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Stereotypes and Self-Perceptions of Physical Education Pre-Service Teachers

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Abstract: Stereotypes and self-perceptions are important in understanding how people develop their self-knowledge and social identity, become members of groups, and view groups and their members. While we have some understanding of the stereotypical view of the physical education teacher, we currently have little knowledge of how physical education pre-service teachers (students studying a physical education degree) are stereotyped, and also if there is any relationship between these stereotypes and how physical education pre-service teachers perceive themselves. The purpose of this study was to examine the stereotypes and self-perceptions of physical education pre-service teachers. The aims were to describe how physical education pre-service teachers stereotype and perceive themselves, examine if there are differences in the stereotypes and self-perceptions between males and females, and to explore if there were relationships between what the physical education pre-service teachers believed stereotyped them and how they perceived themselves. Participants were 250 students (n=120 males, n=130 female) studying a 4-year Bachelor of Education (Physical Education) degree at a university who completed a questionnaire which contained 10 items about how they viewed physical education pre-service teachers (stereotypes), and 26 items on how they viewed male physical education pre-service teachers and female pre-service teachers (stereotypes) and 26 items on how they view themselves (self-perceptions). Factor analysis revealed 2 stereotype factors, which were labelled as Sociable (e.g., socialise, partying, drinking, loud and outgoing) and Health and Lifestyle (e.g., fit, playing sport and not smoking). The stereotype of the male physical education pre-service teacher, comprised two factors: physical, assertive and aggressive behaviour (e.g., aggressive, dominant, self-confident, and competitive) and physical and self-presentation factors (muscular, athletic, physically fit, physically coordinated, and attractive). The stereotype of female physical education pre-service teachers comprised three factors: physical appearance and ability (e.g., physically fit, athletic, able-bodied, attractive, thin, and physically coordinated), aggressive and assertive behavioural style (e.g., intimidating, unapproachable, and aggressive), and masculine behavioural style (e.g., aggressive,

masculine, feminine, muscular and dominant). The self-perception of male physical education pre-service teachers comprised three factors: perceived appearance and ability (e.g., athletic, physical fit, thin, attractive, muscular and pleased with their body), aggressive and confident behaviour (e.g., intimidating, dominant, show off and aggressive) and independence and intellect (e.g., independent, ambitious, self confident and intelligent). The self-perception of female physical education pre-service teachers comprised three factors: strong willed behaviour (e.g., ambitious, and dominant), presentation and appearance (e.g., pleased with their body, attractive, thin and self confident), and aggressive and dominant behaviour (e.g., aggressive, intimidating, masculine and show off). There were significant relationships between the male physical and self-presentation stereotype factor stereotype and perceived appearance and ability self-perception factor and between the male physical, assertive and aggressive behaviour stereotype factor and the male aggressive and confident behaviours self-perception factor. For females, the aggressive and dominant behaviour stereotype was related to both the aggressive and assertive behavioural style self-perception factor and the masculine behavioural style self-perception factor. It is suggested that future studies investigate the stereotypes and self-perceptions of students in schools during the recruitment phase of socialisation, and the possible influence of the physical education teacher education programme, faculty leaders, and significant others on the physical education pre-service teachers' self-perceptions, stereotypes and socialisation into physical education.

Introduction

Stereotypes and self-perceptions are important in understanding how people develop their self-knowledge and social identity, become members of groups, and view groups and their members (Hogg & Vaughan, 2008). While those involved in physical educators have some understanding of the stereotypical view of the physical education teacher, those involved in educating pre-service teachers currently have little knowledge of how physical education pre-service teachers (students studying a physical education degree) are stereotyped, and also if there is any relationship between these stereotypes and how physical education pre-service teachers perceive themselves. Stereotypes have been defined as "a set of beliefs about the personal attributes of a group of people" (Stroebe & Insko, 1989, p. 5). Stereotypes serve many functions in society. They enable the quick labelling of individuals to groups, identify the beliefs about the personal attributes of a group of people, and also enable groups to create or preserve valued differences with other social groups, to maintain their group ideologies (Stroebe & Insko, 1989). When an individual identifies with a group, they will share some characteristics, values, and beliefs with other people who also identify with that group (McGarty, Yzerbyt, & Spears, 2002).

When someone observes a group behaving in a particular activity, they are likely to believe that the characteristics and abilities of the group's members are consistent with the required attributes to carry out the activity (Stroebe & Insko, 1989). In schools, the student will observe their teachers engaging in activities relative to their roles: the woodwork teacher is often seen making wood-based constructions, just as the English teacher is often seen

working in the library during lunchtimes. In relation to physical education teacher education, behaviours such as playing sport, drinking sociably, and wearing sporting apparel are observable behaviours that may be used to stereotype this group. Therefore, by using stereotypes, researchers in physical education can represent the typical member characteristics of a group (McGarty et al., 2002). For stereotypes to be recognised they need to have an element of truth in them, a shared belief of the culture that people represented by the stereotype behave in a particular way (Spears, Oakes, Ellemers, & Haslam, 1997).

Ingroup and Outgroup Perspectives

The position of an individual who is stereotyping a group, in terms of ingroup or outgroup perspectives, has a direct consequence to the outcome of that stereotyping. An ingroup perspective is presented from individuals who belong or identify with belonging to the group being stereotyped, and, therefore, has a vested interest in the stereotype. An outgroup perspective is presented from individuals or groups who identify as not belonging to the group being stereotyped, and, in comparing the other group with their own, are more likely to have negative views of the stereotyped group (Coon, 1988; Hogg & Vaughan, 2008). This phenomenon relates to ingroup bias, where the individual within the group seeks to maintain or elevate their group's social standing, and will rate their group more positively than outgroups. Symbols and behaviours have increased importance here for ingroup identification and preservation. For example, participating in sporting activities, wearing sports clothing, socialising, wearing whistles, and behaving in other manners that appear appropriate for the physical education profession may identify individuals as belonging to the physical education teacher ingroup. The more the individual perceives themselves as relating to their ingroup members, the more they become dissimilar to outgroups, increasing the ingroup-outgroup differentiation.

In addition to having a perception of the stereotypical group member, ingroup members will also hold a perception of their own characteristics. Coon (1988) describes a person's self-image as "the total subjective perception of oneself, including an image of one's body and impressions of one's personality, capabilities and so on" (p.495). By having an awareness of the characteristics that represent one-self, can identify our self-perception, or self-knowledge.

