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A study of multidimensional physical self-concept and values among adolescent boys and girls

Thesis for the degree doctor rerum politicarum

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Abstract

Gender seems to play a decisive role in adolescent's physical self-concept and values. Boys for example score higher than girls on physical self-concept, and they also place more importance on doing well in sports compared to girls. In the present dissertation the focus has been on gender differences in adolescent's physical self-concept and values.

Self-concept research has more recently suggested that physical self-concept is multidimensional, and one measure that has been developed to measure multidimensional physical self-concept is The Physical Self-Description Questionnaire (PSDQ). This measure consists of nine specific domains as well as global physical and global self-esteem. Few physical self-concept instruments have been translated into Norwegian, and certainly not recently. In the present dissertation, one aim *(Study I)* therefore was to translate the Australian PSDQ into Norwegian and to test this measure in a Norwegian population. The factor structure was satisfying and indicates that the Norwegian version of the PSDQ is a useful instrument for measuring multidimensional physical self-concept in a Norwegian sample. Furthermore, the PSDQ also seem to be a valuable research tool among children as young as 10 and 11 years of age, especially when a five-point respond scale is used.

A second aim *(Study II)* was to explore whether gender differences in multidimensional physical self-concept could be found, and if differences were found, did they run along gender-stereotypical lines. Not surprisingly, boys scored higher than girls in strength, sports competence, physical activity, and endurance. However, girls did not score higher than boys on flexibility that is gender stereotyped as a typical feminine feature. Boys were also significantly more positive than girls when describing their global self-esteem, global physical, body fat, coordination and health.

These differences in physical self-concept are not necessarily based on biology, but may just as well be a result of general gender stereotypical attitudes, and therefore the third aim *(Study III)* of the present dissertation was to investigate whether gender differences emerged regarding to what boys and girls emphasized concerning physical attributes; Appearance (-strength, -slender, -good looking face, -good looking body) as well as Strength, Endurance, Sports Competence, Flexibility, Masculinity and Femininity. The results showed that boys rated appearance strength, sports competence, endurance and strength as significantly more important to them compared to girls, whereas girls rated appearance good looking face and appearance slender significantly more important to them than did boys. Boys

and girls also differed in sport involvement. Whereas more boys participated in sports traditionally characterized as masculine, more girls participated in typically feminine sports.

Neither gender differentiated beliefs, nor self-conceptions develop in a vacuum, and ample evidence documents that significant others may contribute to the shaping of these beliefs and self-perceptions over time. Parents do for example treat boys and girls differently when it comes to physical activity and sport, and such attitudes could very well influence how adolescent boys and girls come to rate the importance of different characteristics. The fourth aim *(Study IV)* in this thesis was therefore to investigate whether boys and girls differed in which physical features they perceived as important to their significant others. The results revealed gender differences in how boys and girls perceived significant others' values. The major differences between boys and girls were evident on the strength and appearance strength dimensions. Furthermore the results demonstrated a gender variation in the relation between adolescents own perceptions of different physical features and significant others perception of the same physical qualities (as perceived by adolescents).

In conclusion, the present dissertation has demonstrated that what we think of as conventional stereotypes do exist in adolescent boys' and girls' perceptions today. This dissertation suggests that the kind of physical features boys and girls come to rate as important is influenced by social expectations and role models. These expectations may further influence their physical self-concept and manifest in their participation and involvement in differing sport activities. These findings highlight that a more conscious view of gender is required in school and sport settings.

Preface

The present work was carried out at the Norwegian University of Science and Technology (NTNU) during the years 1999 - 2005, and was financed in the form of a scholarship. I am grateful to the University for providing financial support and giving me the opportunity to do this work.

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Anne Torhild Klomsten

Introduction

Let me start with two distinct memories that are related to my childhood. As both of them are vividly remembered, I believe they possess emotional significance and hence, relevance for the underpinnings of the present thesis. The first goes back to when I was a little girl in the 1970s. There is no doubt my physical childhood was gendered, and I remember particularly two events that really upset me because boys and girls were treated differently. The first event was an informal cross-country competition, in which all children in the neighbourhood were invited to participate. After the competition all children received rewards, and in my opinion a strange thing happened. Despite completing exactly the same distance, boys and girls received different rewards. Whereas the girls got a paper bag with sweets, cookies and fruits, the boys got a nice blue car made of paper with letter cookies within. When I asked why the boys got a car, the answer was; "That's because they are boys and they like playing with cars." Well, so did I.

