any concerns over their sex.

In exercise, clothing has received considerable attention with regard to self-presentation. This research has established that clothing holds the potential to intensify women's fear of negative physical evaluation. For example, in one study, women exercised to videos of female instructors dressed in clothing that either emphasized or de-emphasized their physique (Martin Ginis, Prapavessis, & Haase, 2008). The participants reported elevated situational SPA after exercising to the video that depicted the instructor's thin, fit physique. Another study demonstrated increases in SPA as a consequence of the suggestion of having to wear specific clothing (Gammage, Martin Ginis, et al., 2004). In this study, women were told that they were required to wear either typical aerobics attire that included a spandex jog bra and cropped top along with short spandex shorts, or a loose-fitting t-shirt and shorts for an upcoming exercise class. Once the participants had completed the study's measures, they were told that the study was over and they were not actually required to wear the clothing that they had been shown. The women who experienced the condition that included the tight-fitting outfit expressed greater

state-levels of SPA, and were less excited about the upcoming exercise class compared to the women who thought they would have to wear the loose-fitting clothing. Thus, it is not surprising that other studies have shown that women who are high in trait measures of SPA prefer to wear clothing that is loose-fitting and de-emphasizes their physique (Crawford & Eklund, 1994; Eklund & Crawford, 1994). Similar results have been reported in the context of injury rehabilitation (Driediger & Hall, 2012). That is, women high in SPA indicated greater preference for baggy and concealing clothing compared to women who reported less SPA. Conversely, those who experienced minimal SPA rated their preference for clothing that was tight and revealing higher than the highly physique anxious women. Therefore, it was hypothesized that the physique anxious females in the present study would stress their preference for clothing that conceals their figure.

The appearance of the other people who are present has been shown to influence the physique anxiety of women in exercise (Eklund & Crawford, 1994; Martin Ginis et al., 2008). For example, when women exercised to a video that included an instructor who was dressed so that her culturally ideal body was accentuated, the exercisers who reported a greater perceived discrepancy between their body and the instructor's indicated elevated SPA (Martin Ginis et al.). Similarly, when women watched exercise videos that showcased female exercisers whose bodies were described as "perfect-looking", they reported significantly less self-presentational efficacy (SPE) than they reported after viewing videos of "normal-looking" exercisers (Fleming & Martin Ginis, 2004). Finally, as women's SPA increased, they rated their preference for attending aerobics classes with others who were in better shape lower (Eklund & Crawford). On the other hand, females preferred to attend aerobics classes with others who were obviously less fit than they were (Eklund & Crawford). To date, we have not uncovered any significant relationships

between the SPA of women who are undergoing physiotherapy and the appearance of the other people present in the injury rehabilitation setting (Driediger & Hall, 2012; Driediger et al., 2012). However, in these studies women were asked to indicate their preference based on whether or not the other patients were athletic-looking. Perhaps such a minimal written description was not enough to provoke women who are high in SPA to respond as expected based on the exercise literature. Thus, it remains possible that the appearance of the other people present in a rehabilitation environment may influence women's self-presentational concerns. It was proposed that the presence of attractive others, or people who exhibit superior fitness would be of concern for the physique anxious women in the current study.

Women's self-presentational concerns have been shown to influence their choice of exercise settings (Spink, 1992; Yin, 2001). Specifically, women who experience high levels of SPA prefer to exercise alone, in private rather than in public environments (Spink, 1992). Obese women indicate that they choose these private exercise settings mostly because of the apprehension they feel about having other people judge their bodies (Bain, Wilson, & Chaikind, 1989). Exercising in unfrequented or private settings may afford women protection from perceived judgements from other people.

Research in injury rehabilitation has found that as the physique anxiety of women increased, they demonstrated greater preference for receiving treatment in more private areas of the clinic, such as on a bed surrounded by a curtain (Driediger & Hall, 2012), or in a separate examination room (Driediger et al., 2012). Therefore, it was hypothesized that the female participants in the current study would also indicate a preference for receiving physiotherapy treatment in areas of the clinic that limit the potential for others to judge them, such as behind the closed doors of a private examination room.

Recent research has also found that women expressed increasing aversion to receiving physiotherapy treatment in an open concept clinic setting as their SPA increased (Driediger & Hall, 2012). The photographs and written descriptions of the open concept treatment setting in this study incorporated multiple mirrors and windows. It was suggested that these features increased the perceived potential for evaluation causing the women to respond as they did. However, the presence of mirrors has yet to be examined independently of other features of the rehabilitation environment with regard to self-presentation.

Evidence of the potential impact of mirrors and windows on a woman's social physique anxiety can be found in the exercise literature. For example, women who exercised in front of a mirror indicated decreased confidence in their ability to exercise compared to exercise conditions that did not include mirrors (Katula, McAuley, Mihalko, & Bane, 1998). Reductions in self-efficacy were further exaggerated by high levels of dispositional SPA. Also, exposure to an aerobics class environment that included mirrors and windows that other people could see in led to increased SPA for female exercisers compared to the same aerobics class scenario where the mirrors and windows were covered (Gammage, Martin Ginis, et al., 2004). Researchers advise that mirrors likely act to heighten women's awareness of their physique, creating the potential for higher social physique anxiety (Katula et al.). Therefore, it was hypothesized that the current sample of women who are already aware of others' evaluations of their physique would report a strong dislike for mirrors and windows.

Self-efficacy theory contends that experience with a situation increases a person's confidence in that particular situation (Bandura, 1997). In exercise, researchers have demonstrated that people who have been exposed repeatedly to a situation experience greater self-efficacy and report lower levels of self-presentational concern (Hausenblas et al., 2004;

McAuley, Bane, & Mihalko, 1995; McAuley, Marquez, Jerome, Blissmer, & Katula, 2002). It has been proposed that self-efficacy theory and self-presentation be combined to reflect self-presentational efficacy (SPE; Leary, 1983). SPE refers to an individual's belief in the ability to convey the impressions that are desired (Maddux, Norton, & Leary, 1988). Research in exercise has demonstrated that as their SPE increases, females perceive less threat of physical evaluation (Maddux, et al., 1988; Gammage, Hall, & Martin Ginis, 2004). Therefore, it was hypothesized that the women in the present study would exhibit less concern over others' evaluations of them as they gained familiarity with the injury rehabilitation environment and had additional experience with their treatment program. To test this hypothesis, the women were interviewed twice: once prior to their initial physiotherapy appointment, and then again after they had undergone three physiotherapy sessions. Their satisfaction with the rehabilitation program and recommendations for improvements to the physiotherapy clinic were also assessed during this second interview. No hypotheses were made regarding these variables, as they had not been evaluated previously, and were included for exploratory purposes only.

Method

Participants

The sample included 10 women who ranged in age from 18 to 64 years (M = 41.30, SD = 16.86). Participants' height (M = 64.80 inches, SD = 2.49), and weight (M = 206.30 pounds, SD = 63.78) were collected, and their Body Mass Index (BMI; M = 34.37, SD = 9.70) was calculated by multiplying their weight in pounds by 703, divided by their height in inches squared (Roizen et al., 2009).

Purposeful sampling was used to recruit women who would provide rich, genuine information regarding self-presentation in injury rehabilitation (Patton, 1990). Thus, the criteria

for inclusion were: females who reported a certain degree of social physique anxiety (SPAS score greater than 25); those who had been referred to physiotherapy for an injury that required at least three sessions; women who had not yet started their current program; and those who had not received this type of treatment within the past two years. All of the participants were recruited from the South London AIM Health Group clinic, in London, Ontario, Canada and were referred by the same primary care practitioner. The women's SPA scores ranged from 25 to 45 (M = 36.44, SD = 7.78). They reported injuries to their knee (n = 3), back (n = 2), shoulder (n = 2), hip (n = 1), ankle (n = 1), and pelvis (n = 1). The injury severity ranged from a mild sprain to multiple injuries that included a broken pelvis. Traumatic injuries (n = 8) were reported more than overuse injuries.

Procedures

Once ethics approval had been obtained from the Office of Research Ethics at Western University (see Appendix A), potential female participants were approached by their physician at the end of the medical appointment in which they were referred to physiotherapy. The doctor provided the women with a brief overview of the study in addition to the letter of information (see Appendix K) and obtained written consent if they volunteered to participate. Eligibility for the study was determined by the criteria listed above including their total score on the Social Physique Anxiety Scale (SPAS; Hart et al., 1989). This scale measures a person's concern with other people's evaluation of his or her figure or physique. The brief 9-item version was employed since it has exhibited superior validity and reliability to that of the original 12-item questionnaire (Martin, Rejeski, Leary, McAuley, & Bane, 1997). Participants are instructed to read each item carefully and to indicate how characteristic each statement is of them. Items are rated on a 5-point scale ranging from 1 (not at all characteristic of me) to 5 (extremely

characteristic of me). Two of the items are positively worded to detect response bias, and therefore must be reverse-coded prior to calculation of a total score. The sum of the items produces a total score that can range from 9 to 45. Given that the mean SPA score found by Driediger et al. (2012) for injured females about to commence physiotherapy was 25.46, a score of 25+ was considered sufficient for participation in the present research.

The women who met the inclusion criteria provided the physician with their contact information (e.g., phone number), which was released to the interviewing researcher who arranged convenient interview times with the participants. The women were contacted immediately upon receipt of their contact information in order to increase the likelihood of conducting the first interview before they started their physiotherapy program.

Interview procedures. Before any data was collected, two pilot interviews were conducted. One involved a woman who responded to questions based on a past injury. The other was conducted with an injured woman who displayed less SPA than the criterion. After each pilot interview, the interview guide was re-examined and refined according to feedback from the pilot participants and any observations that were made by the interviewer. An undergraduate student who was completing an independent study as part of this project also attended the pilot interviews. She took notes and provided her insights after each interview. The interview guide was also reviewed by two other researchers who had multiple years of experience with qualitative interviewing and were experts on the topic of self-presentation. Once the investigator had gained a sufficient level of familiarity with the content of the interview and the interview guide was deemed satisfactory by all who appraised it, the interviewing process began.
All interviews were completed in a boardroom located within the health clinic where the women had received primary care, and where they would subsequently attend physiotherapy sessions.

Each participant was interviewed twice and each interview was recorded. The length of the first interview was 45 minutes to one hour, while the second interview lasted about 30 minutes.

At the beginning of the first interview, the participants were again given the letter of information to read over and their verbal consent was obtained. The researcher then led the interviewee on a tour of the physiotherapy portion of the clinic where their rehabilitation would occur. The main purpose of the tour was to provide the women with a reference from which to respond to questions in the interview, while highlighting three areas where patients could receive treatment, as well as specific features of the clinic, such as mirrors, and windows. The three potential treatment settings available in this facility were separate examination rooms, beds with curtains that could be drawn around them, or beds located within the open concept setting without curtains. There were never any people present when the tours were conducted.

The semi-structured interview followed a combination of the standard, open-ended interview and the interview guide approach described by Patton (1990). Each woman was asked an approximation of the same question which represented the standardized format of the interview, and decreased the bias that may have arisen if the women were asked different questions (Patton, 1990). The interview guide approach was reflected in the flexibility of the interview which was ascertained by the use of a variety of probe questions and statements that were not always necessary, nor were they presented in the same sequence. Each section of the interview guide for both interviews began with a general, open-ended question that was followed up by more specific probe questions depending on the type and amount of information provided by the participant.

In order to enhance rapport and to facilitate communication, the women were initially asked to discuss their injury and previous rehabilitation experience, in detail. The major purpose

of this study was represented by the core sections of the first interview, including: (a) self-presentational concerns (b) social setting preferences, and (c) physical setting preferences. The interview finished with demographic questions pertaining to the women's age, height, and weight. The interview guide that was used for the first interview is included in Appendix L.

After each participant had completed three physiotherapy appointments and before they completed a fourth, a second interview was conducted. A semi-structured interview guide again served as a template (see Appendix M). Initial questions were again used to facilitate open communication and focused on descriptions of the participant's physiotherapy appointments and their current thoughts, feelings, and satisfaction with the program. The remainder of the interview concentrated on their concerns for how the other people in the clinic perceived them, and how these concerns influenced their preferences for aspects of the social and physical rehabilitation environment. Finally, the women were asked to provide suggestions on ways to improve the comfort of the physiotherapy setting. Rapport was quickly established because of the connection made during the first meeting. Also, the participants' responses to this second interview were more thoughtful, and often more descriptive than their original responses due to the repetitive nature of the interview and the time that they had to reflect on the topics discussed previously.

Data collection continued past the point of saturation to ensure that no new information emerged. Achieving saturation has been established by qualitative researchers as an indication of an adequately sized sample (Biddle, Markland, Gilbourne, Chatzisarantis, & Sparkes, 2001).

Data preparation. Throughout each interview, the researcher took brief notes that described non-verbal behaviours, or emotional events that were not evident on the recording. At the end of each interview, more comprehensive notes were taken, including interesting topics, or

common themes that emerged. Therefore, the process of data analysis essentially began as the interviewing process commenced. That is, the researcher kept detailed written reports of common themes that emerged and constantly compared information obtained in each additional interview as the data collection phase continued. This method is consistent with inductive content analysis that is employed frequently in qualitative research (Patton, 1990). It has been depicted as the organization of quotes into meaningful themes and comprehensive categories (Scanlan, Ravizza, & Stein, 1989). The recordings were listened to frequently in order to maintain a degree of familiarity with the data as the collection phase persisted for 18 months.

Each recorded interview was then transcribed verbatim into a word processor. The written interviews were read over multiple times to maintain familiarity with the content and to acquire a more thorough understanding of the common themes that were present.

Data analysis. The transcribed interviews were uploaded into QSR*NVivo9, a software package that stores, retrieves, organizes and helps researchers analyze large amounts of qualitative data (Richards, 2005). The program is employed by researchers to help identify categories of data as nodes and organize the nodes into hierarchical trees. The women's quotes, including individual words, phrases, or combinations of sentences that expressed a single thought or feeling are referred to as meaning or text units (Miles & Huberman, 1990). The text units that represented particular themes were placed into their respective nodes. The number of text units indicates the number of times a particular theme was discussed. However, higher numbers do not necessarily signify importance over and above that which is emphasized by the participants.

As is true in most qualitative research, both inductive and deductive approaches were employed in the present analysis (Krane, Anderson, & Stean, 1997; Meyer & Wenger, 1998; Schwandt, 1997). For example, the analysis was deductive in that the researcher possessed a

priori knowledge of self-presentation within different contexts, which was helpful in the development and organization of topics for the interview. Additionally, the most general nodes (i.e., the base of the tree) that were identified initially were derived from the interview guide. However, the constant comparative technique (Strauss & Corbin, 1990) which is based in grounded theory (Glaser & Strauss, 1967) was used to inductively identify themes that emerged from the raw data during the process of data collection, and also after the basic themes had been organized within the computer program.

The term trustworthiness has been used extensively within qualitative literature to evaluate the empirically based concepts of validity and reliability (e.g., Hardy, Jones, & Gould, 1996; Meyer & Wenger, 1998). Although there has been debate among researchers if it is even logical to attempt to associate the notions of validity and reliability to qualitative methodologies (e.g., Biddle et al., 2001; Golafshani, 2003; Sparkes, 1998), the term trustworthiness was used in the present study to legitimize our methodology. Lincoln and Guba (1985) originally outlined a number of criteria that convey trustworthiness and represent the notions of validity and reliability within positivistic frameworks. They include: credibility (internal validity), transferability (external validity), dependability (reliability), and confirmability (objectivity) (Sparkes, 1998).

Triangulation was the primary method used to establish credibility. It was employed in the development of the interview guide (i.e., multiple researchers were involved), and in the data analyses. That is, a second researcher independently analyzed 20 percent of the data to ensure that the classification system was the most appropriate and best fit the data. There was a 94% agreement rate between the two investigators. An inter-rater reliability of 85% is considered "good" (MacQueeneen, McLellan-Lemal, Bartholow, & Milstein, 2008). Therefore, the classification system was deemed acceptable. Member-checking was also used with two

participants to ensure credibility. Two of the participants reviewed the content of their transcribed interviews in order to ensure that everything that had been said was present. They also examined the hierarchical tree that housed the categorizations of their data, ensuring that everything that they conveyed in the interview was accurately reflected in the data analysis (Sparkes, 1998).