It is possible that similar types of people will be attracted to and recruited into physical education teacher education, and that the group type may be similar to the stereotypes of physical education teachers. Physical education pre-service teachers are likely to be recruited through socialisation, adapt to the role of a physical education teacher as they see the role of the stereotypical physical education teacher to be, and may, as an outcome, become a model of the stereotype of the physical education teacher. By perceiving themselves to be and identifying as a member of the physical education profession, a close link between their perceptions and the stereotypes of the physical education teacher may develop. This relationship is expected, as stereotypes are simplified characteristics of social groups, and a person who identifies with a certain group, and spends time within that group, could develop characteristics identifiable to that group, and perceive themselves as a group member. There is a lack of research on stereotypes and self-perceptions of physical education pre-service teachers, however, some studies on recruitment into physical education teacher education, and the representations and stereotypes of physical education teachers might provide information on the expected stereotypes and self-perceptions of physical education pre-service teachers.

Stereotypes in Physical Education

Researchers have often wondered who enters the physical education profession: what type of person they are; why they choose physical education; what perceptions they have about physical education teachers and teaching in general; the experiences they had in sport and physical education at school; and what influenced their decision to become physical educators (MacDonald, Kirk, & Braiuka, 1999; Spittle, Jackson, & Casey, 2009). As the process of recruitment is a way of maintaining the common definition and practice of the profession (Dewar, 1989), stereotypes affect the recruitment of individuals into the physical education profession.

The socialisation process of individuals into physical education is affected by stereotypical views of who is appropriate to become physical education teachers. Students may be initially attracted to physical education careers if they have success and interests in sports and physical activity (Dewar, 1989). Those who do not model the ideal behaviour of physical educators, experience low success in physical education classes, and don't identify with physical education may not be recruited into the profession. Physical education pre-service teachers who don't fit the image or model of a physical educator, may experience a lack of success, or not gain full ingroup status within the physical education pre-service teacher cohort.

An important concept in teacher socialisation is subjective warrant, an individual's perceptions of the skills and abilities required for a specific occupation (Dewar & Lawson, 1984). By developing these perceptions during childhood, through observation of teachers, parents and peers, the individual interested in physical education examines their personal competencies, characteristics and aspirations against the perceptions they have of the physical educator. This perceptual framework is influenced by socio-cultural and psychological factors, such as family interest in physical activity, and the economic benefits and rewards of teaching physical education.

Tinning, Macdonald, Wright, and Hickey (2001) considered the type of person attracted to physical education teacher education, and the impact of having, or not having, 'the look' can have on the recruits into physical education teacher education programmes. This 'look', prescribing the subjective warrant, entails the "slim/mesomorphic, able-bodied, heterosexual, physically capable and physically fit" (Tinning et al., 2001, p. 86), who wears designer sports clothes, is young, athletic, and Caucasian. Tinning et al. discussed a 'cloning process' in physical education teacher education, where the selection of physical education pre-service teachers results in the replication of faculty members from their younger days, and a lack of heterogeneity among physical education pre-service teachers. O'Bryant, O'Sullivan, and Raudensky (2000) in examining the effectiveness of socialising graduate students into the physical education teacher education profession, concluded that there was a lack of appreciation for diversity within the recruitment of students into physical education teacher education and within the delivery of physical education. O'Bryant et al (2000) examined the recruitment of mature-age physical educators; findings indicated family and friends were not impressed, did not initially support decisions to undertake physical education teacher education, and openly questioned decisions to change professions. The perceptions of the general public of the physical education profession can often be negative, in terms of comparison with other professions such as medicine and law.

Popular Representations of Physical Education Teachers

The depictions of physical educators in popular culture often reinforce particular stereotypes of physical education teachers and have the potential to influence societal perceptions (Duncan, Nolan, & Wood, 2002). Research on stereotypes of physical educators was most prevalent in the 1970's and 1980's, when the feminist movement forced a need to understand the gendered nature of physical education. Physical educators were prevalently typecast as male, Caucasian, and masculine in behaviour and physique (Nettleton, 1985). More recently, stereotypes of physical educators have been found to include some positive descriptors, such as friendly, athletic, organised, healthy and good role models for young people; and conversely, some negative descriptors such as jocks, bullies, clowns, lesbians, unintelligent, unattractive, patronizing and sarcastic (Duncan et al., 2002; McCullick, Belcher, Hardin, & Hardin, 2003; O'Reilly, 2000; Tinning et al., 2001).

Research from outgroup perspectives has examined media representations of physical education teachers in movies. For example, Duncan et al. (2002) and McCullick et al. (2003) concluded that the characteristics of physical educators in movies were gendered; there was confusion about the role of the physical educator, blurring with that of a coach; and physical education was considered non-academic, with teachers who could not teach, had negative attitudes towards their students, and utilised humiliation, sarcasm, and aggression in their teaching. More positively, Duncan et al. (2002) suggested that physical educators were generally depicted as fit, wearing appropriate clothing, and sometimes showing compassion towards their charges.

The representations of physical educators in the mass media appear to be gendered, with males being portrayed as "hormone raging" and pursuing every skirt in sight, with a penchant for bullying students and females, portrayed as either the physically attractive sexual objects of adolescent male lust, or as butch lesbians (Duncan, et al., 2002; McCullick, et al., 2003). These generalisations can have an impact on the way society views physical educators. What is unknown about gendered stereotypes of physical education teachers is the impact these stereotypes have on those studying to become physical educators. Very little research has been conducted from an ingroup perspective. One study by Harris and Griffin (1997) examined the stereotypes and personal beliefs about female physical education teachers from an ingroup perspective. They found that female physical educators were seen as more athletic, aggressive, coordinated, fit, pleased with their bodies, and masculine (lesbian, feminist, single, unfeminine) than most women, but less attractive and not more intelligent than most women.

Tinning et al. (2001) linked the physical representation of physical educators to the gendered nature of the stereotypes in physical education. Tinning et al. (2001) contrasted the mesomorphic, able-bodied, heterosexual, physically capable, and physically fit look needed to be considered a good teacher, to the struggles females can face in achieving the stereotypical look and remaining feminine. They argued that physical education teacher education students who conformed to the specific construction of femininity (long hair, trim, fashionable) was crucial for the women to maintain their sense of femininity when other qualities (physical prowess) were overtly masculinised. Conversely, males in physical education teacher education courses faced no such contradiction of identity, with risk-taking behaviour, sporting prowess, and masculinity being encouraged.