The second memory was tied to an experience that occurred some time later. My cousin and I spent a lot of time playing together. When we were about eight years old both of us got new bikes. However, I was confused that his bike was different from mine. I really liked the shape of my cousin's bike, and I always thought that the "boy's bike" with a metal bar across the top of frame looked better than mine that had the metal bar going from the handlebars down the bike's structure to near the pedals' attachment to the frame. To me, "the boy's" bike invited more physical activity, in that you had to throw your leg and foot over the frame. However, it did not matter how much I wanted a bike like the one my cousin had, I did not get one. My question about why my cousin had a different bike shape from mine was answered with "That's because he is a boy and you are a girl, it is just the way it is."

Most people do not raise critical questions about these gender differences instead they are usually taken for granted. However, I figured out that gender differentiation between boys and girls in the physical context could not be based purely on biology, because performances were similar for both skiing and bike cycling. Thus, in my opinion they needed a different explanation. I believe that perceptions about what is for instance regarded as appropriate behaviors for boys and girls respectively may be created by the social environment. These beliefs colours not only our perception about ourselves and the limitations we impose on ourselves, but also how others view our performance or our capacity.

As time passed, I grew up and we entered the 21st century. Today, both males and females are active participants in the sport world, young girls play in soccer leagues alongside

young boys, both men and women finish triathlons – in all age categories, and more women seek adventurous activities like base jumping, sky diving, and polar expeditions. One might think that gender differences in the physical domain are viewed more broadly and the conventional stereotypes are something that belongs in the history books, however, the present dissertation indicates – this is not the case.

Research has demonstrated that boys and girls differ in physical self-concept, in that boys score higher than girls when they describe their own physical appearance and competencies. Furthermore, boys and girls also rate values within sport differently. To boys for example, doing well in sports is much more important than to girls. These differences are not assumed to be purely biologically based, and in my opinion they may alternatively be explained in terms of gender stereotypes.

Historically, sport and exercise have generally been thought of as a male domain, and if these attitudes still exist, they might influence boys and girls responses on physical self-concept and values in a stereotypical way. The main aim of the present thesis, therefore, was to carry out a theoretical and empirical investigation of multidimensional physical self-concept and values among adolescent boys and girls, and to explore whether gender differences are still present.

In self-theory, two prominent self-theories exist, namely the self-concept and self-efficacy tradition. Although, the present thesis is based on theoretical arguments from the self-concept tradition, self-efficacy will also be shortly described because of some important similarities and differences between these two traditions. Important in the self-concept tradition, is the historical development from unidimensional to multidimensional and hierarchical perspectives of self-concept, and this will be presented together with key antecedents to self-concept formation. Empirical evidence demonstrates differences in self-concept between boys and girls, and some of this research will be described.

When it comes to gender differences in self-concept, most researchers seem to agree that they run along gender stereotypic lines. It is for example suggested that boys are more positive than girls on self-concept in mathematics, science, and physical competence that are typically stereotyped as male domains whereas girls are more positive than boys on self-concept in areas that are stereotyped as female domains.

Gender stereotypes and how certain features and activities come to be tied to males and females respectively, and described as masculine or feminine will thus be discussed in the next section. Conventional stereotypes such as masculinity and femininity have received much criticism, and this criticism is closely tied to how gender is conceptualized. Therefore

some broad guidelines of gender research in psychology as well as contemporary views from gender theory will be presented. When looking at children's socialization, a number of studies have demonstrated that boys and girls are treated differently and in accordance with conventional stereotypes both in family settings, as well as in school and in the media, and some of this research will be reviewed.

Several theories try to explain gender development, and in the next part, I will give a short presentation of different perspectives on gender typing. However, the main focus will be on Expectancy – value theory that incorporates values as important and also holds that the social context influences individuals with regards to gender stereotyping.

After this comes a definition of sport as used in the present thesis. In order to understand the unequal and complex relationship between men and women in sports some elements may be of especially important, among them considered here is women's participation in sport historically, power relations and physical differences between men and women. The theory section ends with the study objectives and research questions.