The methods and results sections of this study are reported in rich detail in order to ensure that people who read this study have enough information to see the results from the perspective of the investigating researchers. This was our attempt to achieve transferability.

The dependability was improved by the expertise of those involved in the research. All of the investigators had previous experience with qualitative interviewing, methodology, and analyses. The interviewing researcher had conducted multiple interviews for a previous qualitative study (Driediger, Hall, & Callow, 2006), while the co-investigator had published a number of qualitative studies (e.g., Munroe, Giacobbi, Hall, & Weinberg, 2000; Munroe-Chandler, Hall, & Weinberg, 2004). Also, the interviewing researcher had previously developed and implemented a graduate level seminar series on qualitative methodology under the guidance of the co-investigator. Dependability was also enhanced by the inclusion of pilot interviews.

Finally, confirmability was achieved through the inclusion of a two-rater analysis of the data, as well as the presence of another person (i.e., undergraduate research assistant) during the interviews of the pilot participants, as well as the interviews for the first two participants.

Results

Descriptive statistics were calculated for the participants' age, height (inches), weight (pounds), BMI, and SPA. The sample was middle-aged (M = 41.30, SD = 16.86), short in stature (M = 64.80, SD = 2.49), and generally heavy (M = 206.30, SD = 63.78). The women's BMI

scores indicated that the majority were obese (BMI > 30; n = 7), while one participant was overweight (BMI > 25), and two were within normal weight range (BMI < 24.99). Most of the women displayed a substantial degree of SPA (M = 36.44, SD = 7.78) with the maximum score on the SPAS being reported twice. However, two females demonstrated a level of SPA that was at the cut-off point (i.e., 25), and one participant did not provide her SPA score. These women were retained because their self-presentational concerns were comparable to those expressed by the rest of the sample. Also, it should be noted that six women completed the screening process and were subsequently deemed ineligible because of low scores on the SPAS. These individuals were thanked for their time and participation in the screening for the study. Only seven of the original ten participants were interviewed for a second time. One woman never started her physiotherapy program, and two others could not be contacted for follow-up.

The data from the first and second interviews were initially analyzed independently. However, very few differences were demonstrated between the participants' reported thoughts, feelings, and preferences in interview 1 and 2, leading to a merging of the data from these time points. Therefore, the results of interviews 1 and 2 are presented together. The limited findings that illustrate changes in attitude expressed by only a few participants are also described within each section.

The qualitative results are presented in three main sections, each divided into general and specific categories. The self-presentational concerns of the participants are presented first (Figure 1), followed by the women's thoughts, feelings and preferences for social setting characteristics (Figure 2), and finally their attitudes and preferences toward physical aspects of the injury rehabilitation environment (Figure 3). Finally, other relevant topics that the women discussed are reported. These include: injury location, self-presentational efficacy, protective self-

presentational coping strategies that they employed, and recommendations for modifications to physiotherapy facilities.

Self-Presentational Concerns

General. The women all expressed concerns about other people's judgements of them, in general. For example, one woman stated: "...part of me wants to say that I don't care what other people think, but really I do." They acknowledged that their uncertainty about their upcoming physiotherapy sessions caused them to feel apprehensive about how they would be perceived. A woman described her fear of other people watching her:

> I have social anxiety and so coming into this situation was hard for me, like that type of situation anyway, so I was really self-conscious coming in, and not knowing what I'm supposed to do. Am I doing it right? Are people watching what I'm doing?

One woman discussed how the physiotherapy setting was different from other social situations and resulted in her experiencing more anxiety that would persist despite exposure to the situation:

> But in physio it's more of an enclosed area, there's more, it's more intimate, you know what I mean? There's more people in your space and stuff like that and so yeah, I'm still self conscious. And…uh yeah, I don't know if that will ever change to be honest.

Similarly, another woman said, "I don't think you ever really, other than with your physio person here, I don't think you would ever have that familiarity to be comfortable, ever. I don't think I would."

Only a couple of the women experienced a reduction in their apprehension toward physiotherapy after they had attended some appointments. One woman described in her second interview how the familiarity helped to ease her concerns: "I'm not nervous about it like I was. I got used to everybody in the couple of times that I was there."

Specific. The women indicated that they were particularly concerned with how the other people in the clinic would evaluate their injury, their physique, and their physical ability or

performance. The clothing that they were required to wear also affected their concerns of others' perceptions of them.

The women worried that the validity of their injury may be questioned because of its severity, or other people's inability to identify where they were injured. One woman felt that the other patients would think that she wasn't actually injured at all. She said, "Because my injury seems so minor, I don't want people to think that I'm faking it and trying to milk it." The women discussed how they experienced a heightened fear of negative evaluation when their injury was not obvious. One woman with multiple injuries stated how her feelings might change if she had a more common or socially acceptable, less severe injury:

> Hard to imagine, but I think I would be a lot more comfortable if it was like an elbow or you know, something visible, or something easier or a broken foot, or something. That's just one thing and that's kind of more acceptable and people know about it. It would also be easily identifiable instead of invisible.

A frequently expressed concern was that the other people would attribute the participants' injuries to be a function of their body type and not a legitimate injury. For example, one woman commented, "I'm sure a lot of people will say, well no wonder, she's heavy, and so that's why she has knee problems."

With some experience, a few of the women reported that they no longer thought that other people would perceive their injury as invalid. One woman in her second interview discussed how other patients who were rehabilitating similar injuries helped to eliminate her concerns for being perceived as weak: "I think, you know what, this is valid and I'm not a weak person."

All of the women reported feeling anxiety about others' thoughts regarding their physical appearance. Some were especially concerned with the impressions that they made on other females, as demonstrated by this quote: "And with women, they are more judging me on what I

look like." Most women expressed how other people would evaluate their weight. One woman said: "They judge you if you are fat."

The participants' limited physical ability heightened their concern over other people's negative evaluations of them. The women discussed how their inability to perform their exercises as well as expected would result in specific negative perceptions. This is illustrated by the following statement: "I walked in there pretty fine, but then when I started to do the exercises I couldn't do them. That's when I'm thinking people are thinking that I'm a wimp." The women also spoke of their concerns over judgements based on how they performed in comparison to someone else, indicated by a woman with a knee injury: "If somebody was running super fast on a treadmill beside me and I wasn't allowed to run that fast because of my knee, it would probably feel like they were judging me, that I can't run that fast."

Most of the participants indicated that their own judgement of other people triggered their self-presentational concerns. One woman described how her evaluations of others intensified as her dissatisfaction with her own body increased: "I think the unhappier I am with my body, the more I find I'm looking at other people."

Finally, the women all favoured clothing that concealed their figure. Big, baggy, comfortable clothes were mentioned as the ideal attire to wear to physiotherapy appointments. An example of one woman's need to disguise her body was obvious when she said, "I'm the person who wears the sweatshirt on the beach, so yeah; I kind of like to keep as covered as possible." When asked to discuss standard articles of clothing that may be required for physiotherapy, such as shorts or tank tops, many of the women were not only adamant that they would not wear these items, but also that if they were instructed to don such attire, they would be deterred from attending their program altogether. One woman expressed this emphatically: "It

would deter me from even getting into that process, of even going to the clinic. I probably wouldn't go."

The women's clothing preferences did not change after they had commenced their rehabilitation program, but a few participants admitted to wearing articles of clothing that they had previously indicated that they would not wear. For example, one female who was originally firm in not wanting to wear a tank top, expressed how she ended up in one: "I went out and bought one." When asked if she felt comfortable with this, she said: "I don't like it but it's better than getting my shirt gooped on."

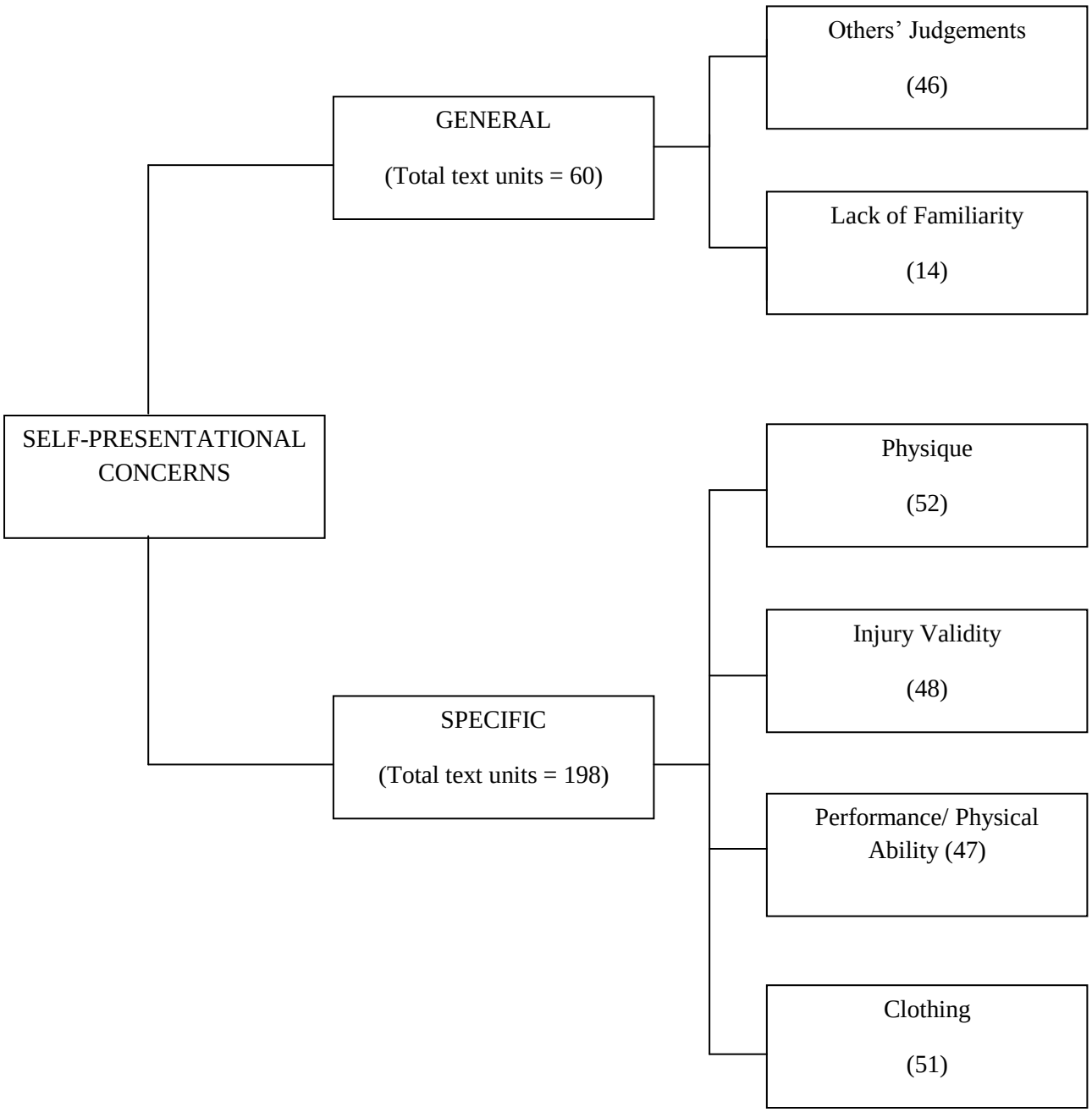

Figure 1. Hierarchical tree illustrating self-presentational concerns.

Social Environment Preferences

General. The social setting as a whole is represented by general characteristics of the other people who are present. These include the number of people, the amount and type of social interaction, and the presence of people whom the women felt they needed to impress. They were all found to influence the women's self-presentational concerns.

The women preferred having few people present during their physiotherapy appointments. They indicated an increased awareness of being evaluated with more people present. For example, one woman expressed why she would feel apprehensive in a crowded facility: "Yeah. I'm that type of person that feels like everyone is always watching me so I'd probably be really uncomfortable if I knew that there were tons of people in there." However, the women also specified that they did not want to attend appointments without anyone else present because of the focused attention. Most women preferred between three and five other patients, as demonstrated in the following quote: "Maybe like 4 or 5. Not a room-full but not empty either because being the only one in the room is kind of uncomfortable too because there's nobody else to look at but you." A few participants stated that they would not complete their rehabilitation session if the clinic was too busy. This quote illustrates one woman's anticipated behaviour: "I'm not a big crowd person to begin with. So if the gym was crowded, I'd probably leave."

In the second interview, one participant discussed how her initial experience with fewer people helped her to feel more comfortable when the number of people present increased in subsequent visits:

> Yeah. I think that if I had gone into the situation like I was last week, where there were lots of people in there….if that was my first week, it would have been really intimidating and it would have been harder to come back, but because it was a smaller group at first and then it went into that larger, busier, commotion time, then I think it was easier to handle for me.

Most women, however, insisted during their second interview that fewer people were still less threatening.

The majority of participants said that they preferred a social atmosphere that was friendly and supportive and the women continued to favour a socially-charged setting even after they had started their rehabilitation program. One woman described her ideal type of social interaction:

> I would want the physiotherapist to be happy, and energetic, and positive and, I can't think of the word, like encourage you. Encourage you to do your exercises and encourage you and tell you that you will get better. The people: Happy and energetic, very encouraging as well, and social.

The interaction between patients made some women feel that there was less potential for negative evaluation, as indicated in the following statement: "I like when they are making comments because obviously if they are making comments to you, you can tell yourself that they are not judging you."

The women all reported that they would feel a tremendous amount of pressure to perform above and beyond their capability if the other people in the clinic were people whom they felt they had to impress. One woman said that she would experience so much anxiety that she would feel ill. Her quote exemplifies this: "Nervous, I think. Probably try harder, but I'd be nervous about the whole thing. I would probably make myself sick before I got there. I tend to do that." Others spoke of how their need to impress would make them do things that they were unable to do, potentially causing themselves additional harm. For instance, one woman said:

> I definitely would hate it and would try to compensate and make it look like, oh; I can do this exercise even though it was hurting horribly. But oh, I can do 50 sit-ups or I can do 50 planks even though I know that after the first two, I shouldn't be doing these at all.

Specific. The women discussed their preferences for specific characteristics of the other people who may be present during their physiotherapy appointments (i.e., other patients and their

physiotherapist). The characteristics that were considered included the other people's (a) sex, (b) age, (c) physique and (d) physical ability.

The women articulated a definite preference for female patients. They reported that females would help alleviate their anxiety in this setting. As one woman declared, "I don't know if it's just a female thing but I think we all seem to be more comfortable around people of our own sex so I would probably be more comfortable if they were all female." Alternatively, the women stated that they would feel more aware of the potential for evaluation if males were present, as demonstrated in this quote: "Yeah, I would probably still feel quite self conscious if it was all males y'know, thinking, oh they might be checking me out or…(laugh)." The women asserted that they did not feel comfortable with men, even after attending a number of physiotherapy sessions.

Most of the women indicated that the ideal age of the other patients was their age or older. They stated that they perceived less judgement from older people, as expressed by this statement: "Older mature, even seniors cause they're more sweet and caring and they don't judge you." Many participants contradicted themselves by stating that they were not concerned by the age of the other patients, after which they immediately revealed how they were threatened by younger people, especially with regard to their physique. For example, this was apparent in one woman's comments: "No, the age doesn't matter. It would bother me if they were 20 years old and they all had these little bodies and then there was me. That would be intimidating." Some women indicated that the presence of young females may discourage them from continuing with their rehabilitation program. Surprisingly, this was emphasized by one of the youngest participants:

> If there are a lot of teenagers per se, that are girls, I think that it could be frustrating and aggravating to the point where I wouldn't want to go back. I think I could potentially stop going to physio because of it.