The Need for Research on Stereotypes and Self-Perceptions

The research suggests that the typical stereotype of physical education teachers involves being: fit, healthy, athletic, and able-bodied (Tinning et al., 2001), masculine, male, Caucasian (Nettleton, 1985), organised, unintelligent, muscular, bullies, patronising, and aggressive (Duncan et al., 2002; Harris & Griffin, 1997; McCullick et al., 2003). Although this is the stereotypical view of the physical educator, and little is known about the stereotypes of the physical education pre-service teacher; it might be expected that the physical education pre-service teacher would be stereotyped in a similar fashion.

The views held within the groups being stereotyped may be different to the stereotypes expressed by outgroups, therefore, more research needs to be conducted on the physical education ingroup. Theories of socialisation and social identity propose that when an individual identifies with a group, they will share some characteristics, values, and beliefs with other people who also identify with that group (McGarty et al., 2002). Additionally, the socialisation process of individuals into physical education is affected by stereotypical views of who is appropriate to become a physical education teacher. Those who do not model the ideal behaviour of physical educators, or don't identify with physical education may not be recruited into the profession. Individuals in physical education teacher education, who don't fit the image or model of a physical educator, may experience a lack of success, not gain full ingroup status and studentship within the student body, and may drop out. This lack of identification with the group may be elicited by the lack of identification with the stereotypes deemed appropriate for physical educators. By studying the views of the ingroup members, those involved in physical education teacher education may gain a valuable insight into the ways the ingroup members identify themselves as physical educators. This could influence the behaviour of physical education pre-service teachers and the way that physical education is perceived.

Purpose

The purpose of this study was to examine the stereotypes and self-perceptions of physical education pre-service teachers. The aims were to describe how physical education pre-service teachers stereotype and perceive themselves, examine if there are differences in the stereotypes and self-perceptions between males and females, and explore if there were relationships between what the physical education pre-service teachers believed stereotyped them and how they perceived themselves.

Method
Participants

Participants were 250 students (*n*=120 males, *n*=130 female) studying a 4-year Bachelor of Education (Physical Education) degree at a regional university in Victoria, Australia. The mean age of participants was 20.07 years (*SD*=1.98).

Measure

A questionnaire was developed by the researchers to examine the stereotypes and self-perceptions of physical education pre-service teachers. The questionnaire was based on previous research on stereotypes of physical education teachers (e.g., Harris & Griffin, 1997;

McCullick, et al., 2003; Nettleton, 1985; Tinning, 1990; Tinning et al., 2001). The questionnaire consisted of 3 sections: demographics, stereotypes, and self-perceptions. All stereotype and self-perception questions asked physical education pre-service teachers to respond on a 5 point scale from 1 (*strongly disagree*) to 5 (*strongly agree*).

Demographics

Demographic questions included age, gender, and year level.

Stereotypes

Participants were asked how they viewed physical education pre-service teachers. This involved 10 items on *all* physical education pre-service teachers and 26 items on *male* pre-service teachers and 26 items on *female* pre-service teachers. For the items on *all* physical education pre-service teachers, participants responded to the stem "Do ALL physical education pre-service teaching students….?" Examples of items are: socialise by drinking, play sport, and smoke (all individual items can be seen in Table 1). For the items on *male* and *female* pre-service teachers, the stem consisted of "Do you think MALE/FEMALE physical education pre-service teachers are….?" Examples of items are: attractive, intelligent, able-bodied, competitive, muscular, aggressive, thin, dominant, easy-going and feminine (all items can be seen in Table 3)

Self-Perceptions

Participants responded to 26 items about how they viewed themselves. The 26 descriptor items were the same 26 items used in the stereotypes section. The stem consisted of "How do you perceive yourself to be? Are you….?"

Procedure

Ethical approval for the study was provided by a university research ethics committee. All participants were provided with a plain language information statement, verbal description of the study, and instructions on how to complete the questionnaire. All participants provided informed consent. All data was collected during university classes and the completed questionnaires were handed to one of the researchers on completion. The questionnaire took approximately 15 minutes to complete.

Data Analysis

Data was initially screened for missing data and outliers. Following this continuous variables were checked for normality. To describe the stereotypes and self-perceptions of physical education pre-service teachers, descriptive statistics (mean and standard deviation) were calculated for all items. To reduce the 26 stereotype and 26 perception items for each gender to a more manageable number for subsequent analysis, principal components analysis (PCA) was conducted. By conducting exploratory principal components analysis with Kaiser's criterion and Catell's scree test, the underlying factors for each set of variables were determined. The factors were rotated using the orthogonal Varimax rotation procedure, to

minimise the number of variables with high loadings on each factor. The loadings on each of the items assigned within each factor were considered strong if > 0.40, so any items with loadings < 0.40 were not included in the factor. The choice of factors was made on the basis of Eigenvalues (i.e. > 1.0), visual inspection of the Scree Plot, and interpretability of the factor items under each factor. To determine any differences in stereotypes by respondent gender, independent samples t-test were conducted on factor scores. Due to the number of tests involved, alpha was set at $p < .01$ to reduce risk of Type I error (Keppel & Wickens 2004). Where significant effects were found, post hoc tests were run to assess whether the variable was equally distributed across the four practice conditions, using χ^2 tests for independence. Eta squared (η^2) was calculated as an effect size, with effect sizes of .01, .06, and .14 interpreted as representing small, medium, and large effects sizes respectively (Green, Salkind, & Akey, 1997). To determine any relationships between the stereotypes and self-perceptions of the physical education pre-service teachers, correlation analysis was conducted through the use of Pearsons product-moment correlation coefficient. This was conducted on the male and female factors scores. All analyses were performed using SPSS Version 17.0.

Results
Stereotypes of Physical Education Pre-Service Teachers
Item Scores

The descriptive statistics for the 10 items for stereotypes for all physical education pre-service teachers are presented in Table 1. Descriptive statistics are presented for the total sample and for male and female respondents. Means for the items ranged from 1.61 (smoke as much as other university students) to 4.61 (having to play sport). Male and female participants appeared to be consistent in their ratings.