In the methodology section I will describe the data material and the statistical analyses that are used in the different studies. Next follows results and summary of the four studies on which the present dissertation is based upon. The thesis ends with a general discussion that also acknowledges the limitation of the research and suggestion for future research as well as some practical implications.

Self theory

Self theory describes and explains different thoughts individuals hold about themselves These beliefs are for example what kind of person he/she is, how satisfied he/she is with him/her selves, how confident he/she feels to successfully perform given tasks, and how capable he/she is compared to others (Skaalvik & Bong, 2003). Because these beliefs rather than objective competence and characteristics determine individuals behaviours in different contexts they are assumed to be important.

The notion of self-concept is attractive in that researchers believe that it is an influential predictor for important outcomes, such as academic achievement (Marsh, 1993). Also, self-concept has been treated as an important outcome in itself because of its close ties with psychological well-being (Paradise & Kernis, 2002). Self-concept may also predict motivation tendencies as individuals seek behaviors in areas of competence to maintain or

enhance self-perceptions. This will have importance for boys and girls for example when they feel and describe their physical self, and which activities they choose to participate within a physical context.

Two prominent self theories are on the one hand self-concept theory, and on the other hand self-efficacy theory. Although, the present thesis is based on theoretical arguments from the self-concept tradition, self-efficacy will also be described to some extent due to important differences and similarities between these two traditions.

Self-concept

The self-concept construct is old and has its roots in the field of psychology, although it is widely used in many disciplines such as for example social sciences. William James (1890) is generally recognized as the first to develop a theory of the self-concept. Marsh, Byrne, and Shavelson (1992) argue that to James, four notions were of particular importance: a) his distinction between the I (self-as-knower or active agent) and Me (self-as-known or the content of experience); b) his multifaceted, hierarchical nature of self-concept; c) he argued that the social self was based on the recognition individuals receive from peers or a generalized social self that represents the evaluations from a higher authority, and d) his definition of self-esteem as the ratio of success to pretensions and a function of an activity's subjective importance. Despite the rich beginning by William James, advances in theory, research, and measurement of self-concept were slow until the last 20-25 years where there has been development in self-concept research, both in self-concept theory and in self-concept methodology (Marsh et al., 1992).

Self-concept is broadly defined as a composite view of oneself. It is a general term that includes different aspects of self-perception. For instance, Rosenberg (1979, p. 7) defined self-concept as "…the totality of the individual's thought and feelings having reference to himself as an object." As we have conceptions of our self in different areas, we might therefore speak of self-concepts in plural. Self-concept is furthermore suggested to be formed through experiences with the environment (Shavelson, Hubner, & Stanton, 1976, p. 411), and self-concept researchers typically emphasize that self-concept is formed through reflected appraisals from significant others, social comparisons, and self-attributions. Therefore, as suggested by Skaalvik (1997) we have conceptions of ourselves in all areas where we gain experience.

Self-concept is suggested to range from specific conceptions (e.g., "I am good at running") to more general domain conceptions (e.g., "I am good at sports"). In addition self-

concept researchers have also studied "global" self-concept or global self-esteem (e.g., "I am satisfied with who I am"). Self-esteem is generally viewed as a global and relatively stable evaluative construct reflecting the degree to which an individual feels positive about him- or herself.

Although self-concept is suggested to include descriptions of the self, self-concept is also believed to consist of an evaluative component (Harter, 1996; Skaalvik, 1997). All since William James' time, the self has been argued to be a cognitive/evaluative system in which the individual cognitively compared his/her successes or failures in various domains to the importance attached to such successes or failures. The outcome of this equation, as argued by Harter (1996), determines the global level of self-esteem.

Skaalvik (1997) argues that in achievement related self-concepts it is not possible to make a clear distinction between self-description and self-evaluations. This can be explained by the self-conception "I learn different sport skills easily" that must necessarily include both descriptive and evaluative components. The descriptive component is the knowledge the individual has about him/herself in different areas such as the belief that an individual have that he/she can learn sport skills easily. This belief about sport skills learning must however include an evaluation process. When the individual describes him/herself as "good at sports" this description can not be distinguished from the person's evaluation of his/her sports abilities. Therefore, self-concept is both descriptive and evaluative.