The women discussed how the physique and physical ability of the other people present would affect their adherence to their rehabilitation program. One woman stated that she wouldn't attend her appointment if she walked in and all of the other patients were physically fit: "What if they were all really fit? I wouldn't go. No." Another woman said that she would end her session early if the other people were all really athletic. She stated, "Yeah I-of course I'd feel like crap (laughing). Yeah I probably wouldn't want to continue that session that day (laugh) and I'd just want to go home." It is not surprising then that the women indicated a clear preference for the other patients to be in worse shape than them. One woman said she would derive confidence from being in better shape and more able than her peers. She emphasized this as she described characteristics of the other patients that would make her feel good:

> Fat. Fatter than me. Less active then me. Less able then me. I want to be the star – I don't mean the star – I want to be, or get confidence from being - oh, I can do this - oh look, that feels good because they can't do this. You know. There are still things I can do that they can't and I'm not all that bad.

When interviewed for a second time, some women discussed how they would be more accepting of other patients with more varied physiques. They felt less need for all of the patients to be in worse condition than themselves. The following illustrates this: "I could probably tolerate that they – that they're not all fat. Maybe a couple, or one or two that are fatter, or less mobile. It would still be good. They don't all have to be that way now."

The qualities of the physiotherapist that were important to the women were considered. There were a number of personality traits that the women discussed as well as their sex and age. This description of one participant's ideal physiotherapist summarizes the characteristics that were mentioned by other women as well:

> Kind, caring, empathetic, good listener, skilled, confident, competent, puts me at ease, not shocked by any of the injuries, just like you are being. You've probably heard it all before, and non-judgmental. It doesn't matter the age probably. I would probably feel better if it was female because of where it is - hip and lower back and stuff. Although if a guy was…well, I think I'd feel more comfortable with a female.

The physiotherapist's appearance was not concerning for the women, however they did all assume that the therapist would be able to perform the exercises and would therefore be adequately fit. They also mentioned that the therapist's choice of clothing may affect their level of comfort. The following quote provides an example: "They'd have to be fit I suppose, wouldn't they? Although not necessarily. That really wouldn't matter, unless they had this really itsy bitsy outfit on that I'd feel that I was just…"

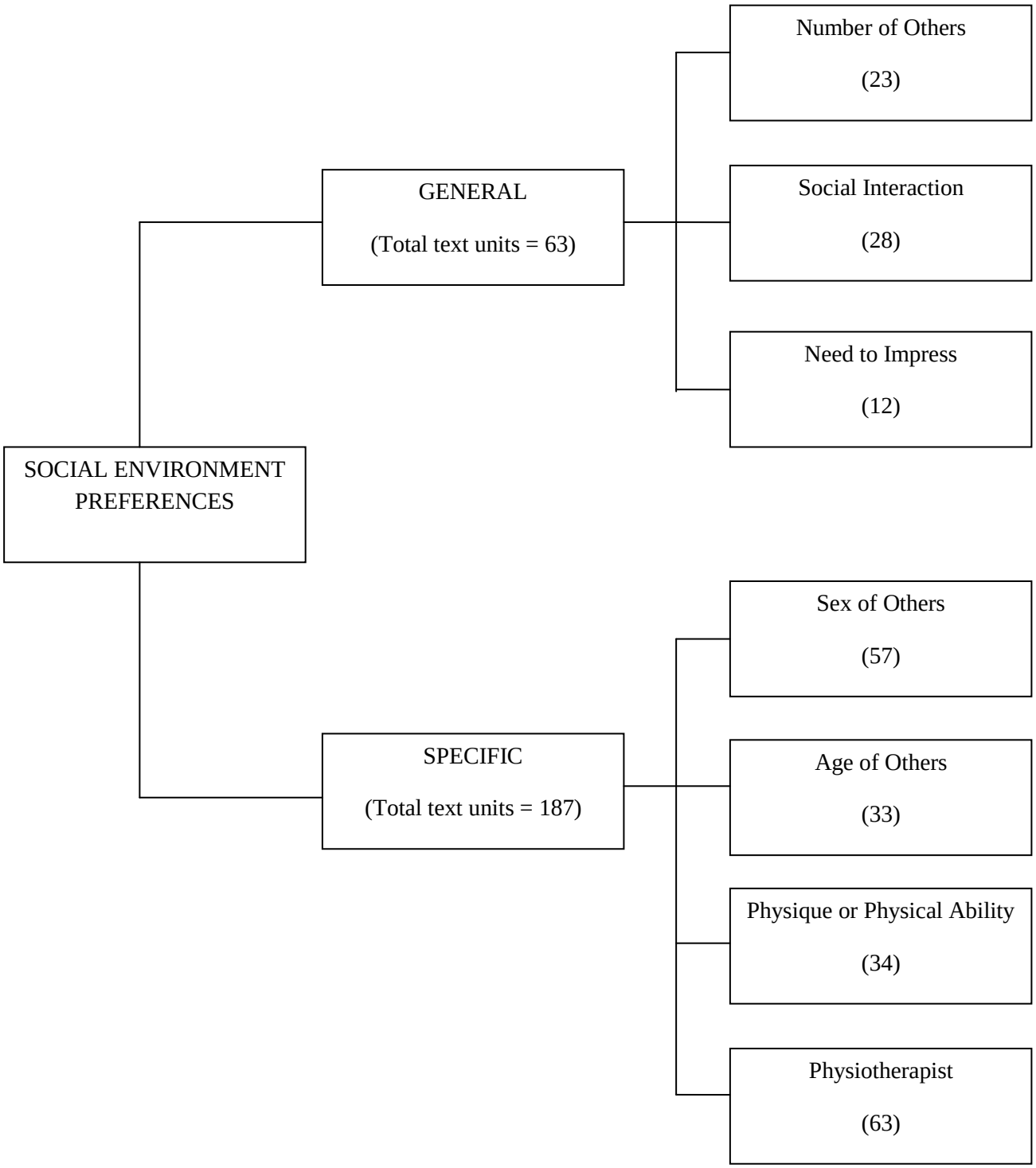

Figure 2. Hierarchical tree illustrating social environment preferences.

Physical Environment Preferences

General. The women discussed their preference for the three distinct treatment areas (i.e., open concept, curtained bed, and private room) that were available in the clinic where they were undergoing injury rehabilitation. They expressed their thoughts and feelings toward each treatment setting.

The open concept setting was associated with the most potential for evaluation as the patients are expected to perform all aspects of their rehabilitation in front of everyone else. The women did not express preference for this type of environment, but they did indicate that they would tolerate it depending upon the number of people present, or what they were required to do. For instance, some women found this setting acceptable if there were minimal people present, as specified in this quote: "Um it wouldn't bother me so much as long as it-it wasn't crowded." Other women found it acceptable only for particular elements of their treatment, such as, when receiving modalities. One woman said, "I'd feel comfortable because it is one of those things where you're just sitting there, not really physically doing anything." Other participants expressed their approval for the open concept setting because of the location, and also the legitimacy of their injury. This is revealed in the following statement: "Just like, for my injury, on my ankle, it wouldn't really bother me too much to have that out in the open because clearly there is something wrong."

When asked how they would feel about being treated out in the open, the majority of women revealed anxiety about others' perceptions of them. Most women said that they'd feel uncomfortable. One woman described her thoughts: "I think I'd feel uneasy like they're all watching 'look how funny she looks'." A number of women indicated that they would be

discouraged from returning to physiotherapy if they had to receive treatment in this type of setting. When discussing the performance of her exercises, one woman said:

> I don't want people staring at me. That I can tell you. If that were to happen, I wouldn't come back. No, I wouldn't do them out in the open area. I just wouldn't. I do not want everybody staring at me.

The second treatment setting that was considered was a bed surrounded by a curtain. Some women preferred the privacy that the curtain provided without necessitating the move to an entirely separate examination room, as signified by the following account:

> I would prefer it to be on one of the beds with the curtain all around. I don't need to be in a private room. The curtain is good enough for me, but I need that privacy, for what I have. For my injury and my problem.

Most women, however, expressed concern with other people overhearing their conversations with the physiotherapist. They felt that they would be evaluated based on what they were saying, even though other people could not see them. One woman provided an example: "Um, even behind a curtain is not…yeah, okay, no one can see me but they can hear me. Um, 'cause I feel, I don't know. I just feel like I'm being judged at all times even when I'm talking."

When asked to discuss their preference for this treatment setting during the second interview, some women acknowledged a slight change in attitude toward the curtained bed scenario. That is, initial concerns about other people overhearing conversations with the therapist were not as prominent since the topics of conversation had remained superficial. This is evident in the following quote: "Cause I was afraid people could hear what my prognosis is or whatever but I find when we're doing the treatment we don't talk about our prognosis, but 'how is it going,' y'know?"

The third and final treatment option that the women discussed was a separate examination room with a door. This setting afforded the most privacy and virtually eliminated the potential for evaluation. The majority of women indicated a strong preference for this setting

for all of the elements of a standard physiotherapy appointment (i.e., for exercises, manual treatment, and modalities). The following quote demonstrates this preference: "So if I could do everything in my own little room that would be ideal." The women wanted to be treated in this setting to eliminate the possibility that other people would evaluate them based on what they saw or heard: "My own room. So that nobody would be looking at me and hearing what was going on." Some women maintained that they only required a private room for exercises that were difficult, or aspects of treatment that required them to expose parts of their body. One woman revealed this when she said:

> Exercises depending. If I could still have my clothes on and nothing interrupted, but if they had to have a band around here for some reason and it had to be under my shirt, I'd prefer to be in a room by myself and isolated.

Many women demonstrated that they would feel apprehensive about advocating for themselves if they felt uncomfortable with the area in which they were receiving treatment. They perceived that others would criticize them if they asked for additional privacy. For example, one woman said:

> I think probably if I was to say I only wanted to be treated in a room, and maybe that is the same with the drapes, it's like what people are thinking: What's your problem? Why? There must be something wrong with you.

Only one woman reported a change in preference from the more private examination room to the open concept treatment setting after having attended three physiotherapy appointments. This is explained by the following comment: "No. I'm totally fine there. I don't need to be in a private room."

Specific. The women discussed their preferences and feelings toward the mirrors and windows that were present in the physiotherapy clinic. Both of these features were highlighted as anxiety- provoking, and consequently were not favoured by the participants. One woman expressed her aversion to mirrors: "I don't-I don't like mirrors 'cause then I-I judge myself."

Another woman spoke of how windows made her feel: “Yeah, to see random people walking by and they could peek in and check on what you’re doing. That would be uncomfortable.”

Once the women had started their physiotherapy program and had some experience with the facility, some of the women reported that they no longer felt additional anxiety about the mirrors. One woman claimed, “See, I think I’m getting past even that. Now I don’t even think about it. Maybe if I had to go and stand right there and do it but no, more mirrors, less mirrors, I don’t even see them now.” Most of the women demonstrated that they were no longer concerned about the windows either, as expressed in this statement: “The windows are only to the outside so that would be okay because I realize now that it seems like there are a lot of people out there but they don’t look in.”

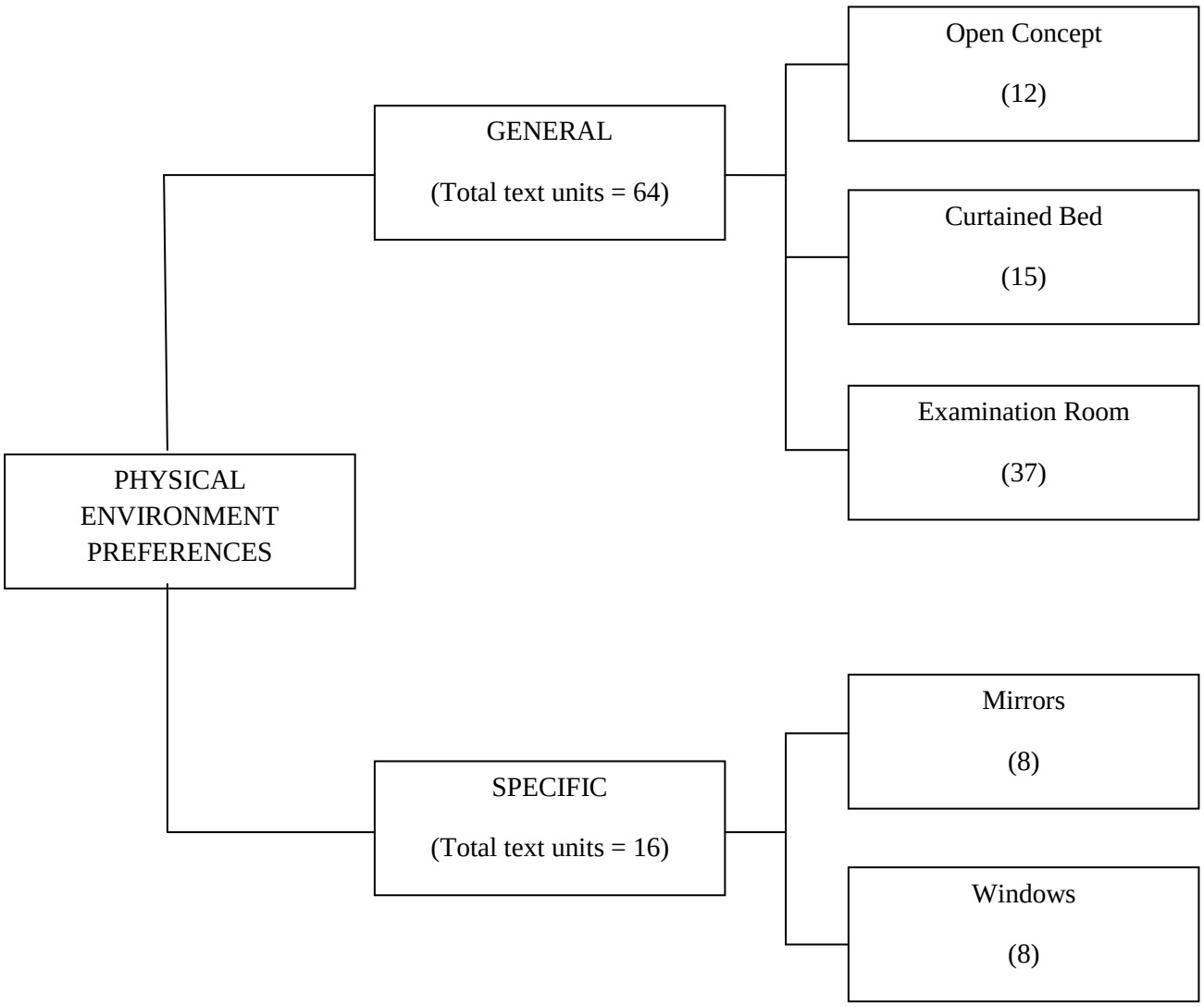

Figure 3. Hierarchical tree illustrating physical environment preferences.

Other Themes

Injury location. All of the women indicated that their environmental preferences and concern over others' perceptions of them would change if they were undergoing rehabilitation for a different injury. They discussed this in terms of the location of the injury on their body. The following quote summarizes how most women felt:

> Your lower back, where you'd have to show anything under my shirt or something like that, I'd definitely want to be behind closed doors. So I guess it kind of depends on where the injury is. If it were my arm or something like that, where you'd just have to sit there, it wouldn't really bother me to sit right here with an ice pack on or out in the waiting room.

Self-presentational efficacy. The women were asked to discuss their confidence for presenting themselves in a desirable way (i.e., their self-presentational efficacy; SPE) during both interviews. Initially, the women reported minimal confidence in their ability to convey positive impressions in injury rehabilitation. This statement provides evidence of a woman's efficacy: "I would have to say if I had to pin it down, I'm probably not that confident that people are judging me favourably in terms of my injury and my overall body appearance and so on."