Item			Respondent Gender			
	Total		Male		Female	
Do ALL physical education pre-service teaching students…?	*M*	*SD*	*M*	*SD*	*M*	*SD*
have to play sport	4.61	.58	4.60	.51	4.62	.64
have to be fit	4.30	.59	4.28	.52	4.34	.65
have to be outgoing	4.15	.65	4.19	.57	4.12	.72
have to socialise by drinking	4.02	.80	4.04	.78	4.01	.81
have to go out partying on the weekend	4.06	.74	4.04	.67	4.09	.81
have to be loud	3.83	.85	3.84	.82	3.82	.89
drink alcohol in excessive amounts	3.39	1.01	3.44	1.03	3.35	.99
smoke as much as other university students	1.61	.74	1.62	.77	1.61	.71
socialise in big groups	3.88	.76	3.85	.73	3.91	.79
wear brand name sports clothes	3.30	.93	3.30	.85	3.31	1.01

Table 1: Descriptive Statistics (Mean and Standard Deviation) for 10 Individual Stereotype Items on All Physical Education Pre-Service Teachers

Exploratory Factor Analysis on Stereotypes All

Principal components analysis (PCA) on the stereotypes of all physical education pre-service teacher items revealed two factors, labelled Sociable (SA1) and labelled Health and Lifestyle (SA2) to reflect the items loading on each factor. The factor loadings and percentages of explained variance are presented in Table 2.

Item	Factor Loading	
	SA1 Sociable	SA2 Health and Lifestyle
Socialise by drinking	.89	
Like to go out partying	.87	
Drink in excessive amounts	.81	
Loud	.64	
Outgoing	.51	
Socialise in big groups	.35	
Fit		.80
Playing sport		.78
Smoking		-.62
Outgoing		.44
Explained Variance (%)	**30.1**	**18.2**

Table 2: Factor Loadings for Exploratory Factor Analysis of All Stereotype Scale

Differences between All Stereotype Factor Scores for Respondent Gender

No significant differences in the factor scores between male and female participants for the Sociable Factor (SA1), $t(247) = .42$, $p = .67$, $\eta^2 = .01$, (male $M = .03$, $SD = .98$, female $M = -.03$, $SD = 1.02$) or the Health and Lifestyle factor (SA2), $t(247) = -.46$, $p = .65$, $\eta^2 = .01$ (male $M = -.03$, $SD = .91$ female $M = .03$ $SD = 1.08$) were found.

Stereotypes of Male Physical Education Pre-Service Teachers
Individual Item Scores

The descriptive statistics for the 26 items for stereotypes for male physical education pre-service teachers for the total sample, and for male and female respondents are presented in Table 3.

Item Do you think MALE physical education pre-service teachers are….?	Total		Respondent Gender			
			Male		Female	
	M	*SD*	*M*	*SD*	*M*	*SD*
Intelligent	2.82	.87	2.85	.95	2.80	.79
Attractive	3.97	.69	3.95	.74	3.99	.65
Able-Bodied	4.29	.50	4.28	.53	4.30	.48
Strong Willed	3.95	.66	3.98	.61	3.92	.69
Physically Fit	4.43	.50	4.40	.49	4.46	.52
Intimidating	3.44	.86	3.41	.84	3.47	.89
Athletic	4.38	.53	4.29	.49	4.45	.55
Thin	3.30	.84	3.38	.82	3.24	.85
Competitive	4.38	.66	4.30	.63	4.45	.69
Self-Confident	4.26	.60	4.18	.55	4.33	.64
Muscular	4.01	.69	3.89	.63	4.12	.73
Aggressive	3.09	.85	3.08	.83	3.10	.88
Feminine	1.75	.72	1.78	.71	1.73	.73
Ambitious	3.57	.73	3.53	.74	3.61	.72
Physically Coordinated	4.48	.57	4.48	.53	4.48	.60
Masculine	4.17	.65	4.05	.61	4.29	.68
Dominant	3.83	.75	3.75	.75	3.90	.74
Appearance	2.96	.84	2.89	.83	3.03	.85
Anorexic/ Bulimic	1.54	.75	1.53	.73	1.54	.77
Independent	3.69	.78	3.70	.72	3.68	.83
Un-approachable	2.28	.90	2.26	.87	2.31	.92
Homosexual	1.62	.80	1.54	.73	1.70	.86

Table 3: Descriptive Statistics (Mean and Standard Deviation) for 26 Stereotype Items on Male Physical Education Pre-Service Teachers by Respondent Gender

Exploratory Factor Analysis on Stereotypes Male

Principal components analysis (PCA) on the stereotypes of male physical education pre-service teacher items revealed two factors SM1: Physical, Assertive, and Aggressive Behaviour and SM2: Physical and Self-Presentation. The factor loadings and percentages of explained variance are presented in Table 4.

Item	Factor Loading	
	SM1 Physical, Assertive, and Aggressive Behaviour	SM2 Physical and Self-Presentation
Aggressive	.76	
Intimidating	.75	
Show Off	.66	
Dominant	.65	
Self-Confident	.51	
Muscular	.50	.74
Masculine	.46	.47
Competitive	.41	
Athletic		.77
Physically Fit		.75
Able-Bodied		.58
Physically Coordinated		.57
Attractive		43
Explained Variance (%)	**12.5**	**11.7**

Table 4: Factor Loadings for Exploratory Factor Analysis of Male Stereotype Scale

Differences between Male Stereotype Factor Scores for Respondent Gender

No significant difference in the factor score for the male stereotype factor Physical, Assertive, and Aggressive Behaviours (SM1) was found for respondent gender, $t(244) = -1.76$, $p = .08$, $\eta^2 = .01$ (male $M = -.11$, $SD = .1.03$, female $M = .11$, $SD = .96$), however, a significant difference for the male stereotype factor Physical and Self-Presentation (SM2) was found, with females having a higher mean factor score than males, $t(244) = -.2.08$, $p = .039$, $\eta^2 = .02$ (male $M = -.14$, $SD = .97$, female $M = 13$, $SD = 1.02$).

Stereotypes of Female Physical Education Pre-Service Teachers
Individual Item Scores

The descriptive statistics for the 26 items for stereotypes for female physical education pre-service teachers are presented in Table 5. Descriptive statistics are presented for the total sample.