This descriptive/evaluative component includes beliefs about both roles and characteristics as suggested by Skaalvik (1997). A certain individual can for example have a role as an athlete. Within, this role this individual perceives him/herself to have certain characteristics, for example significant abilities to run fast or to be strong.

The descriptive/evaluative component can be distinguished from the affective element exemplified by "I am proud of my sports abilities," or "I hate sports." Both roles and characteristics are believed to be socially ranked and valued. A person may like or dislike the perception he/she has of him/herself in a particular area, and these descriptive and evaluative elements may give rise to emotional or affective reactions like pride and shame. This affective perspective is believed to be tied to socially accepted values and ideals. In our society the ability to achieve competently is highly valued, thus most people who regard themselves as competent will be positive about that aspect of their self-description. However, there is still no automatic relation between the affective and descriptive elements of self-concept and this will for example be influenced by what is regarded as important areas to the individual to achieve. Although good soccer abilities are highly valued among some groups in Norway, it need not

bother a specific individual that he/she does not perceive him/herself as having good abilities in soccer. This is because it is not important to be a good soccer player nor to him/her or to his/her friends. Gender is assumed to have special relevance in this regard. In our society boys and girls early learn in which gender category they belong, and these gender categories are connected to special characteristics or features. Males are often expected to show 'masculine'[1] characteristics and to choose traditional 'masculine' sport activities, whereas females are expected to present 'feminine' features and to choose traditional 'feminine' sports. Consider a boy who enjoys rhythmic gymnastics, and to whom participation in this sport is important. If he gains no respect for his activity choice from his social milieu this will probably not give him any positive emotions.

From unidimensional models to multidimensional and hierarchical models

Early perspectives on the self-system viewed self-concept in a simplistic and unidimensional way (see Byrne, 1984; Marsh, 1990a). This unidimensional approach assumed that the individual's self-assessments in a variety of contexts such as academic, social, physical, and moral was additive and formed an overall or global self-concept. This perspective was for instance defended by Coopersmith (1967) and Marx and Winne (1978) who argued that the facets of self-concept was so heavily dominated by a general factor that the separate factors could not be adequately differentiated.

There are however several problems with this unidimensional approach. For example, one problem with a unidimensional model of self-concept is that it has been given a variety of definitions. Another difficulty with these measures is that they overlook the fact that the impact of particular self-evaluations on global self-esteem is dependent on how important each aspect is to the individual (Rosenberg, 1968, 1979). Also in such measures the meaning of general self-concept changes depending on the particular areas that researchers include in their instruments (Snow, Corno, & Jackson, 1996). According to Marsh and Hattie (1996) there appears to be no support at all for a unidimensional model of self-concept. The lack of clear definition led to the construction of very different instruments for measuring a global self-concept, often labelled self-esteem. Other researchers argue that general self-esteem should be measured separately from area specific self-concepts. These researchers have therefore attempted to measure global self-esteem by using items that do not refer to particular contexts (e.g., Harter, 1979; Marsh, 1990b; Rosenberg, 1965). Self-esteem in these

[1] Masculinity and femininity will be discussed in the section: Gender stereotypes and gender socialization.

instruments is implicitly defined as general self-acceptance, self-regard or self-worth (Harter, 1993; Rosenberg, 1965).

In the last 20-25 years self-concept researchers have emphasized the multidimensionality of self-concept (Bracken, 1996; Byrne & Shavelson, 1986; Damon & Hart, 1988; Harter, 1982, 1999; Hattie, 1992; Hattie & Marsh, 1996; Shavelson & Marsh, 1986; Yeung, Chui, Lau, McInerney, & Russell-Bowie, 2000). Based largely on the work of Marsh and his associates (e.g., Marsh, 1993), the field has come to recognize that any sound understanding of self-concept and its impact must take into account the multidimensional nature of the construct. This multiple view of self is not new, and was first suggested by James (1890) in his conception of the "empirical self" as consisting of the material self, social self and spiritual self. A further partitioning by James of social self is reflected in his classic and often cited statement that a person "has as many social selves as there are individuals who recognize him" (James, 1890, p. 294).