After they had attended three appointments, a few women stated that their confidence had increased, as expressed in this quote: "Probably not so much anymore, as I'm feeling more confident." These women indicated that they had gained confidence as their familiarity with the situation increased. They emphasized experiences where they did not feel evaluated as being essential to raising their efficacy. One woman provided an illustration:

> The more I think I have come, the more I feel comfortable with this physio. I'm just going to sit in one of the chairs and not try to make chit chat and just read a magazine or my book and just probably gain confidence, the more I come and the more they're not judging me or it is a good experience, I guess.

However, a number of women maintained a lack of confidence, despite having had some experience with physiotherapy. A woman described her self-presentational efficacy during her

second interview: “Um, no I don’t think um-I don’t have any positive...It’s still…yeah, it’s still the same, still low.”

Coping strategies. The women all mentioned at some point within one of the two interviews that they used some kind of protective self-presentational strategy to reduce the amount of anxiety that they had about their evaluation. The strategies they employed included psychological strategies, such as self-talk, or thought-blocking, and thinking about other things as a distraction. They also reported behaving in a particular way to receive optimal treatment. For example, one woman spoke of how she strived to portray herself: “I will probably be a happy – try to be a good patient – type.”

Other women discussed the strategies they used to avoid other people. The approach employed most often was scheduling appointments at specific times in order to attend when there were fewer people present, or when it would be unlikely that a particular group of people may be there. For example, one woman stated how she asked her physiotherapist for a time when younger people were not likely to be there: “I really don’t want to be here when all the university kids are here. Can you tell me when I should and shouldn’t come?” Otherwise, the participants indicated that they physically moved away from other people so that they could not be seen, they avoided any eye contact with others, and they ignored other people by not looking at them, or disengaging from others by reading a magazine or book.

Finally, the participants described avoiding areas of the clinic where their awareness of their body was heightened, such as in front of mirrors. For example, one woman said, “If I know where the mirrors are, then I can avoid them or avoid looking at the mirrors.”

Recommended modifications. Many of the women stated that they would feel best in a clinic that catered specifically to females, as described by this quote: “Yeah. I think I’m

definitely more comfortable with all women." A few women suggested that they would be most comfortable in a clinic that focused only on their type of injury and excluded athletes, or people with sport injuries. The women proposed that smaller clinics with a set maximum number of patients allowed to attend at one time would be optimal. In terms of the design of the facility, the women suggested that the mirrors were not necessary. They recommended positioning the windows higher so that natural light was permitted, but no one could see in. They also recommended that the open gym be organized into separate areas with dividers, or simply designing the room as an L-shape, so that there were areas where people could feel as if they were in their own space. Finally, they indicated a need for additional private rooms, and proposed a sign-up sheet to book these rooms, as indicated in the following statement:

> So I think more giving them the opportunity, all the time, to say you know 'where would you like your treatment to be?' And if they want it to be in a private room, then maybe they can book that, realizing that it's going to be limited in terms of what they need or not, but maybe if they can sign up specifically to be in a private room for their treatment, every time, and they'll know the facts that way.

They expressed the necessity for open communication regarding each patient's choice of where they felt most comfortable being treated, and liked having a number of treatment setting options, such as curtained beds, or open space.

Discussion

The primary purpose of this study was to provide an in-depth consideration of the self-presentational concerns exhibited by physique anxious women who were undergoing injury rehabilitation. A secondary purpose was to increase our understanding of how women's preferences for features of the injury rehabilitation environment were influenced by these self-presentational concerns.

The findings provide support for the hypotheses, revealing that this sample of women experienced extensive self-presentational concerns that were intensified due to the nature of the

physiotherapy environment. When compared to other social settings, the women described the rehabilitation setting as smaller, more contained space, with people in close proximity. Additionally, they described it as an intimate situation that emphasizes the evaluation of the body. These characteristics alone may provide evidence for why women who report SPA regard this social setting as anxiety-provoking.

Self-Presentational Concerns

The women felt they were frequently being judged by other people. They acknowledged feeling self-conscious in most social situations, but this was emphasized within physiotherapy, especially because of the unfamiliarity that they felt in this situation. Their uncertainty about what to expect and what was expected of them in this situation intensified their self-presentational concerns initially. The majority of participants were obese and also displayed SPA, above that depicted by females in other studies that have measured this construct (e.g., Driediger & Hall, 2012; Driediger et al., 2012; Gammage, Martin Ginis, et al., 2004). They described comments made by others in a variety of situations that indicated they were being negatively evaluated. Thus, it was evident that they were aware of the potential for people to judge them, and these concerns were not only perceived, but real. Furthermore, it was acknowledged that their concern over other people's evaluations of them resulted from their own judgements of other people. The participants indicated that as their dissatisfaction with their body increased, their critical evaluations of others also increased. This, in turn, caused them to feel additional concern for how other people perceived them. This finding is similar to that demonstrated in exercise. For example, if a woman desires to convey the impression of being an exerciser and feels confident that she is able to portray this image to others (i.e., SPE), she will

be less concerned with judgements made by other people (Gammage, Hall, et al., 2004; Maddux et al., 1988).

As anticipated with a primarily obese, physique anxious population, the women were overly concerned with how the other people in the physiotherapy setting would perceive them based on general features of their appearance, but mainly their weight. The fact that they were injured amplified their anxiety as they perceived additional criticism from others due to their limited physical ability. The women often compared themselves to others in regard to their physical ability, and when they could not perform as desired, they felt that they were being negatively evaluated, believing that other people would perceive them as weak or pathetic. The females in two recent studies on this topic also reported that they would be concerned that the other patients in an imagined physiotherapy setting would view them as weak, unfit, unhealthy, and unable to perform their exercises (Driediger & Hall, 2012; Driediger et al., 2012).

Surprisingly, the women in the present study revealed that their concerns were not limited to others' perceptions of their physique, or appearance as might be expected. That is, they expressed feeling apprehensive about people's perceptions of the validity of their injury. This variable is unique to injury rehabilitation. It seems that in this context when injuries are not highly visible, women with SPA perceive greater potential for evaluation. The women indicated that they felt this way because of the invisibility of their pain and discomfort, or functional limitations. They thought that others misunderstood the implications of their injury and judged them accordingly. Primarily, they perceived the authenticity of their injury to be in doubt because of their weight. The women often described wanting to tell others their story so that they would not pass judgement on them. This was certainly the case with women who experienced weight gain as a consequence of their injury. They also believed that certain injuries were more

socially acceptable than others, and any discrepancy resulted in elevated self-presentational concerns. Thus, the nature of the injury (i.e., ability to identify, severity, functional limitations, and social norms) may act to intensify women's' self-presentational concerns in injury rehabilitation.

As expected, the participants described heightened awareness of others' evaluations when the clothing that they were required to wear was more revealing than they felt comfortable with. Consistent with the hypothesis, and previous findings in injury rehabilitation (Driediger & Hall, 2012; Driediger et al., 2012) and in exercise (Gammage, Martin Ginis, et al., 2004), the women expressed a preference for wearing baggy clothing that concealed their bodies and a dislike for clothing that accentuated their figure. However, likely due to the level of SPA they experienced, the women indicated a preference for clothing that was even less revealing or physique-salient. They reacted negatively to suggestions of being required to wear regular shorts or loose-fitting tank tops. Some even stated that they would not attend their physiotherapy sessions if these articles of clothing were necessary. Therefore, the clothing that a physique anxious woman may be required to wear could have dire implications for their adherence to their injury rehabilitation program.

Social Environment Preferences

The women's self-presentational concerns regarding the social aspects of physiotherapy included the number of people present, the social interaction between these people, and who these people were. In accordance with our hypothesis, the women indicated feeling substantially more anxiety as the number of other people present increased. This is consistent with findings in other domains. For example, when students were instructed to visualize themselves singing the national anthem in front of various-sized audiences, the participants rated their anxiety higher as

the size of the audience observing them increased (Jackson & Latanté, 1981). Due to their expressed sensitivity to the judgements of others in physiotherapy, it is likely that the injured women perceived the other patients as an audience, and a rather critical one.

When the women discussed the amount and type of social interaction that they preferred in physiotherapy, they indicated a definite preference for what some researchers have termed a socially enriched atmosphere (Martin & Fox, 2001). That is, they described feeling more comfortable in the injury rehabilitation environment when the other people were friendly, and encouraging. This is consistent with our hypothesis, but findings in exercise, particularly with regard to fitness classes, demonstrate that a socially enriched atmosphere may intensify participants' anxiety (Martin & Fox). For example, the enriched social setting depicted by exercisers who were participating together with study participants in an aerobics class displayed the same traits favoured by women in the present study in their attempt to make the class "comfortable, relaxed, and interactive" (Martin & Fox, p. 1004). However, the study participants reported feeling increased social anxiety in the enriched exercise setting compared to a less interactive class. Typically, the presence of other people acts to alleviate social anxiety (Carron et al., 2004). Based on the current findings, this seems to also be the case in injury rehabilitation, so long as the number of others present is minimal and the nature of the social interaction between these people is friendly and supportive. Specifically, the women felt that the other people present were distracted from evaluating them when they were involved in conversation. It is very possible, however, that they were distracted from focusing on themselves when involved in conversations with others. This latter point was initially suggested as one of four potential explanations for reductions in anxiety experienced by people in group situations (Carron & Prapavessis, 1997).

In support of the hypothesis, the injured women reported a considerable aversion to attending physiotherapy sessions with people whom they felt the need to impress. In agreement with the concept of social facilitation (i.e., people work harder when other people are present; Allport, 1924), the women reported that they would attempt to perform to the best of their ability, and even beyond their means, if they felt they had to impress the other people in the clinic. In fact, they even implied going so far as to further injure themselves. In exercise, Martin and Leary (2001) found that some people deliberately engaged in unsafe behaviours to impress others, such as lifting weights that were heavier than they were capable of lifting, thereby increasing their risk of injury. Evidently, women with SPA also perform their injury rehabilitation exercises with self-presentational motives in mind. Carron et al. (2004) proposed that people may focus more of their attention on themselves when they are highly motivated to present themselves in a particular way, especially when the performance is important to them. However, they suggested that this self-focused attention may be damaging to their performance. Thus, the injured women's intense motivation to present as a physically able person, and the value placed on looking this way in front of important others may cause an increase in self-focused attention, with subsequent elevations in anxiety and reductions in performance. In the rehabilitation of an injury, the quality with which exercises are performed is fundamental to recovery. Therefore, receiving treatment for an injury in a facility where there are people whom physique anxious women are motivated to impress may be detrimental to their ultimate recovery.

The women discussed the sex, age, and appearance of the other people present in the injury rehabilitation environment. As hypothesized, the participants expressed an explicit preference for attending physiotherapy sessions with other females and indicated that they disliked having male patients in the facility with them. In two recent examinations of women's

preferences for physiotherapy settings, Driediger and colleagues (Driediger & Hall, 2012; Driediger et al., 2012) also found positive relationships between women's SPA and their preference for the other patients to be female. With regard to their self-presentational concerns, the women in the current study stated that they just felt more comfortable with members of their own sex. Alternatively, they felt a heightened fear of negative evaluation when men were present. Similar attitudes exist in exercise settings with women who experience higher physique anxiety being more aware of the presence of men and disliking co-ed fitness classes more than women who report less SPA (Eklund & Crawford, 1994). A male presence has also been shown to reduce the intended amount of time that women anticipate that they would exercise for (Kruisselbrink et al., 2004). Finally, women who chose to exercise in women-only sections of a fitness center were found to have significantly higher trait levels of SPA when compared to women who exercised in co-ed areas (Yin, 2001). The difference between exercise and rehabilitation settings is that exercise locations may provide the option of areas, or entire facilities that are exclusively for women, while physiotherapy clinics tend to be entirely co-ed. Perhaps the option of attending a facility where only women are present may help to minimize the self-presentational concerns experienced, especially for those who are high in SPA. This may have implications for women's compliance with their rehabilitation program. However, the behaviour of women who experience SPA has yet to be investigated experimentally.

The age of the other patients was discussed by the women in the present study. Interestingly, the women preferred to attend their sessions with people who were the same age or older. Most participants reasoned that older people do not pose as much threat in terms of their negative evaluations. On the other hand, the presence of younger patients was reported as being highly anxiety-provoking. This was especially true if the younger coactors were fit, or attractive.

The age of the other people present within the injury rehabilitation environment has not been previously examined in regard to self-presentational concerns. The current findings suggest that this may be a fruitful topic for future research in self-presentation.

As initially proposed, the physique and physical ability of the other patients was of great concern for the women who were interviewed. They were extremely aware of what the other people in the clinic looked like, and this influenced the amount of anxiety that they experienced. For example, they indicated feeling more comfortable with people who had similar figures or were in worse shape than they were. In exercise settings, women who are high in SPA have also demonstrated a preference for exercising with other people who are less physically fit than themselves (Eklund & Crawford, 1994). Additionally, the women in the current study indicated that their confidence would be enhanced if the other patients were less physically fit, or even less able to perform their rehabilitation tasks. The exercise research has shown that a woman's confidence in her ability to present herself in desired ways (SPE) was affected by her perceived discrepancy between her own body and other exerciser's bodies (Fleming & Martin Ginis, 2004). Similar to the present results, these participants experienced greater SPE when the other exercisers were more like themselves.

Contrary to our hypothesis and previous findings in injury rehabilitation and exercise (Driediger et al., 2012; Lamarche & Gammage, 2009), the women in the present study expressed an explicit preference for a female physiotherapist. Participants stated that they would experience less anxiety if they received treatment from another woman. Some participants indicated that they only felt comfortable being treated by a female because of the location of their injury. It is not known why the women in this study preferred a female therapist while the women in previous studies did not. Similar types of injuries and injury locations were represented in the

present study and in previous work (Driediger et al.). Perhaps the current sample's level of SPA was a factor, or it may have been a consequence of their weight. This finding warrants additional examination.

The participants also discussed a number of other characteristics of their physiotherapist that they deemed important. Most of these were based on competency as a therapist, as well as emotional support provided. Also, the women frequently acknowledged that they valued a non-judgemental physiotherapist. The women sometimes remarked on how they felt they would be perceived by their physiotherapist; however, their anxiety over other peoples' evaluations of them was mostly limited to the other patients. Finally, the women did not state any preferences with regard to the physiotherapists' appearance, although a number of participants expected a certain degree of physical fitness. Also, one woman indicated that she would not feel comfortable if her physiotherapist was wearing clothing that was revealing and emphasized her physique. This supports findings in exercise. Martin Ginis et al. (2008) found that female exercise participants' SPA increased in response to an instructor who was wearing clothing that accentuated her thin, toned body. However, the present study did not consider how the clothing of the other patients influenced the injured women's self-presentational concerns, and this topic was not introduced by participants. Nonetheless, it may be a potential area to explore in the future.

Physical Environment Preferences

It has been established that most women who are high in SPA prefer to exercise in locations where there is minimal potential for evaluation. Typically, they prefer to exercise alone in more private areas rather than out in public (Spink, 1992). In injury rehabilitation, women have been shown to prefer treatment settings that offer either limited (i.e., beds with curtains;

Driediger & Hall, 2012) or complete protection (i.e., examination room; Driediger et al., 2012) from the potential evaluation of others. In accordance with our hypothesis and these previous findings, most women in the present study preferred to be treated in the privacy of a separate examination room. The participants recognized that this setting provided them the most protection from scrutinizing others, minimizing what other people could see and hear. Similarly, the women expressed apprehension over the fact that other people may overhear their conversations when they were being treated behind a curtain. They indicated that they would feel evaluated despite being out of view. In other words, it is apparent that a woman's fear of negative evaluation is not limited to situations in which other people are observing them, but may also persist when other people are listening to them talk. Interestingly, some of these same women indicated that they would tolerate the open concept setting for certain tasks (e.g., exercises that were easy to perform), or certain aspects of their treatment (e.g., receiving ice). They reported that this was always dependent upon the location of their injury.