Item						
Do you think FEMALE physical education pre-service teachers are….?	Total		Respondent Gender			
			Male		Female	
	M	*SD*	*M*	*SD*	*M*	*SD*
Intelligent	3.63	.70	3.60	.76	3.66	.66
Attractive	3.84	.75	3.91	.83	3.78	.68
Able-Bodied	4.04	.59	4.05	.62	4.03	.57
Strong Willed	3.87	.60	3.90	.61	3.85	.59
Physically Fit	4.05	.67	3.97	.71	4.12	.63
Intimidating	2.83	.90	2.75	.93	2.89	.87
Athletic	4.10	.63	4.00	.64	4.19	.60
Thin	3.75	.75	3.76	.71	3.74	.80
Competitive	3.75	.72	3.64	.77	3.85	.65
Self-Confident	3.89	.62	3.91	.60	3.88	.64
Muscular	2.93	.81	2.87	.78	2.99	.84
Aggressive	2.59	.86	2.71	.87	2.48	.83
Feminine	3.41	.88	3.46	.89	3.38	.88
Ambitious	3.80	.68	3.70	.69	3.88	.66
Physically Coordinated	4.02	.78	3.87	.80	4.16	.73
Masculine	2.70	.97	2.55	1.00	2.83	.92
Dominant	3.14	.83	3.07	.89	3.19	.77
Appearance	2.79	.87	2.91	.85	2.67	.88
Anorexic/ Bulimic	2.19	.88	2.16	.90	2.21	.87
Independent	3.77	.67	3.80	.65	3.73	.69
Un-approachable	2.34	.87	2.38	.90	2.30	.85
Homosexual	2.23	1.03	2.27	1.10	2.20	.96
Easy-Going	3.99	.65	3.94	.65	4.03	.64
Pleased with Body	3.57	.76	3.60	.70	3.55	.82
Show Off	2.94	.88	3.00	.92	2.88	.85
Sociable	4.22	.64	4.16	.64	4.27	.63

Table 5: Descriptive Statistics (Mean and Standard Deviation) for 26 Stereotype Items on Female Physical Education Pre-Service Teachers by Respondent Gender

Exploratory Factor Analysis on Stereotypes Female

Principal components analysis (PCA) on the stereotypes of female physical education pre-service teacher items revealed three factors that were considered appropriate for analysis: Physical Appearance and Ability (SF1); Aggressive and Assertive Behavioural Styles (SF2); and Masculine Behavioural Styles (SF3). The factor loadings and percentages of explained variance are presented in Table 6.

Item	Factor Loading		
	SF1 Physical Appearance and Ability	SF2 Aggressive and Assertive Behavioural Style	F3 Masculine Behavioural Style
Physically Fit	.77		
Athletic	.76		
Able-Bodied	.69		
Attractive	.65		
Thin	.59		
Physically Coordinated	.44		
Show Off		.76	
Intimidating		.64	
Unapproachable		.59	
Aggressive		.57	.47
Masculine			.72
Feminine			-.67
Muscular			.56
Dominant			.41
Explained Variance (%)	**11.3**	**9.5**	**7.9**

Table 6: Factor Loadings for Exploratory Factor Analysis of Female Stereotype Scale

Differences between Female Stereotype Factor Scores for Respondent Gender

No significant differences for respondent gender on the female stereotype factors, Physical Appearance and Ability (SF1), $t(241) = -1.155$, $p = .25$, $\eta^2 = .01$ (male $M = -.08$, $SD = 1.03$, female $M = .07$, $SD = .97$); Aggressive and Assertive Behavioural Style (SF2), $t(241) = 1.895$, $p = .059$, $\eta^2 = .02$ (male $M = .13$, $SD = 1.00$, female $M = .12$, $SD = .99$); or Masculine Behavioural Style (SF3), $t(241) = -1.425$, $p = .155$, $\eta^2 = .01$ (male $M = -.10$, $SD = 1.04$, female $M = .87$, $SD = .96$) were found.

Self-Perceptions of Physical Education Pre-Service Teachers
Item Scores

The descriptive statistics for the 26 items for self-perceptions of male and female physical education pre-service teachers are presented in Table 7. Male items generally appear to have higher ratings than the equivalent female items.

Item "How do you perceive yourself to be? Are you….?"	Total		Respondent Gender			
			Male		Female	
	M	*SD*	*M*	*SD*	*M*	*SD*
Intelligent	3.89	.62	3.99	.67	3.79	.57
Attractive	3.39	.72	3.53	.76	3.25	.65
Able-Bodied	4.12	.59	4.22	.55	4.02	.60
Strong Willed	4.02	.62	4.05	.63	3.99	.61
Physically Fit	3.92	.69	4.03	.70	3.82	.67
Intimidating	2.41	.95	2.60	1.00	2.23	.88
Athletic	3.99	.63	4.08	.69	3.91	.55
Thin	3.11	1.01	3.31	1.07	2.93	.93
Competitive	4.16	.73	4.34	.62	4.00	.79
Self-Confident	3.80	.78	4.01	.73	3.60	.77
Muscular	3.20	.86	3.43	.82	2.99	.84
Aggressive	2.53	1.00	2.75	1.02	2.32	.94
Feminine	2.79	1.19	1.92	.86	3.60	.84
Ambitious	3.99	.66	3.97	.65	4.01	.68
Physically Coordinated	4.33	.63	4.46	.57	4.22	.66
Masculine	2.98	1.15	3.78	.76	2.26	.95
Dominant	3.01	.91	3.20	.93	2.83	.86
Appearance	3.02	1.15	3.15	1.12	2.91	1.17
Anorexic/ Bulimic	1.41	.76	1.37	.66	1.45	.84
Independent	4.03	.72	4.02	.72	4.04	.72
Un-approachable	1.77	.89	1.85	.99	1.69	.80
Homosexual	1.26	.57	1.21	.49	1.29	.64
Easy-Going	4.40	.60	4.48	.60	4.33	.60
Pleased with Body	2.45	.90	3.65	.83	3.26	.93
Show Off	2.74	1.06	3.09	1.06	2.42	.96
Sociable	4.34	.66	4.39	.57	4.29	.73

Table 7: Descriptive Statistics (Mean and Standard Deviation) for 26 Self-Perception Items for Male and Female Physical Education Pre-Service Teachers

Exploratory Factor Analysis on Self-Perceptions Male

Principal components analysis (PCA) on the self-perceptions of male physical education pre-service teacher items revealed three factors that were considered appropriate for analysis: Perceived Appearance and Ability (PM1); Aggressive and Confident Behaviours (PM2); and Independence and Intellect (PM3). The factor loadings and percentages of explained variance are presented in Table 8.

Item	Factor Loading		
	PM1 Perceived Appearance and Ability	PM2 Aggressive and Confident Behaviours	PM3 Independence and Intellect
Athletic	.84		
Physically Fit	.81		
Able-Bodied	.65		
Pleased with their Body	.62		
Thin	.57		
Attractive	.47		
Strong Willed	.46		.51
Muscular	.43		
Intimidating		.82	
Dominant		.74	
Show Off		.73	
Aggressive		.66	
Independent			.73
Ambitious			.65
Self-Confident			.58
Intelligent			.51
Explained Variance (%)	**13.7**	**10.5**	**9.7**

Table 8: Factor Loadings for Exploratory Factor Analysis of Male Self-Perceptions

Exploratory Factor Analysis on Self-Perceptions Female

Principal components analysis (PCA) on the self-perceptions of female physical education pre-service teacher items revealed three factors: Strong Willed Behaviour (PF1); Presentation and Appearance (PF2); and Aggressive and Dominant Behaviour (PF3). The factor loadings and percentages of explained variance are presented in Table 9.

Item	Factor Loading		
	PF1 Strong Willed Behaviour	PF2 Presentation and Appearance	PF3 Aggressive and Dominant Behaviour
Ambitious	.74		
Strong Willed	.68		
Able Bodied	.59		
Dominant	.44		.56
Pleased with their body		.80	
Attractive		.67	
Self-Confident		.65	
Thin		.58	
Aggressive			.77
Intimidating			.66
Masculine			.56
Show Off			.45
Explained Variance (%)	**8.8**	**8.6**	**8.3**

Table 9: Factor Loadings for Exploratory Factor Analysis of Female Self-Perceptions

Relationships between Stereotypes and Self-Perceptions of Physical Education Pre-Service Teachers
Relationships between Stereotype and Self-Perception Items for Male and Female Physical Education Pre-Service Teachers

The relationship between stereotypes and self-perceptions for male physical education pre-service teachers and the relationship between stereotypes and self-perceptions for female physical education pre-service teachers were investigated using Pearsons product-moment correlation coefficients. The results of this analysis are presented in Table 10. For male pre-service physical education teachers, 19 correlations were significant at p<.01,, and for female pre-service physical education teachers there were 17 significant correlations at p<.01, indicating that number of self-perception and stereotype items were related for both genders.

Item	Male	Female
Intelligent	-.06	.14
Attractive	.44*	.10
Able-Bodied	.37*	.20
Strong Willed	.33*	.26*
Physically Fit	.41*	.40*
Intimidating	.43*	.09
Athletic	.13	.32*
Thin	.30*	.14
Competitive	.23*	.29*
Self-Confident	.29*	.12
Muscular	.12	.25*
Aggressive	.40*	.42*
Feminine	.30*	.29*
Ambitious	.31*	.35*
Physically Coordinated	.30*	.22
Masculine	.39*	.32*
Dominant	.34*	.27*
Appearance	.44*	.43*
Anorexic/Bulimic	.43*	.22
Independent	.43*	.26*
Unapproachable	.34*	.32*
Homosexual	.32*	.23*
Easy-Going	.23	.22
Pleased with Body	.22	.48*
Show Off	.48*	.49*
Sociable	.23	.23*

Table 10: Pearson Correlations between 26 items for Stereotypes and 26 items for Self-Perceptions
*p < .01

Stereotype and Self-Perception Factors for Male Physical Education Pre-Service Teachers

The relationships between the male stereotype factors and male self-perceptions factors are presented in Table 11. A significant moderate positive correlation was found between the Physical, Assertive and Aggressive Behaviour stereotype factor (SM1) and the Aggressive and Confident Behaviour self-perception factor (PM2) and a small, but significant, positive relationship between the Physical and Self-Presentation stereotype factor (SM2) and the Perceived Appearance and Ability stereotype factor.

| Factor | | Stereotype | |
		SM1 Physical, Assertive and Aggressive Behaviour	SM2 Physical and Self-Presentation
Self-Perception	PM1 Perceived Appearance and Ability	-.11	.29*
	PM2 Aggressive and Confident Behaviour	.42*	-.06
	PM3 Independence and Intelligence	.01	.08

Table 11: Pearson Correlations between Male Stereotype Factors and Male Self-Perception Factors
*p<.01

Stereotype and Self-Perception Factors for Female Physical Education Pre-Service Teachers

The relationships between the female stereotype factors and male self-perceptions factors are presented in Table 12. A small significant positive correlation was found between the Aggressive and Assertive Behavioural Style stereotype factor (SF2) and the Aggressive and Dominant Behaviours self-perceptions factor (PF3).

| Factor | | Stereotype | | |
		SF1 Physical Appearance and Ability	SF2 Aggressive and Assertive Behavioural Style	SF3 Masculine Behavioural Style
Self-Perception	PF1 Strong Willed Behaviour	.15	-.15.	-.07
	PF2 Presentation and Appearance	..01	.09	.15
	PF3 Aggressive and Dominant Behaviours	.05	.28 *	.19

Table 12: Pearson Correlations between Male Stereotype Factors and Male Self-Perception Factors
*p<.01

Discussion

This study examined the stereotype and self-perceptions of physical education pre-service teachers, exploring how physical education pre-service teachers stereotype and perceive themselves, if there were differences in the stereotypes and self-perceptions between males and females, and if there were relationships between what the physical education pre-service teachers believed stereotyped them and how they perceived themselves. Physical education pre-service teachers generally described the stereotypical physical education pre-service teacher as having to play sport, be fit, be outgoing, socialise by drinking, and going out, and not smoking as much as other university students. Male physical education pre-service teachers were seen as being physically coordinated, physically fit, competitive, sociable, able-bodied, self-confident, masculine, easy-going, and muscular and not being feminine, homosexual, or anorexic/bulimic. Female physical education pre-service teachers were seen as being sociable, physically fit, able-bodied, and physically coordinated.