Each participant outlined how her self-presentational concerns and her preferences for features of the environment would change if she was receiving physiotherapy treatment for a different injury. For example, the women who were currently undergoing rehabilitation for an injury to a frequently exposed area of their body (e.g., arm) indicated that they would want additional privacy if they had an injury to a more intimate body part (e.g., lower back). Previous attempts to demonstrate that the location of an injury may affect women's self-presentational concerns and rehabilitation setting preferences have been unsuccessful (Driediger & Hall, 2012). Nevertheless, the current findings suggest that injury location may indeed influence these variables. Therefore, the injured areas that possess the greatest potential for evaluation need to be

identified and the effects that these injuries have on women's rehabilitation experiences need to be determined.

Mirrors and windows have been shown to heighten the physique anxiety experienced by women in exercise (Gammage, Martin Ginis, et al., 2004; Katula et al., 1998). As hypothesized, these same features of the rehabilitation environment were considered as anxiety-provoking by the participants in the present study. The women expressed their distaste for mirrors in particular. They explained that the presence of mirrors caused them to evaluate themselves more than they already did. Researchers in exercise have proposed that mirrors create the potential for increased SPA due to a women's heightened awareness of her physique (Katula et al.). Based on our findings, it is evident that mirrors may influence women's self-presentational concerns in environments other than exercise.

There were a number of additional themes that emerged in the present research. One was that most women felt apprehensive about advocating for themselves when they felt uncomfortable being treated in a particular setting. They indicated that they felt social pressure to conform to the type of treatment setting that the majority of people experienced (i.e., the open concept environment). They perceived that the other patients would judge them if they spoke up and asked to be treated in a more private area of the clinic. They likely thought that this would draw additional attention to them, thus increasing the potential for evaluation. In physical activity settings, females have been shown to minimize the occurrence of any behaviour that would increase attention from others (James, 2000). Some females even avoid participation in an activity that they like because they do not want to suffer the consequences of being singled out (James, 2000). Therefore, our current finding is important because it may have implications for compliance to rehabilitation programs. That is, if women do not feel that they can advocate for

themselves when they experience additional anxiety with aspects of their treatment, or the environment in which their treatment takes place, they may not return to complete the remainder of their program. Therefore, it is important that physiotherapists address the comfort level of their female patients and open the lines of communication on this issue right from the start of each person's rehabilitation program.

Another theme that emerged in the present study was the various coping strategies that the women employed to help minimize their self-presentational concerns. They predominantly discussed techniques that they used to physically avoid other people in the physiotherapy clinic, such as hiding themselves behind equipment, or scheduling specific appointment times when other patients were less likely to be present. However, they also used psychological strategies such as thought-blocking and self-talk in an attempt to change their thoughts from anxiety-provoking to more positive cognitions. Some women dealt with the rehabilitation situation by submersing themselves in a book or magazine so that they would not be affected by the presence of others. Some of these strategies are similar to those employed by adolescent girls at public swimming pools (James, 2000). These girls described attempting to hide from the view of others by blending in with a group of friends. They also used self-talk to alleviate some of their self-presentational concerns. Similar to strategies employed by female exercisers (Brewer, Diehl, Cornelius, Joshua, & Van Raalte, 2004), the women in the current study also reported wearing clothing that camouflaged their figure, and chose to perform their rehabilitation exercises as far away from the view of others as possible.

A protective strategy that may be unique to physiotherapy and other health-related situations was described by a number of women. It involved facing their fears head-on. That is, they strove to present themselves as a "good patient", or a "pleaser" despite incurring additional

attention for their efforts. For example, they maintained an energetic, jovial demeanor while complying with instructions from the therapist. They assumed that if they "played the role" that other people would view them in a positive light and they would therefore avoid negative criticisms. Regardless of which strategies they implemented, the women all confirmed the effectiveness of these techniques in enabling them to cope with their self-presentational concerns. Nonetheless, based on their reports, it does not seem that these strategies were all that effective in increasing the women's confidence in their ability to present a desirable image.

Participants were asked to discuss their self-presentational efficacy prior to the start of their rehabilitation program, and again after they had attended three physiotherapy sessions. It was hypothesized that women would express greater confidence as they gained experience with their rehabilitation program and familiarity with the physiotherapy environment. Contrary to this hypothesis, most of the women maintained a comparable degree of self-presentational concern even after they had gained some experience with this social situation. That is, confidence that others would perceive them favourably was still low. In exercise, increased exposure to anxiety-provoking situations has been found to alleviate social anxiety (Hausenblas et al., 2004; McAuley et al., 1995; McAuley et al., 2002). That the women in the current sample were injured may have increased their sensitivity to the features of the physiotherapy setting more than females who experience high SPA and are not injured. In this sense, the injury itself may act to either prolong the women's apprehension, or minimize the anxiety-reducing effects that would usually be gained from experience. It is also possible that three physiotherapy sessions may not have provided the women with enough exposure to this social situation to help reduce their self-presentational concerns. Had we examined the self-presentational efficacy of the women after they had completed their rehabilitation program our findings may have been different.

There were a couple of women, however, who indicated that they felt more confident as they gained familiarity and experience with injury rehabilitation. Their increased SPE was described as a consequence of attending sessions without feeling judged by the others present. This finding mirrors that of Maddux et al. (1988) who ascertained that women who believe that they will be regarded favourably will experience increased SPE, thus reducing feelings of social anxiety. These associations are important because they emphasize the possibility of enhancing an injured woman's efficacy by reducing her perceived potential for negative evaluation. Researchers in exercise have suggested that environmental manipulations be made in order to minimize the evaluative potential of an exercise setting (Gammage, Hall, et al., 2004; Hausenblas et al., 2004). It is proposed that similar manipulations or modifications be implemented within injury rehabilitation settings in an attempt to help women feel less judgement and increased SPE.

Our a priori knowledge of the self-presentation research in exercise gave us the insight to ask the women in this study to provide specific environmental modifications that would make them feel more comfortable within injury rehabilitation facilities. The women offered a number of creative and detailed modifications to the clinical setting in which they received treatment (e.g., higher windows, additional examination rooms, elimination of mirrors), as well as providing suggestions for physiotherapy clinics in general (e.g., exclusive to females or to specific injuries, smaller clinics designed with multiple areas where people could be inconspicuous, the use of dividers). They also suggested policies that may be implemented to afford additional protection from negative evaluation (e.g., a maximum number of patients allowed at one time, sign-up sheets for private rooms). Finally, and most importantly, they emphasized the value in providing patients with treatment setting options, and highlighted the

impact of facilitating open communication between physiotherapists and patients on this issue. The recommendations provided by these women may help physiotherapists develop environmental manipulations to reduce the distress that their patients experience in regard to their self-presentation. Perhaps in doing so, female patients may experience enhanced confidence in their ability to convey positive impression to others. The hope is that this increased SPE may influence satisfaction with injury rehabilitation programs and ultimately increase adherence to these programs.

Limitations

As in any study, there were limitations that need to be acknowledged. First, the second interview was conducted after only three physiotherapy sessions. It was anticipated that the women would express substantial change in their self-presentational attitudes and preferences toward specific environmental factors after they had had some experience with injury rehabilitation. Although a couple of the women did report changes in their thoughts and feelings, the majority of women did not. It seems that this time frame did not provide the women with adequate experience to affect their SPE, or alter their views. Alternatively, the experiences that the women did have may not have reduced their perception of negative evaluation from others, thus maintaining their low SPE, and their original attitudes and preferences for aspects of the environment. However, it is also possible that women who report physique anxiety of this magnitude may be precluded from reductions in self-presentational concerns regardless of the experience or familiarity that they have with the environment. In order to ascertain which is the case, future studies could examine women's self-presentational concerns, including their SPE and SPA throughout the course of an injury rehabilitation program.

The second limitation was that seven of the ten women in this study were obese. It should be noted that obesity was not a prerequisite for inclusion in the study, and overweight women were not targeted for recruitment. Although the sample that was recruited provided the amount and type of information that was sought by the researchers, it limits our knowledge of the self-presentational concerns that exist for women who are high in SPA, but are of average weight. Research on SPA in exercise has found that high levels of SPA can be exhibited independent of body fat (Ransdell, Wells, Manore, Swan, & Corbin, 1998), and researchers have concluded that it is not only overweight women who experience SPA (Eklund & Bianco, 2000). Our previous rehabilitation studies also provide evidence that it is not only women who are obese who suffer from self-presentational concerns (Driediger & Hall, 2012; Driediger et al., 2012). Finally, it should be emphasized that there were two female participants in the present sample who were of average weight. The self-presentational concerns and attitudes of these women were no different than those expressed by the remainder of the sample. However, it is suggested that additional qualitative research be conducted with women of average weight who report high levels of SPA in order to enhance our understanding of their self-presentational thoughts, feelings, and behaviours within injury rehabilitation.

Third, despite our best efforts to accurately portray the attitudes and behaviours of the women who participated in this study, the nature of qualitative research presents the potential for researcher bias. We attempted to overcome this limitation in a number of ways. The participants' quotes were presented in extensive detail so that their meanings were not lost or could be interpreted differently by readers of this study. As well, attempts were made to convey the attitudes expressed by the majority of the women by choosing quotes that illustrated these thoughts. Nonetheless, it was impossible to incorporate all of the participants' quotes into our

results, leaving some ideas and thoughts unreported. Also, in order to verify that the participants' thoughts were conveyed accurately, two member checks were performed. It is recognized that it would have been more ideal to conduct member checks with each of the participants. However, since most women had already committed a substantial amount of time to this study after having participated in two interviews, two member checks were considered satisfactory in helping to achieve legitimacy of the results while also minimizing participant burden. Finally, as this was one of the first studies to examine self-presentation in injury rehabilitation, the researchers put forth considerable effort to inductively analyze the data, rather than deductively place quotes into preconceived categories based on a priori knowledge. Even so, as with any qualitative research, it was impossible to avoid all biases, particularly in the development of the interview guide. Therefore, it is recommended that additional research be conducted on the topic of self-presentation in injury rehabilitation employing alternative methodologies.

Future Directions

A number of potential areas of future investigation have already been presented throughout the discussion. The main ideas are summarized here. The current findings have illustrated the potential influence of an injury on women's self-presentational concerns. However, the relationships between various aspects of the nature of the injury and self-presentation need to be determined. Based on the present results, the elements of an injury that may be worthy of further investigation include: (a) the injury location, (b) the injury severity, (c) the ability to identify the injury, (d) possible social norms surrounding certain injuries, (e) and the functional limitations resulting from injury. Some specific questions that need to be answered include: How does the location of the injury affect self-presentational variables such as situational SPA? Does the severity of the injury override the anxiety that women experience or

does this exacerbate the issue? Is the ability to identify an injury of importance to other populations of women (i.e., those who are not obese)? Is injury validity a concern for people who experience lower levels of SPA? And finally, how does the nature of the injury influence a women's compliance with their rehabilitation program?

The attitudes that women possess regarding the characteristics of the environment and the subsequent implications for their rehabilitation behaviour need to be investigated. No study to date has explored this issue. The women in this study provided a preliminary indication of the situations that would deter them from completing their physiotherapy program. Some of the setting characteristics that may present the potential for negatively impacting adherence include: (a) the clothing required, (b) the number of people present, (c) the presence of important others, (d) other patients who are younger, (e) physically fit others, (f) the presence of males, and (g) being treated in an open concept clinic. Research that examines the relationships between these environmental characteristics and women's rehabilitation behaviour is warranted.

The current study identified a number of features of the social and physical rehabilitation environment that are associated with self-presentation in this social situation. However, there are likely more variables that have not been addressed here, or in previous studies (Driediger & Hall, 2012; Driediger et al., 2012). For example, the clothing worn by the other patients, or the physiotherapist, may be potential areas of future exploration. Also, the inconsistent findings among studies regarding the preferred sex of a women's physiotherapist justifies the need for additional research on this topic. In terms of the social setting as a whole, there is a need to determine how highly physique anxious women perceive the other patients as a group. Do they consistently view them as a scrutinizing audience as implied in the current results? Or, do some women perceive the other patients as part of their group? There is the possibility that

relationships could form over the course of a rehabilitation program so that patients may provide support for each other, helping to diminish apprehension about being judged. Further research is necessary to clarify the influence of the group in the context of physiotherapy.

Summary and Practical Implications

The results of this study demonstrate that injured women who are anxious about the evaluation of their physique experience extensive self-presentational concerns that are exacerbated by the injury rehabilitation environment. The concerns and preferences expressed by these women support those reported in exercise and recent rehabilitation studies on self-presentation (see Hausenblas et al., 2004, for a review of the exercise literature; Driediger & Hall, 2012; Driediger et al., 2012), but more importantly, they also identify concerns that may be exclusive to the rehabilitation setting, and distinguish setting characteristics that have not yet been previously recognized in the self-presentation literature. The protective self-presentational strategies employed and the clinic modifications described by these women could be implemented by physiotherapists to help make their patients feel more comfortable in the unique social situation of injury rehabilitation.

Specifically, it is advised that injury rehabilitation environments be modified to reduce the perceived potential for evaluation in an effort to raise the self-presentational efficacy of patients. By doing so, adherence to physiotherapy programs may be enhanced. This suggestion reflects the recommendation made by Gammage, Hall, et al. (2004) with respect to the exercise setting. Also, the manipulations that may be implemented in existing physiotherapy clinics parallel some of the modifications proposed by researchers in exercise (Martin & Fox, 2001; Gammage, Hall, et al., 2004). These include removing the mirrors, creating partitions within the open space, covering or tinting windows, providing additional rooms with doors, or drawing the

curtains that may be available around treatment beds. Additionally, patients may feel less apprehensive in rehabilitation social environments that are exclusively for women and provide encouragement in an interactive atmosphere. They may feel less threat of evaluation by wearing clothing that is comfortable and concealing, and should be encouraged to attend sessions during slow periods. Finally, physiotherapists must communicate available treatment setting options to their patients and allow them to choose where they feel most comfortable receiving treatment, acknowledging that some people feel more apprehensive than others. Based on our findings, it is likely that these social and physical environment modifications may be most important for patients who are in the initial stages of injury rehabilitation.

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GENERAL DISCUSSION

Summary

The purpose of the present program of research was to provide descriptive information regarding self-presentation in injury rehabilitation. The combined results of these studies demonstrated that self-presentational concerns are present within this setting and may be influenced by the nature of the physiotherapy environment. In addition, the findings revealed women's preferences for features of the social and physical rehabilitation setting and offered initial insight into how self-presentational concerns may be influenced by the nature of this environment.

Study 1 was the first study to examine self-presentation in injury rehabilitation; thus, the main goal was to increase our understanding of these concerns in this unique social setting. A convenience sample of young, average weight, male and female university students were recruited. The participants' dispositional social physique anxiety (SPA), self-presentational concerns, and their preferences for features of the physiotherapy environment were assessed based on hypothetical injuries and rehabilitation scenarios. The findings demonstrated that SPA and self-presentational concerns were related, supporting the notion that people are concerned about how they are perceived by others in this setting. However, in accordance with literature in exercise (e.g., Hart, Leary, & Rejeski, 1989; Lantz, Hardy, & Ainsworth, 1997), the females in this sample experienced a more pronounced and diverse concern over others' evaluations of their physique when compared to males. Therefore, the environmental preferences were analyzed for women only.

Relationships between SPA and preferences for a number of features of the rehabilitation environment were found. That is, as women's SPA increased, they reported a greater preference for attending physiotherapy sessions with members of the same sex, wearing clothing that de-

emphasized their physique, and a preference for receiving treatment on a bed with a curtain surrounding it. Similarly, when the women were compared based on extreme scores on SPA, those who scored high in SPA were also found to prefer these same features of the environment more than women who reported low levels of SPA. On the other hand, low SPA-scoring women seemed unaffected by the potential threat of evaluation in the physiotherapy setting, as they displayed greater preference for the presence of males, clothing that revealed their physique, and an open concept treatment setting when compared to their high SPA counterparts. Although Study 1 increased our understanding of self-presentation in injury rehabilitation by demonstrating that people, particularly women high in SPA, are concerned with others' perceptions of them, this study's main limitation was that these results were based entirely on hypothetical scenarios with students who were not injured.

The purpose of Study 2 was to replicate Study 1 with women who were actually injured and about to begin a physiotherapy program. Compared to the female students in Study 1, this community derived sample was older, overweight, and displayed slightly higher levels of SPA. The findings of Study 1 were basically replicated. That is, a relationship between SPA and self-presentational concerns were demonstrated, and the females who exhibited higher physique anxiety indicated a greater preference for attending physiotherapy appointments with other women. Alternatively, as SPA increased, this sample preferred to receive treatment for their injury in a private examination room rather than the curtained bed preferred by participants in Study 1. Additionally, the relationship between SPA and preference for concealing clothing that was found in the first study was not present in Study 2. In both studies, no significant relationships emerged between SPA and the social setting items that described the sex of the physiotherapist, the physique of the other patients present, the degree of social interaction, and

whether or not the other patients were people whom the participants felt the need to impress. It was proposed that the findings may have been different had the women in either study been attending physiotherapy appointments with other patients who portrayed these characteristics, rather than imagining these anticipated social situations based on written descriptions. Some of the non-significant findings in Study 2 were also explained by the fact that the study was underpowered. Nevertheless, taken together, the results of these two exploratory studies indicated that some aspects of the injury rehabilitation environment may possess the potential to influence women's self-presentational concerns, but these studies did not address the underlying mechanisms producing these results.

Study 3 employed a qualitative methodology to examine the self-presentational concerns of injured women who experienced SPA and were in the process of receiving physiotherapy. How these concerns were influenced by the nature of the injury rehabilitation environment was of primary interest. The majority of the sample were middle-aged, obese, and reported a certain degree of SPA. Interviews with these women revealed general reasons for the occurrence of self-presentational concerns in this unique social setting. That is, the participants' lack of familiarity with the rehabilitation setting increased their apprehension of how they were perceived by others, which was intensified by their injury. Also, they believed their self-presentational concerns to be a consequence of their own judgements of other people, which amplified as dissatisfaction with their body increased. The women also identified specific personal attributes that they perceived to be targeted for negative evaluation within injury rehabilitation. Specifically, they worried that other people would judge them based on aspects of their appearance, including their weight and the clothing that they might be required to wear. The women referred frequently to others' perceptions of their injury and its' validity, as well as evaluations of their physical ability and

rehabilitation exercise performance. Finally, participants expressed concern that other people would judge them based on how they behaved as a patient. Some of these specific concerns were reflected by items on the Self-Presentation in Injury Rehabilitation Questionnaire employed in Studies 1 and 2 and were identified by the women in these studies as well (i.e., items that represented cognitive and physical manifestations of anxiety and concerns about appearance).

The women in Study 3 indicated their preferences for features of the social and physical injury rehabilitation environment and provided insight into how these features affected their self-presentational concerns and behaviour. Consistent with the preferences reported by the women in the first two studies, the women in Study 3 indicated a preference for the other patients to be female, their clothing to be concealing, and receiving treatment in a setting that afforded protection from the evaluative stares of others (i.e., a separate examination room). However, they also described preferences for characteristics of the clinic not identified previously. For example, the participants in Study 3 preferred to attend physiotherapy sessions with only a few other people; that these other people were socially interactive, and not people whom the women would feel the need to impress. Additionally, the women favoured the other patients to be the same age or older, less physically fit, less able to perform their rehabilitation exercises, and more overweight. Finally, the women described how their rehabilitation adherence may be influenced if the other patients in the clinic did not meet their preferences. They reported that they may be discouraged from completing the session, or deterred from continuing their program altogether if males, or younger, more physically fit female patients were present, if the facility was crowded, or if they were required to wear clothing that was more revealing than they felt comfortable with. They also indicated that they would feel heightened awareness of the judgements of others if they received treatment, or performed certain aspects of their rehabilitation in an open concept

setting. This treatment area was also associated with the potential for non-compliant behaviour. The results of all three studies revealed a wealth of information surrounding self-presentation based on both anticipated and actual experiences within injury rehabilitation. However, there is still an extensive list of questions about this topic that remain to be answered.

Future Directions

In Studies 1 and 2 the questionnaire that was used to assess self-presentational concern was exploratory in nature. It did not incorporate specific subscales, nor did it attempt to replicate any instruments that have been developed within other domains (e.g., SPEQ; Conroy, Motl, & Hall, 2000). Consequently, the development of a valid and reliable measure of self-presentation in injury rehabilitation is still required. The combined findings from the three studies presented within this dissertation identify an extensive list of the specific personal attributes that may be of concern for women who anticipate or are undergoing injury rehabilitation. These physical, cognitive, behavioural, social, and situational variables may be of value in guiding the development of future measurement indices.

The studies that were conducted for this dissertation utilized a measure of dispositional SPA to examine relationships between self-presentation and environmental preferences. However, it is unknown how the features of the injury rehabilitation environment affect state-levels of SPA. In exercise, researchers have demonstrated that certain features of the exercise environment act to amplify SPA, while others may reduce SPA (Gammage, Martin Ginis, & Hall, 2004; Katula, McAuley, Mihalko, & Bane, 1998; Kruisselbrink, Dodge, Swanburg, & MacLeod, 2004). The characteristics of the injury rehabilitation environment that may be responsible for affecting situational SPA in a similar way still need to be determined.

The results of Study 3 provided preliminary evidence of the potential role that the nature of the injury plays in women's experience of self-presentational concerns in injury rehabilitation. Primarily, the women described how preferences for features of the physiotherapy environment were often dependent upon where their injury was located on their body. Specifically, they stated that they would experience greater threat of evaluation if their injury was in an intimate location compared to a frequently exposed part of their body. Based on their personal accounts, it is likely that the location of an injury on a woman's body could dramatically influence her rehabilitation experience. However, this requires further examination. Future research could employ experimental designs to compare injuries to more or less intimate parts of the body in order to identify injuries that present the greatest potential for intensifying women's self-presentational concerns.

The participants in Study 3 also indicated other aspects of their injury that warrant further investigation. For instance, it was implied that there are particular injuries that are more socially acceptable than others. This seemed to be dependent upon the ability for others to identify and relate to their injury. Interestingly, the women expressed that they would perceive less judgement if their injury was more commonplace, or could be identified easily (e.g., by the use of crutches or a cast). Another characteristic of the injury that was described as anxiety-provoking was the severity of the injury and the functional limitations that it imposed. The more functionally impaired the women believed they were (perceived or actual), the more concerned they were about others' perceptions of them. However, the actual severity of the injuries that were reported by the women in this sample was not assessed. Therefore, it is recommended that researchers who choose to examine self-presentational concerns within physiotherapy settings in the future include measures of injury severity and functioning.

The results of Study 3 revealed that the women's efficacy in their ability to present themselves in a desirable way (i.e., their self-presentational efficacy; SPE) did not improve even after they had gained familiarity with the physiotherapy environment and program. Self-efficacy theory posits that experience with a situation can result in increased confidence in that particular situation (Bandura, 1997). Also, research in exercise has indicated a negative relationship between self-presentation and a person's self-efficacy. That is, as self-efficacy increases, their SPA decreases (Katula et al., 1998). Three potential reasons for the women's maintained lack of confidence were specified. First, it was proposed that the proximity of the second interview to the first may have been responsible for the lack of improvement in SPE. It was also suggested that women who express self-presentational concerns to the extent that these women reported may not receive the beneficial improvements in self-efficacy that typically result from exposure in other domains. Finally, it was offered that the experiences that these women did have were not successful in helping these women perceive less judgement from others, thus maintaining their low SPE. Researchers have found that people who believe that they are capable of presenting the image that they desire, experience less social anxiety (Maddux, Norton, & Leary, 1988). The women in the current study may not have felt that they were able to present themselves in a favourable light, regardless of their experience with the situation. Based on the different explanations provided, future research needs to establish which variable (i.e., amount of experience, type of experience, or degree of self-presentational concern) is most influential on women's SPE in the injury rehabilitation environment. Thus, future studies need to examine the relationship between SPE and self-presentation over a longer period of time, as women progress through the various stages of the rehabilitation program. Furthermore, the relationship between SPE and exposure to the injury rehabilitation environment demands clarification, especially since

self-efficacy has been associated with rehabilitation adherence (e.g., Blanchard, Rodgers, Courneya, Daub, & Knapik, 2002; Maddison & Prapavessis, 2004; Taylor & May, 1996).

As mentioned previously, the women in Study 3 acknowledged that certain elements of the social and physical injury rehabilitation environment possessed the potential to impact their motivation to complete their physiotherapy program, highlighting the fact that their self-presentational concerns may act as a barrier to their compliance. Therefore, the goal of future researchers should be to determine methods for alleviating self-presentational concerns in rehabilitation in order to improve adherence rates. However, researchers have proposed that behaviour may be influenced more by improvements in self-efficacy rather than attempts made to reduce self-presentational concerns (Gammage, Hall, & Martin Ginis, 2004). For example, Gammage and colleagues recommended that exercise behaviour be influenced through increases in SPE by modifying the exercise environment to create less evaluative threat. Further support for this exists within the cardiac rehabilitation literature (e.g., Blanchard et al., 2002; Maddison & Prapavessis, 2004; Taylor & May, 1996). These researchers have demonstrated that an effective method for improving adherence to rehabilitation programs involves enhancements to patients' self-efficacy. Therefore, the modifications recommended by the participants in Study 3 could be used to develop intervention studies to ascertain the legitimacy of these manipulations in raising women's self-efficacy, thus alleviating their self-presentational concerns.

In reviewing the self-presentation in exercise literature, it was apparent that researchers had classified features of the exercise environment into social or physical characteristics (e.g., see Hausenblas, Brewer, & Van Raalte, 2004, for a review). Because of the similarities that exist between exercise facilities and physiotherapy clinics, it was concluded that the injury rehabilitation environment also contained both social and physical features. The social

environment refers to characteristics of the other people who are present, whereas the physical environment includes properties of the location in which the task takes place (i.e., physical activity or physiotherapy). In reviewing the literature, and through the process of conducting the studies for this dissertation, the need for a framework to organize the characteristics of these environments was deemed necessary. Therefore, it is proposed that the social and physical aspects of both exercise and rehabilitation environments may be further broken down to include general and specific elements. For example, the general social setting characteristics describe how the other people present function as a whole (e.g., the number of people, or the social interaction between them), whereas the specific social setting features describe individual attributes of the people who are present (e.g., their sex, or age). The general features of the physical environment describe the nature of this environment as a whole (e.g., open space, public, private), while the specific features include independent elements that are present within the setting (e.g., mirrors, windows). This framework, presented in Figure 4, could be used to help researchers organize and identify aspects of the exercise or injury rehabilitation environment that they are examining.

It is important to note that clothing was measured together with the social setting preferences for the studies within this dissertation, and is also included alongside social environment characteristics on similar measures within research in exercise (Eklund & Crawford, 1994). In summarizing the characteristics of the exercise environment found to influence self-presentation, Hausenblas et al. (2004) referred to clothing as a psychological rather than a physical or social characteristic. Upon reflection, it is suggested that the clothing worn by participants is more representative of their specific self-presentational concerns rather than a feature of the social setting as it is more self-relevant and does not relate to the other people

present. Additionally, in the present studies, the general elements of the physical rehabilitation setting were represented by three separate areas within the facility where treatment could occur (i.e., open concept area, behind a curtain, or in a private room). It is suggested that future studies could incorporate additional aspects of the physical rehabilitation environment depending on the design of the clinic, and the treatment options available (e.g., lap pools, waiting areas, or observation windows).

Practical Implications

The results of the present studies provide an indication of the specific aspects of the injury rehabilitation environment that may influence the degree of concern that women have for how they are perceived in this setting. In accordance with the recommendation made by Gammage, Hall, et al. (2004) with respect to the exercise setting, it is suggested that injury rehabilitation environments be modified to reduce the potential for evaluation in an effort to raise the self-presentational efficacy of patients. By doing so, adherence to physiotherapy programs may be enhanced. Possible manipulations to existing physiotherapy clinics parallel some of the modifications suggested by researchers in exercise (Martin & Fox, 2001; Gammage, Hall, et al., 2004). These include removing the mirrors, creating partitions within the open space, covering or tinting windows, providing additional rooms with doors, or drawing the curtains that may be available around treatment beds. Additionally, patients may feel less apprehensive in rehabilitation social environments that are exclusively for women and provide encouragement in an interactive atmosphere. They may feel less threat of evaluation by wearing clothing that is comfortable and concealing, and should be encouraged to attend sessions during slower periods. Finally, physiotherapists need to be encouraged to communicate available treatment setting options to their patients and allow them to choose where they feel most comfortable receiving

treatment, acknowledging that some people feel more apprehensive than others. Based on our findings, it seems that these social and physical environment modifications may be most important for patients who are in the initial stages of injury rehabilitation.

	General	Specific
Social	Social atmosphere	Attributes of other people present
Physical	Nature of location	Features within location

Figure 4. Framework for the social and physical characteristics of the injury rehabilitation environment.

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APPENDIX A

Western University

Research Ethics Board Approval Notices

Office of Research Ethics
The University of Western Ontario
Room 4180 Support Services Building, London, ON, Canada N6A 5C1
Telephone: (519) 661-3036 Fax: (519) 850-2466 Email: ethics@uwo.ca
Website: www.uwo.ca/research/ethics

Western

Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. C.R. Hall
Review Number: 16397S **Review Level:** Expedited
Review Date: July 31, 2009
Protocol Title: Self-presentation in injury rehabilitation: Students' attitudes toward physical and social aspects of injury rehabilitation settings
Department and Institution: Kinesiology, University of Western Ontario
Sponsor:
Ethics Approval Date: August 19, 2009 **Expiry Date:** September 30, 2010
Documents Reviewed and Approved: UWO Protocol, Letter of Information and Consent
Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Non-Medical Research Involving Human Subjects (NMREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the applicable laws and regulations of Ontario has granted approval to the above named research study on the approval date noted above.

This approval shall remain valid until the expiry date noted above assuming timely and acceptable responses to the NMREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

During the course of the research, no deviations from, or changes to, the study or consent form may be initiated without prior written approval from the NMREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of monitor, telephone number). Expedited review of minor change(s) in ongoing studies will be considered. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the NMREB:

a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) all adverse and unexpected experiences or events that are both serious and unexpected;
c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to this office for approval.

Members of the NMREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the NMREB.

Chair of NMREB: Dr. Jerry Paquette

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Western

Office of Research Ethics

The University of Western Ontario
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Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr. C.R. Hall
Review Number: 16377E **Review Level:** Expedited
Review Date: August 12, 2009
Protocol Title: Self presentation in injury rehabilitation: Women's preferences for physical and social characteristics of rehabilitation settings.
Department and Institution: Kinesiology, University of Western Ontario
Sponsor:
Ethics Approval Date: September 24, 2009 **Expiry Date:** September 30, 2010
Documents Reviewed and Approved: UWO Protocol, Letter of Information and Consent
Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced study on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

The ethics approval for this study shall remain valid until the expiry date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the HSREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of monitor, telephone number). Expedited review of minor change(s) in ongoing studies will be considered. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the HSREB:

a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) all adverse and unexpected experiences or events that are both serious and unexpected;
c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to this office for approval.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

Chair of HSREB: Dr. Joseph Gilbert

Office of Research Ethics

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Use of Human Subjects - Ethics Approval Notice

Principal Investigator: Dr C.R. Hall
Review Number: 15658E **Review Level:** Expedited
Review Date: November 19, 2008
Protocol Title: The role of self-presentation in injury rehabilitation setting preferences
Department and Institution: Kinesiology, University of Western Ontario
Sponsor:
Ethics Approval Date: January 09, 2009 **Expiry Date:** December 31, 2009
Documents Reviewed and Approved: UWO Protocol, Letter of Information and Consent.
Documents Received for Information:

This is to notify you that The University of Western Ontario Research Ethics Board for Health Sciences Research Involving Human Subjects (HSREB) which is organized and operates according to the Tri-Council Policy Statement: Ethical Conduct of Research Involving Humans and the Health Canada/ICH Good Clinical Practice Practices: Consolidated Guidelines; and the applicable laws and regulations of Ontario has reviewed and granted approval to the above referenced study on the approval date noted above. The membership of this REB also complies with the membership requirements for REB's as defined in Division 5 of the Food and Drug Regulations.