Two factors emerged for the overall physical education pre-service teacher stereotype, which were described as Sociable and Health and Lifestyle factors. These two factors accounted for 48.3% of the variance. The stereotype of the male physical education pre-service teacher, comprised two factors, labelled Physical, Assertive and Aggressive Behaviour and Physical and Self-Presentation factors. These two factors accounted for 24.2% of the variance. Female physical education pre-service teachers rated the male Physical and Self-Presentation stereotype factor significantly higher than male physical education pre-service teachers. The stereotype of female physical education pre-service teachers comprised three factors, labelled as Physical Appearance and Ability, Aggressive and Assertive Behavioural Style, and Masculine Behavioural Style. These three factors accounted for 28.7% of the variance.

Male physical education pre-service teachers tended to view themselves as being easy going, physically coordinated, sociable, competitive, able-bodied, athletic, strong willed physically fit, independent, and self-confident and not being feminine, unapproachable, anorexic or bulimic, or homosexual. The self-perception of male physical education pre-service teachers comprised three factors, labelled Perceived Appearance and Ability, Aggressive and Confident Behaviours, and Independence and Intellect. These three factors accounted for 33.9% of the variance.

Female physical education pre-service teachers tended to view themselves as being easy going, sociable, physically coordinated, competitive, and able-bodied and not being unapproachable, anorexic/bulimic, or homosexual. The self-perception of female physical education pre-service teachers comprised three factors, labelled Strong Willed Behaviour, Presentation and Appearance, and Aggressive and Dominant Behaviour. These three factors accounted for 25.7% of the variance.

Significant relationships were found between the male stereotype and self-perception factors. The Physical and Self-Presentation stereotype factor was moderately related to the Perceived Appearance and Ability self-perception factor. In addition, the Physical, Assertive and Aggressive Behaviour stereotype factor was related to the Aggressive and Confident Behaviours self-perception factor. Significant relationships were also found between the female stereotype and self-perception factors. The Aggressive and Dominant Behaviour stereotype was related to both the Aggressive and Assertive Behavioural Style self-perception factor and the Masculine Behavioural Style self-perception factor.

Stereotypes of Physical Education Pre-Service Teachers

The stereotypes of physical education teachers have the potential to influence societal perceptions of physical education and physical educators (Duncan et al., 2002). Stereotypes of physical educators from outgroup perspectives have been reported to present a picture of the physical educator as having characteristics including being: fit, healthy, athletic, and able-bodied (Tinning et al., 2001), masculine, male, Caucasian (Nettleton, 1985), organised, unintelligent, muscular, bullies, patronising, and aggressive (Duncan et al., 2002; Harris & Griffin, 1997; McCullick et al., 2003.)

An outgroup perspective is more likely to have negative views of the stereotyped group in comparison to their own ingroup (Coon, 1988; Hogg & Vaughan, 2008), thus it may be expected that there would be some differences in the way the physical education pre-service teachers stereotype pre-service teachers and how an outgroup may characterise physical educators. Although this is the stereotypical view of the physical educator, not specifically the physical education pre-service teacher, the ingroup views presented in this study suggested that physical education pre-service teachers generally described the stereotypical physical education pre-service teacher as having to play sport, be fit, be outgoing, socialise by drinking, and going out, and not smoking as much as other university students.

Two factors, Sociable, encompassing socialising by drinking, partying, drinking in excessive amounts, being loud, being outgoing, and socialising in big groups and Health and Lifestyle, encompassing being fit, playing sport, being outgoing, and not smoking summarised the stereotype of the physical education pre-service teacher. Thus, there is apparent commonality between the ingroup and outgroup views, however, the ingroup view seems to be more positive, with lower attribution of unintelligent, bullying, and patronising characteristics to the physical education pre-service teacher.

The stereotypes of physical educators in popular culture also appear to be gendered (Duncan, et al., 2002; McCullick, et al., 2003; Tinning et al. (2001). In this study, male physical education pre-service teachers were seen as being physically coordinated, physically fit, competitive, sociable, able-bodied, self-confident, masculine, easy-going, and muscular and not being feminine, homosexual, or anorexic/bulimic. The stereotype was described as comprising two factors Physical, Assertive and Aggressive Behaviour, comprising being aggressive, intimidating, a show off, dominant, self-confident, muscular, masculine, and competitive, and Physical and Self-Presentation factors, comprising being muscular, masculine, athletic, physically fit, able-bodied, physically coordinated, and attractive. Female physical education pre-service teachers were seen as being sociable, physically fit, able-bodied, and physically coordinated. The stereotype comprised three factors, Physical Appearance and Ability, encompassing being physically fit, athletic, able-bodied, attractive, thin, and physically coordinated; Aggressive and Assertive Behavioural Style, encompassing, being a show off, intimidating, unapproachable, and aggressive; and Masculine Behavioural Style, encompassing being aggressive, masculine, feminine, muscular and dominant.

Self-Perceptions of Physical Education Pre-Service Teachers

How physical educators or physical education pre-service teachers view themselves has not been extensively researched. It may be that how an individual view themselves influences their choices in terms of entering the physical education profession and or continuing. That is, the socialisation process of individuals into physical education may be affected by stereotypical views of who is appropriate to become physical education teachers.

Those who do not identify with physical education or the type of people involved in physical education are not likely to enter or persist in physical education (MacDonald et al., 1999; Spittle et al., 2009).

Male physical education pre-service teachers rated themselves highest on the items related to being easy going, physically coordinated, sociable, competitive, able-bodied, athletic, strong willed physically fit, independent, and self-confident and not being feminine, unapproachable, anorexic or bulimic, or homosexual. The self-perception of male physical education pre-service teachers comprised Perceived Appearance and Ability, Aggressive and Confident Behaviours, and Independence and Intellect. Similarly, female physical education pre-service teachers tended to view themselves as being easy going, sociable, physically coordinated, competitive, and able-bodied and not being unapproachable, anorexic/bulimic, or homosexual. The self-perception of female physical education pre-service teachers comprised Strong Willed Behaviour, Presentation and Appearance, and Aggressive and Dominant Behaviour.

These self-perceptions of both males and female physical education pre-service teachers appear to match fairly closely with the stereotypes of physical education pre-service teachers. Perceiving themselves to be and identifying as a member of the physical education community may be related, to some extent, to similarities between how physical education pre-service teachers view themselves and their peers.