The ethics approval for this study shall remain valid until the expiry date noted above assuming timely and acceptable responses to the HSREB's periodic requests for surveillance and monitoring information. If you require an updated approval notice prior to that time you must request it using the UWO Updated Approval Request Form.

During the course of the research, no deviations from, or changes to, the protocol or consent form may be initiated without prior written approval from the HSREB except when necessary to eliminate immediate hazards to the subject or when the change(s) involve only logistical or administrative aspects of the study (e.g. change of monitor, telephone number). Expedited review of minor change(s) in ongoing studies will be considered. Subjects must receive a copy of the signed information/consent documentation.

Investigators must promptly also report to the HSREB:

a) changes increasing the risk to the participant(s) and/or affecting significantly the conduct of the study;
b) all adverse and unexpected experiences or events that are both serious and unexpected;
c) new information that may adversely affect the safety of the subjects or the conduct of the study.

If these changes/adverse events require a change to the information/consent documentation, and/or recruitment advertisement, the newly revised information/consent documentation, and/or advertisement, must be submitted to this office for approval.

Members of the HSREB who are named as investigators in research studies, or declare a conflict of interest, do not participate in discussion related to, nor vote on, such studies when they are presented to the HSREB.

Chair of HSREB: Dr. Joseph Gilbert

This is an official document. Please retain the original in your files.

cc: ORE File
LHRI

APPENDIX B

Social Physique Anxiety Scale

Studies 1-3

Social Physique Anxiety Scale (SPAS)

The following questionnaire contains statements concerning your body physique or figure. By physique or figure we mean your body's form and structure; specifically, body fat, muscular tone, and general body proportions.

Instructions: Read each item carefully and indicate how characteristic it is of you according to the following scale.

1 = Not at all characteristic of me

2 = Slightly characteristic of me

3 = Moderately characteristic of me

4 = Very characteristic of me

5 = Extremely characteristic of me

_____ 1. I wish I wasn't so up-tight about my physique or figure.

_____ 2. There are times when I am bothered by thoughts that other people are evaluating my weight or muscular development negatively.

_____ 3. Unattractive features of my physique or figure make me nervous in certain social settings.

_____ 4. In the presence of others, I feel apprehensive about my physique or figure.

_____ 5. I am comfortable with how fit my body appears to others.

_____ 6. It would make me uncomfortable to know others were evaluating my physique or figure.

_____ 7. When it comes to displaying my physique or figure to others, I am a shy person.

_____ 8. I usually feel relaxed when it's obvious that others are looking at my physique or figure.

_____ 9. When in a bathing suit, I often feel nervous about how well proportioned my body is.

APPENDIX C

Self-Presentation in Injury Rehabilitation Questionnaire

Studies 1 & 2

Self-Presentation in Injury Rehabilitation Questionnaire (SPIRQ)

Imagine you are receiving the physiotherapy treatment for the injury described on the previous page. The clinic is one large open space similar to a gymnasium. In the middle of the space is an area where you will be required to perform your exercises (e.g., stretching and strengthening exercises). There are treatment beds around the perimeter of the exercise area where your hands-on (i.e., manual) treatment will be provided by your physiotherapist and where you will receive IFC and ice. There are many mirrors and windows in this space. Refer to the photos displayed at the front of the class.

Imagine that there are also many people in this clinic. There are people of all ages, all different body compositions (i.e., height and weight), and both males and females. The people consist of physiotherapists, athletic therapists, kinesiologists, receptionists, patients, parents/partners of patients, and researchers. Imagine that this is where you will be attending physiotherapy appointments.

Again, imagine that you are receiving the physiotherapy treatment for the injury described on the previous page, in the clinical setting described. Imagining how you think the *other people* in the clinic would perceive you respond to each of the following items. For example, if you think the other people would perceive you as weak, you would circle 4 or 5. However, you if think the other people would NOT perceive you as weak, you would circle 1 or 2.

I believe the other people in the clinic would perceive me as ….

1.	Weak	Not at all true	1	2	3	4	5	Completely true
2.	Anxious	Not at all true	1	2	3	4	5	Completely true
3.	Self-conscious	Not at all true	1	2	3	4	5	Completely true
4.	Relaxed	Not at all true	1	2	3	4	5	Completely true
5.	Uncoordinated	Not at all true	1	2	3	4	5	Completely true
6.	Unable to perform exercises	Not at all true	1	2	3	4	5	Completely true
7.	Healthy	Not at all true	1	2	3	4	5	Completely true
8.	Fit	Not at all true	1	2	3	4	5	Completely true
9.	Unfocused	Not at all true	1	2	3	4	5	Completely true
10.	Energized	Not at all true	1	2	3	4	5	Completely true

11.	Difficult to work with	Not at all true	1	2	3	4	5	Completely true
12.	Tense	Not at all true	1	2	3	4	5	Completely true
13.	Strong	Not at all true	1	2	3	4	5	Completely true
14.	Composed	Not at all true	1	2	3	4	5	Completely true
15.	Unable to handle pressures	Not at all true	1	2	3	4	5	Completely true
16.	Frustrated	Not at all true	1	2	3	4	5	Completely true
17.	Unconcerned	Not at all true	1	2	3	4	5	Completely true
18.	Coordinated	Not at all true	1	2	3	4	5	Completely true
19.	Unfit	Not at all true	1	2	3	4	5	Completely true
20.	In control of my emotions	Not at all true	1	2	3	4	5	Completely true
21.	Focused	Not at all true	1	2	3	4	5	Completely true
22.	Tired	Not at all true	1	2	3	4	5	Completely true
23.	Confident	Not at all true	1	2	3	4	5	Completely true
24.	Dumb	Not at all true	1	2	3	4	5	Completely true
25.	Unhealthy	Not at all true	1	2	3	4	5	Completely true
26.	Easy to work with	Not at all true	1	2	3	4	5	Completely true
27.	Knowledgeable	Not at all true	1	2	3	4	5	Completely true
28.	Able to handle pressures	Not at all true	1	2	3	4	5	Completely true
29.	Unable to control emotions	Not at all true	1	2	3	4	5	Completely true
30.	Needy	Not at all true	1	2	3	4	5	Completely true
31.	Perform exercises well	Not at all true	1	2	3	4	5	Completely true
32.	Independent	Not at all true	1	2	3	4	5	Completely true

APPENDIX D

Physiotherapy Clinic Photographs

Study 1


ICARIAN
ICARIAN

APPENDIX E

Injury Rehabilitation Social Environment Preferences Questionnaire

Studies 1 & 2

Injury Rehabilitation Social Environment Preferences Questionnaire

Imagine you are receiving the physiotherapy treatment for the injury described on the previous page. The clinic is one large open space similar to a gymnasium. In the middle of the space is an area where you will be required to perform your exercises (e.g., stretching and strengthening exercises). There are treatment beds around the perimeter of the exercise area where your hands-on (i.e., manual) treatment will be provided by your physiotherapist and where you will receive IFC and ice. There are many mirrors and windows in this space. Refer to the photos displayed at the front of the class.

Imagine that there are also many people in this clinic. There are people of all ages, all different body compositions (i.e., height and weight), and both males and females. The people consist of physiotherapists, athletic therapists, kinesiologists, receptionists, patients, parents/partners of patients, and researchers. Imagine that this is where you will be attending physiotherapy appointments.

Instructions: Again, imagining that you are in this physiotherapy clinic receiving treatment for the injury described, use the following 5-point scale to indicate the rating that best describes your preference for each statement.

1	**2**	**3**	**4**	**5**
Not Preferred		**No Preference**		**Completely Prefer**

1. The other patients in the clinic are the same sex as you. _____
2. The other patients in the clinic are of the opposite sex. _____
3. There are an equal number of males and females in the clinic. _____
4. The other patients who are in the clinic are all very athletic-looking. _____
5. The other patients who are in the clinic do not look very athletic. _____
6. The other people who are in the clinic are very social (e.g., talk to each other a lot).____
7. The other people who are in the clinic are not very social. _____
8. The other people in the clinic are all people you would like to impress. _____
9. The other people in the clinic are people you do not feel you need to impress._____
10. You are required to wear loose-fitting long pants and a long sleeve shirt (e.g., a track suit).

    _____

11. You are required to wear baggy shorts and a baggy t-shirt. _____

12. You are required to wear a short, tight-fitting spandex top and bottoms._____

13. Your physiotherapist is the same sex as you. _____

14. Your physiotherapist is of the opposite sex as you. _____

APPENDIX F

Injury Rehabilitation Treatment Environment Preferences Questionnaire

Studies 1 & 2

Injury Rehabilitation Treatment Environment Preferences Questionnaire

Read the descriptions provided below and look at the photographs that accompany the descriptions. Imagine that this is the physiotherapy clinic where you will be attending physiotherapy appointments and receiving treatment for your current injury.

Instructions: Use the following 5-point scale to indicate the rating that best describes your preference for each physiotherapy clinic depicted by the written descriptions and accompanying photographs.

1	**2**	**3**	**4**	**5**
Not Preferred	**Slight Preference**	**No Preference**	**Much Preferred**	**Completely Preferred**

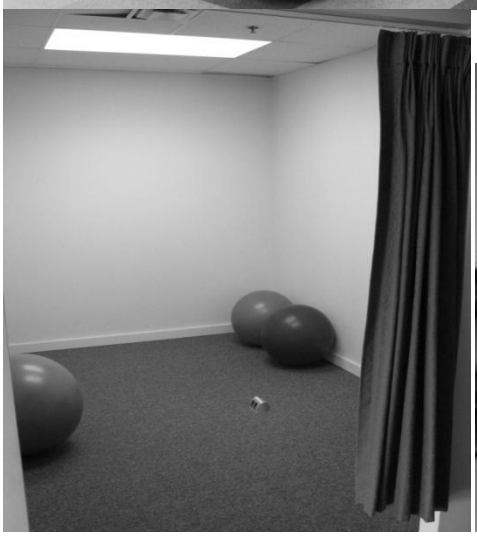
Continue to next page for photos and written descriptions.

1. The physiotherapy clinic is one large open space. There are treatment beds around the perimeter of the gym-like area where hands-on (i.e., manual) treatment is provided by the physiotherapist. Patients perform their exercises in the center of the open space. There are mirrors on most of the walls and there are windows that allow people outside of the clinic to see in. **Rating:_____**

1	**2**	**3**	**4**	**5**
Not Preferred	**Slight Preference**	**No Preference**	**Much Preferred**	**Completely Preferred**

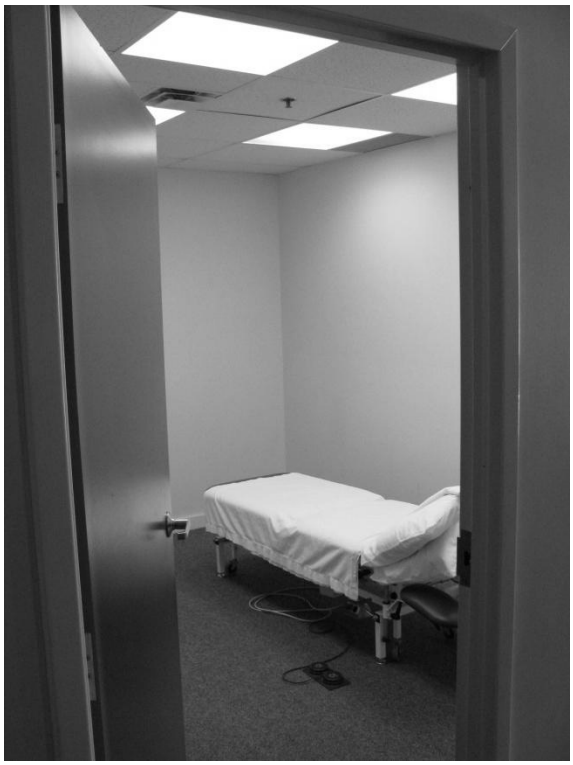
2. The physiotherapy clinic consists of multiple open spaces divided by partitions with treatment beds in one area which are each divided by a thin curtain. Hands-on (i.e., manual) treatment occurs on the beds behind the curtains. Others cannot see you, but are able to hear you. Exercises are completed in shared exercise areas. The exercise areas have mirrors on only one wall. There are few windows in the clinic and they are covered so that no one outside of the clinic can see in. **Rating: _____**

1	**2**	**3**	**4**	**5**
Not Preferred	**Slight Preference**	**No Preference**	**Much Preferred**	**Completely Preferred**



3. The physiotherapy clinic consists of many small, completely separate offices where patients are treated behind a closed door. Hands-on (i.e., manual) treatment occurs on the treatment beds within each room. Exercises are also completed in the individual rooms. There are no mirrors in the rooms. There are no windows in the rooms.
   Rating: _____

1	**2**	**3**	**4**	**5**
Not Preferred	**Slight Preference**	**No Preference**	**Much Preferred**	**Completely Preferred**



APPENDIX G

Letter of Information

Study 1

Self-Presentation, Social Physique Anxiety, and Injury Rehabilitation Setting Preferences of University Students

You are being invited to participate in a study that will examine how your preference for physiotherapy settings is affected by your thoughts, feelings, and behaviors concerning the efforts you take to manage and manipulate how you are perceived and evaluated by others (i.e., your self-presentational concerns, Schlenker, 1980). In order for health-care professionals to promote compliance with prescribed rehabilitation programs (i.e., attendance and effort) and enhance recovery from injury, it is important to understand how people's self-presentational concerns affect their preferences for specific physiotherapy settings.

If you agree to take part in this research you will be asked to complete a package of four questionnaires at the beginning of your class today. First, the Social Physique Anxiety Scale, which requires you to respond to statements about feelings towards your body. Secondly, based on a hypothetical injury, you will be asked to circle the number that best describes your feelings toward a variety of statements that reflect your concern for how other people perceive you (i.e., your self-presentational concerns). Third, you will be asked to rate your preference for various descriptions of the people who will be in the hypothetical clinic with you while you are attending physiotherapy appointments. Finally, you will be asked to rate your preference for three descriptions and accompanying photographs of hypothetical physiotherapy clinics. When you have completed the questionnaires, please return them directly to the investigator. This process will take approximately 15 minutes to complete.

Your participation in this study is completely voluntary. Your agreement to participate in this study is indicated by completing the questionnaires. You may refuse to participate, or refuse to answer any question at any time without any effect on your status at UWO. Once your questionnaire package is collected it will not be possible for you to withdraw from the study as the data collected in this study is completely anonymous. The risks associated with this study are minimal (i.e., you may become emotional when answering questions pertaining to your thoughts and feelings regarding your physique). If you chose to participate in this study, you may help to provide an understanding of how self-presentational cognitions affect preferences for rehabilitation settings.

All data collected in the study is confidential. Please do not write your name on the questionnaire package. If the results of this study are published, no information that discloses your identity will be published. Your questionnaire results will be stored in a locked cabinet, in a secure room and will be destroyed after three years. Representatives of The University of

Western Ontario Health Sciences Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

Thank you!

APPENDIX H

Hypothetical Injury Scenario: Piriformis Syndrome

Study 1

Injury Scenario: Piriformis Syndrome

You have recently been referred to physiotherapy for pain that you frequently experience in your right buttock. This pain prevents you from participating in your regular daily activities and causes you great discomfort while you sleep. The doctor has diagnosed your pain as Piriformis Syndrome. The physiotherapy treatment you will receive will involve manual manipulation of your hip joint and leg, massage of the muscles that make up your buttock (i.e., gluteal muscles), and stretching of the muscles around your pelvis, back, and legs. As part of your rehabilitation program you will be required to do stretching exercises for your hip flexors (i.e., illiopsoas), buttock (i.e., piriformis), and legs (i.e., hamstrings). Your rehabilitation program will also include strengthening exercises for your buttock (i.e., medial glute), and your core (i.e., transverse abdominals, and mulitfidius). After you perform your stretches and exercises, you will be hooked up to an Interferential Current (IFC) machine that helps to decrease inflammation and pain. Your physiotherapist will place four sticky electrodes around your piriformis muscle, which is in the middle of your buttock. When the machine is turned on, you will feel a sharp tingling, or prickly sensation for 15 minutes. You will also be required to ice your injury while you are hooked up to this machine.

APPENDIX I

Hypothetical Injury Scenario: Wrist Tendonitis

Study 1

Injury Scenario: Wrist Tendonitis

You have recently been referred to physiotherapy for pain that you frequently experience in your right wrist just below your thumb. This pain prevents you from participating in your regular daily activities and causes you great discomfort while you work. The doctor has diagnosed your pain as DeQuervain's Tenosynovitis (i.e., wrist tendonitis). The physiotherapy treatment you receive will involve manual manipulation of your wrist and thumb, massage of the muscles in your wrist, and stretching of the muscles of your forearm. As part of your rehabilitation program you will be required to do stretching exercises for your hand, fingers, and forearm. Your rehabilitation program will also include strengthening exercises for your hands, wrists, and forearms. After you perform your stretches and exercises, you will be hooked up to an Interferential Current (IFC) machine that helps to decrease inflammation and pain. Your physiotherapist will place four sticky electrodes around the base of your thumb. When the machine is turned on, you will feel a sharp tingling, or prickly sensation for 15 minutes. You will also be required to ice your injury while you are hooked up to this machine.

APPENDIX J

Letter of Information

Study 2

Injured Women's Social Physique Anxiety, Self-Presentational Concerns and Setting Preferences in Rehabilitation

You are being invited to participate in a study that will examine how your preference for physiotherapy settings is affected by your thoughts, feelings, and behaviors concerning the efforts you take to manage and manipulate how you are perceived and evaluated by others (i.e., your self-presentational concerns, Schlenker, 1980). In order for health-care professionals to promote compliance with prescribed rehabilitation programs (i.e., attendance and effort) and enhance recovery from injury, it is important to understand how people's self-presentational concerns affect their preferences for specific physiotherapy settings.

If you agree to take part in this research you will be asked to complete a package of four questionnaires before you leave the clinic. First, the Social Physique Anxiety Scale, which requires you to respond to statements about feelings towards your body. Secondly, you will be asked to circle the number that best describes your feelings toward a variety of statements that reflect your concern for how other people perceive you (i.e., your self-presentational concerns). Third, you will be asked to rate your preference for various descriptions of the people who will be in the clinic with you while you are attending physiotherapy appointments. Finally, you will be asked to rate your preference for three descriptions and accompanying photographs of hypothetical physiotherapy clinics. When you have completed the questionnaires, please return them directly to the investigator. This process will take approximately 15 minutes to complete.

Your participation in this study is completely voluntary. Your agreement to participate in this study is indicated by completing and signing the attached consent form. You may refuse to participate, refuse to answer any question or withdraw from the study at any time. The risks associated with this study are minimal (i.e., you may become emotional when answering questions pertaining to your thoughts and feelings regarding your physique). If you chose to participate in this study, you may help to provide an understanding of how self-presentational cognitions affect preferences for rehabilitation settings.

All data collected in the study is confidential. If the results of this study are published, your name will not be used and no information that discloses your identity will be published. Your questionnaire results will be stored in a locked cabinet, in a secure room and will be destroyed after five years. Representatives of The University of Western Ontario Health Sciences Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research. Thank you!

APPENDIX K

Letter of Information

Study 3

Attitudes and Perspectives of Injured Women High in Social Physique Anxiety

You are being invited to participate in a study that will examine how your preference for physiotherapy settings is affected by your thoughts, feelings, and behaviors concerning the efforts you take to manage and manipulate how you are perceived and evaluated by others (i.e., your self-presentational concerns). The research will be conducted in the form of in-depth interviews which will focus primarily on your concern for how others perceive you. In order for health-care professionals to promote compliance with prescribed rehabilitation programs (i.e., attendance and effort) and enhance recovery from injury, it is important to understand how people's self-presentational concerns affect their preferences for specific physiotherapy settings. Therefore, the interviews will also focus on questions surrounding your preferences for the physical and social elements of the physiotherapy environment.

If you agree to take part in this research you will be asked by your doctor to complete the Social Physique Anxiety Scale (SPAS) which requires you to respond to statements about feelings towards your body. Your doctor will then determine if you are a suitable candidate for the remainder of the study. If you are not eligible for the study, the information that has been collected will be immediately discarded. If you are eligible to participate in the study, your doctor will ask you to provide your telephone number or email address in order for a researcher to contact you to schedule appropriate meeting times to conduct two 30- to 60-minute interviews. In order to ensure confidentiality, the researcher will only be given your first name. To participate in this study, you will be asked to schedule these interviews at specific times prior to and during your physiotherapy program. The first interview will take place after your referral appointment with your doctor and before your first physiotherapy appointment. The second interview will take place after you have attended three physiotherapy appointments, but before you attend a fourth.

Each interview will take place in a quiet, private office at the clinic where you will be undergoing physiotherapy. Each interview will be audio-taped and then transcribed verbatim (i.e., word for word) onto a computer at a later date. This will be done to ensure that none of the information provided in the interview is missed. The audio-tapes will be only for the use of the researchers listed below.

Your participation in this study is completely voluntary. Your agreement to participate in this study is indicated by completing and signing the attached consent form. You may refuse to

participate, and/ or refuse to answer any question at any time during the interviews with no effect on your current or future care. You may also withdraw from the study up until one month after the second interview when all identifying information will be destroyed.

The risks associated with this study are minimal (i.e., you may become emotional when answering questions pertaining to your thoughts and feelings regarding your physique). A list of local counseling resources will be made available to you should you seek additional care. If you chose to participate in this study, you may help to provide an understanding of how self-presentational cognitions affect preferences for rehabilitation settings.

All data collected in the study is confidential. The information you provide may be taken out of the clinic, to the University of Western Ontario in order for the researchers to contact you and conduct the appropriate statistical analyses. If the results of this study are published, your name will not be used and no information that discloses your identity will be published. Your questionnaire results will be stored in a locked cabinet, in a secure room at the University of Western Ontario and will be destroyed after three years. Representatives of The University of Western Ontario Health Sciences Research Ethics Board may contact you or require access to your study-related records to monitor the conduct of the research.

Thank you!

APPENDIX L

Interview Guide

First Interview

Interview # 1

Introductory Comments

Rationale
Use of data
Issues of confidentiality
Reasons for recording
Issues and topics to be pursued
Informed consent obtained

Introductory Questions

Describe your injury.

Probes:

How did it happen?
When did it happen?
How does it interfere with your daily functioning and/ or physical activities?

What are your reasons for undergoing physiotherapy?

Previous Experience

Describe any previous physiotherapy experiences that you may have had in the past.

Probes:

Tell me about any treatment that you have received.
How long ago was this treatment?
How many different types of injuries have you had?
What were those injuries?
Describe the physical characteristics of the clinic(s) that you have been to and the people who were present when you were receiving treatment.

If you have not had treatment in the past, tell me about any experiences you have had with physiotherapy clinics.

Probes:

Describe any physiotherapy clinic that you may have seen (e.g., on t.v., walking past, or looking in from the outside).
Describe any experiences you may have had while accompanying someone else to physiotherapy.

SP Concerns

Initially, when you were first referred to physiotherapy, what were your thoughts/ feelings about receiving this type of treatment?
Discuss any aspect of your upcoming physiotherapy appointment that concerns you or makes you feel anxious, self-conscious, or uncomfortable.
When you start physiotherapy, how do think the other people in the physiotherapy clinic will perceive you.

Probes:

Describe any concerns you have for being perceived in an unfavourable way. How do you think this would change if the other people in the clinic are: all female, all male, equal numbers, athletic-looking, not very athletic, very social, not social, people you would like to impress, people you don't feel you need to impress.

Describe your confidence for being perceived favourably by the other people in the clinic.

Probes:

How do you think this would change if the other people are: all male, all female, equal numbers, athletic-looking, not very athletic, very social, not social, people you would like to impress, people you don't feel you need to impress.

Social Preferences

Describe the type of people you would prefer to have in the clinic with you while you are undergoing physiotherapy.

Probes:

Discuss your preference for: all female; all male; equal numbers of males and females; all very athletic-looking; not very athletic; very social; not social; people you would like to impress; people you don't feel you need to impress; older; younger; crowded; not crowded.

If you were able to choose your physiotherapist, describe what this person would be like.

Probes:

Discuss any preference you would have for a female physiotherapist.

Discuss any preference you would have regarding the age of the physiotherapist.

Discuss any preference you would have regarding the physical attractiveness of the physiotherapist.

Physical Preferences

After having a tour of the facility where you will be undergoing physiotherapy, and observing that there are potentially 3 areas where you may be treated, for example, in one of the private examination rooms; on one of the beds behind the curtain that separates you from the rest of the open gym area; or on a bed that's out in the open gym area.

Discuss where in this particular clinic you would prefer to receive manual treatment from your physiotherapist.

Probe:

Discuss your reasons for choosing the settings you did.

Discuss where in this clinic you would prefer to perform your exercises.

Probe:

Discuss your reasons for choosing the settings you did.

Discuss where in this clinic you would prefer to receive ice or heat and/ or modalities.

Probe:

Discuss your reasons for choosing the settings you did.

If you were given a choice about what to wear, describe what you would prefer to wear to your upcoming physiotherapy appointments.

Probes:

Discuss how you would feel if you were required to wear: shorts, a tee shirt, a tank top, tight shorts and a jog bra, a bathing suit.

Discuss any ideas or thoughts you may have about changes that could be made to the physical and/ or social clinical environment that may make you feel better about the upcoming physiotherapy appointments.

Demographics

How old are you?
How tall are you?
How much do you weigh?
Describe the physical activities/sports that you participate in.
If you are involved in a competitive sport, at what level do you compete?

APPENDIX M

Interview Guide

Second Interview

Interview # 2

Introductory Comments

Issues and topics to be pursued

Description of Physiotherapy

Describe a typical physiotherapy appointment, in detail, from start to finish.

Probes:

Describe what you do when you first arrive.

Describe what you wear.

Describe the treatment you receive from your physiotherapist and where in the clinic you get treated.

Describe the exercises that you do and where in the clinic you do them.

Describe the machines that you get hooked up to and where in the clinic this occurs.

Describe the people who are generally in the clinic with you.

Describe your physiotherapist.

Discuss your compliance with your rehabilitation program.

Probes:

Discuss how often your physiotherapist suggests you attend appointments compared to how often you actually attend appointments.

Describe how you felt initially about physiotherapy and how you feel now.

Probe:

Discuss why these changes in how you feel have occurred.

Discuss your degree of satisfaction with your current rehabilitation program.

SP Concerns

Discuss your concern for what other people think of you when you are at your physiotherapy appointment.

Probes:

How do you think this would change if the other people in the clinic were: all female, all male, equal numbers, athletic-looking, not very athletic, very social, not social, people you would like to impress, people you don't feel you need to impress, younger, older, more crowded, less crowded.

Describe your concern for being perceived in an unfavourable way.

Probes:

Discuss how you would feel if people perceived you as: weak, anxious, self-conscious, uncoordinated, difficult to work with, unfit, unintelligent, unable to control your emotions, unhealthy, frustrated, or grumpy.

Describe your confidence for being perceived favourably by the other people in the clinic.

Probes:

How do you think this would change if the other people were: all male, all female, equal numbers, athletic-looking, not very athletic, very social, not social, people

you would like to impress, people you don't feel you need to impress, younger, older, crowded, not crowded.

Describe any social situations in physiotherapy that make you feel anxious, self-conscious, or uncomfortable.

Social Preferences

Describe the type of people you would prefer to have in the clinic with you while you are undergoing physiotherapy.

Probes:

Discuss your preference for: all male, all female, equal numbers, athletic-looking, not very athletic, very social, not social, people you would like to impress, people you don't feel you need to impress, younger, older, crowded, not crowded.

If you were able to choose your physiotherapist, describe what that person would be like.

Physical Preferences

After experiencing 3 physiotherapy sessions, discuss where in this particular clinic you would prefer to receive manual treatment from your physiotherapist (compared to where, in the clinic, they've stated they receive treatment).

Probe:

Discuss your reasons for choosing the settings you did.

Discuss where in this particular clinic you would prefer to perform your exercises.

Probe:

Discuss your reasons for choosing the settings you did.

Discuss where in this particular clinic you would prefer to receive ice or heat and/ or modalities (based on what they've discussed above).

Probe:

Discuss your reasons for choosing the settings you did.

Describe any physical characteristics of the physiotherapy clinic that make you feel anxious, self-conscious, or uncomfortable.

Probes:

Discuss how you would feel if there were more mirrors in the clinic.

Discuss how you would feel if there were windows that were open for people outside of the clinic to see in.

Discuss how you would feel if you had to put on a swimsuit and go into a pool as part of your physiotherapy appointment.

If you were given a choice about what to wear, describe what you would prefer to wear to your upcoming physiotherapy appointments.

Future experiences

In the future, if you were to require physiotherapy again for your current injury, describe the physical characteristics of the clinic where you would prefer to undergo physiotherapy and the people who would be present while you are receiving treatment.

Probes:

Describe the clinical treatment setting.
Describe the mirrors and windows in this clinic.
Describe the level of privacy you have while you are this clinic (i.e., who can see you being treated, doing your exercises).
Describe where you do your exercises.
Describe your clothing.
Describe the people who are in the clinic with you.
Describe your physiotherapist.

Discuss your concern for being perceived unfavourably in the clinic that you have just described.

Discuss your confidence in portraying favourable impressions upon others in the setting that you have just described.

VITA

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	Honours Bachelor of Arts Kinesiology with Psychology	1997- 2001
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Refereed Publications:

Driediger, M., Hall, C., & Callow, N. (2006). Imagery use by injured athletes: A qualitative analysis. *Journal of Sports Sciences, 24*, 261-271.

Law, B., **Driediger**, M., Hall, C., & Forwell, L. (2006). Imagery use, perceived pain, limb functioning and satisfaction in athletic injury rehabilitation. *New Zealand Journal of Physiotherapy, 34*, 10-16.

Echlin, P. S., Tator, C. H., Cusimano, M. D., Cantu, R. C., Taunton, J. E., Czarnota, M., Hall, C. R., Johnson, A. M., Forwell, L. A., **Driediger**, M., Skopelja, E. N. (2010). Return to play after an initial or recurrent concussion within a prospective study of physician-observed

hockey concussions: Implications for return to play after a concussion. *Neurosurgical Focus, November.*

Non-Refereed Publications:

Hall, N., **Driediger**, M., & Hall, C. (2009). *Psychological development aspects of squash.* Squash Canada.

Conference Presentations:

The moderating effect of imagery ability on imagery use among golfers. Canadian Society for Psychomotor Learning and Sport Psychology, Ottawa, Ontario, November, 2010 (with L. Duncan & C. Hall).

Imagery Symposium: Imagery research in athletic injury rehabilitation. Recent findings and future directions. Canadian Society for Psychomotor Learning and Sport Psychology, Toronto, Ontario, November, 2009 (with N. Hall, C., Hall, & M. Gregg).

Examining behavioral regulations across a variety of sports and competitive levels. Canadian Society for Psychomotor Learning and Sport Psychology, Canmore, Alberta, November, 2008 (with L. Duncan & C. Hall).

Imagery use in athletic injury rehabilitation. Canadian Society for Psychomotor Learning and Sport Psychology, Montreal, QC, November, 2001 (with C. Sordoni & C. Hall).