Relationship between Stereotypes and Self-Perceptions of Physical Education Pre-Service Teachers

The previous research on physical educator stereotypes is lacking in the examination of possible relationships between stereotypes of social groups and the perceptions of the ingroup members in the field of physical education. The current study found strong positive correlations between the stereotypes and the self-perceptions of the male and female physical education pre-service teachers. These results relate to the theories of ingroup identity, social identity theory, socialisation and recruitment (Hogg & Vaughan, 2008), in that a person attracted to a group will share some characteristics, values, behaviours and beliefs with other members of the group.

As stereotypes are the "set of beliefs about the personal attributes of a group of people" (Stroebe & Insko, 1989, p. 5), relationships between stereotypes of physical education pre-service teachers and the physical education pre-service teachers' self-perceptions should be expected. We found significant relationships stereotype and self-perception factors, and the factors that correlated seem to make intuitive sense. That is, for males the relationship between the Physical and Self-presentation stereotype factor and Perceived Appearance and Ability self-perception factor and the relationship between the Physical, Assertive and Aggressive Behaviour stereotype factor and the Aggressive and Confident Behaviours self-perception factor, indicate some correspondence between the stereotypes and self-perceptions in these areas. For females as well, the relationship between the Aggressive and Dominant Behaviour stereotype and both the Aggressive and Assertive Behavioural Style self-perception factor and the Masculine Behavioural Style self-perception factor indicates association between the stereotyped behaviours and self-perception of behaviour. The correlations were significant, but only moderate to small, indicating some connection between the stereotypes and self-perceptions, but not an extremely close relationship. Thus there appears to be some variation in the way that the ingroup members perceive the stereotype of the physical education pre-service teachers and how they view themselves.

Very few differences were found between stereotypes and self-perceptions for genders, suggesting that stereotypes and self-perceptions were not different. Female physical education pre-service teacher did rate the male Physical and Self-Presentation stereotype factor significantly higher than male physical education pre-service teachers. This alludes to females seeing male physical education pre-service teachers as being more muscular, masculine, athletic, physically fit, able-bodied, physically coordinated, or attractive than male physical education pre-service teachers did.

Future research may wish to examine the stereotypes and self-perceptions of recruits into physical education pre-service teacher programs before they begin their course or those in school who may be considering a career in physical education to explore this socialisation process in more detail. In addition, qualitative research may be used to explore these choices and also the relationships between how physical education pre-service teachers view themselves and their peers and how well they perceive that they "fit the look" of a physical educator. Research on the professional education phase of teacher socialisation, may be warranted to examine the differences in self-perceptions and stereotypes according to the experience of the physical educator, for example, those entering, those midcourse, those at the end of the course, and those out teaching.

Limitations

There are a number of limitations of the current study that should be considered when interpreting the findings and conclusions. Self-report questionnaire data is potentially subject to a social desirability bias in responses with participants tending to provide answers that make the respondent look good (Paulhus, 1991). In addition, self-report data can be subject to item demand (e.g. items may convey hidden cues on how to answer them), common scale formats (e.g. Likert scales), and consistency motifs (e.g. propensity for participants to maintain consistency in their responses) (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The items developed for the questionnaire were based on previous research on stereotypes of physical education teachers (e.g., Harris & Griffin, 1997; McCullick, et al., 2003; Nettleton, 1985; Tinning, 1990; Tinning et al., 2001). This allowed a comparison with outgroup views of physical educators, but may mean that there are descriptors of stereotypes or self-perceptions that physical education pre-service teachers believe that were not included on the questionnaire. Thus, the questionnaire may not provide a complete view of the stereotype or self-perceptions of physical education pre-service teachers. Further research using open-ended questions and qualitative designs may provide more insight into the stereotypes and self-perceptions of physical education pre-service teachers.

There are possible limitations with the sample used. The sample, although of a good size, was limited to students from one regional University, in Australia, and therefore may have limited generalisability to all physical education pre-service teachers. Although the sample was the majority of physical education pre-service teachers in the degree course, not all students in the degree completed the questionnaire. It may be that those who did not complete the questionnaire were qualitatively different from those who did. The sample had more first years than any other year level, so may be biased towards the views of this cohort, although the only significant difference found between year levels on was on the sociable stereotype factor for males where third and fourth year physical education pre-service teachers rated it higher than first year students.

Future Research

There are a number of future research directions that would extend the findings of this exploratory study. For example, longitudinal approaches to studying the socialisation process in physical education teacher education programs to explore how they change over time and the influences on these self-perceptions would add substantially to our understanding of physical education pre-service teachers. As outlined earlier, exploring recruitment or anticipatory socialisation, by sampling students in secondary schools before they enter the physical education teacher education program or during the first stage of socialisation may add further insight to the socialisation process in physical education teacher education and the relationships between stereotypes and self-perceptions.

As most previous studies from an outgroup perspective have focused on physical education teachers and not physical education pre-service teacher (e.g., Duncan et al., 2002; Harris & Griffin, 1997;McCullick et al., 2003; Nettleton, 1985), an outgroup perspective of physical education pre-service teachers would be interesting to explore. For example, investigating how other university students view physical education pre-service teachers, because their view could be quite different from the ingroup view presented in this study. Also, because research on physical education teachers has tended to present an outgroup perspective, studies of physical education teachers, rather than physical education pre-service teachers, from an ingroup perspective would add to our understanding of how physical education teachers view themselves and their profession.

An exploration of how self-perceptions and stereotypes influence the self-confidence, beliefs, and behaviours of physical education pre-service teachers would extend this research further, for example, whether physical education pre-service teachers who don't fit the image or model of a physical educator (Tinning et al., 2001) experience more difficulties than those who do.

Conclusion

This study has provided an insight into the ways that physical education pre-service teachers identify themselves as physical educators and also how they characterise their peer group. Importantly, this study has explored an ingroup perspective of physical education pre-service teachers. This view appeared to be somewhat consistent with outgroup views, however, the ingroup view seems to be more positive, with lower attribution of unintelligent, bullying, and patronising characteristics to the physical education pre-service teacher. Sociable and Health and Lifestyle factors emerged in describing the stereotype of the physical education pre-service teacher. We found some relationship between the stereotypes of physical education pre-service teachers and the self-perceptions of physical education pre-service teachers, indicating that the way physical education pre-service teachers view themselves and their peer group may be somewhat consistent.

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