An appreciation for both global and domain-specific self-evaluations led theorists to speculate on the links between the two types of self-judgments. This, in turn, produced several hierarchical models in which global self-esteem is placed at the top and particular domains and subdomains are nested underneath. One of these hierarchical models is represented by the Shavelson et al. (1976) model that identified two broad classes, academic and non-academic self-concepts. The academic self-concept is further divided into particular school subjects, English, history, mathematics and science. The non-academic self-concept is subdivided into social, emotional and physical self-concept. Physical self-concept is further separated into physical ability and physical appearance. Above the two broad classes we find the general self (global self-esteem) that is at the peak of the hierarchy. Among the four major domains that Shavelson and colleagues proposed (i.e., academic, social, emotional, and physical), academic self-concept was later found to be more highly differentiated than the researchers originally hypothesized. The academic portion of the hierarchy was thus revised to incorporate verbal and math higher-order self-concept factors (Marsh, 1990c; Marsh, Byrne, & Shavelson, 1988). A number of studies provide support for a multidimensional and hierarchical model of self-concept (Marsh, Craven, & Debus, 1991; Marsh & Hocevar, 1985; Marsh & Shavelson, 1985; Yeung et al., 2000). Researchers have in several studies (Marsh, 1986, Marsh et al., 1988; Skaalvik & Valaas, 2001; for a review) demonstrated across age and gender as well as across academic and non-academic settings, the correlation between math and verbal self-concept to be close to zero supporting the notion that self-concept is multidimensional. These findings are contrary to the original Shavelson et al.'s model that suggested that verbal and

math self-concepts combine to form a single, higher-order academic self-concept, and have in fact led to the revision of the original Shavelson et al. model (Marsh & Shavelson, 1985), and the development of The Internal/External Frame of Reference model. This model suggests that individuals form their self-concept judgments in a particular domain by comparing their competence in that domain with the perceived competences of others in the same domain (external, social comparison) and by comparing their own competence in that domain with their own competencies in other domains (internal process). Research in the academic field have refined and extended the Marsh/Shavelson model. Marsh et al. (1988) found that the revised model performed better than the original Shavelson et al. (1976) model for responses from each of three different self-concept instruments.

Whereas most researchers agree on the multidimensional nature of self-concept, some express different views on the hierarchical structure of self-concepts. For example, Harter (1998, p. 579) questioned the validity of self-concept hierarchy, stating that "one has to ask whether the statistical structure extracted does, in fact, mirror the psychological structure as it is phenomenologically experienced by individuals." This issue still needs to be resolved but evidence tends to support the revised hierarchy (Byrne & Worth Gavin, 1996; Marsh & Yeung, 1998a).

The multidimensional perspective reflects the notion that individuals describe/or evaluate themselves in a variety of different life situations or contexts such as academic, social and physical, and that these individual situational self-descriptions or self-evaluations contribute to an overall level of global self-esteem. The multidimensional approach does not assume that each individual's self-evaluation contributes equally and completely to self-esteem, but rather that the individual's self-evaluations combine in unique ways to form the global self-assessment construct. More specifically, this means that by degree one's academic, social, and physical self-concept may contribute to their global self-esteem, however, this may vary from one individual to another depending on how important it is to the individual to succeed in given areas, and on the discrepancy between perception of competence and the importance of success in this area (Harter, 1993; Rosenberg, 1979). For example, to individuals who are active in sports and consider competence in sport as important, and who live in an environment where sporting skills are regarded as having great value, it is anticipated that the physical self-concept, is of particular importance in shaping their global self-esteem. Recent research emphasize the use of specific components of self-concept most appropriate to a particular setting (Marsh, Parada, & Ayotte, 2004), and as Marsh (2002) argues, this concern is particularly relevant in sport or exercise research. Therefore, in the

present thesis, a specific domain of self-concept was focused on, namely boys' and girls' physical self-concept.

Self-efficacy

Within the self-perception literature self-concept and self-efficacy are conceived differently and two separate traditions have emerged: a) the self-concept tradition and b) self-efficacy tradition. These traditions define the constructs of self-perception differently and they also explain the development and the effect of the constructs in different ways. Although the self-concept- and self-efficacy-traditions are different in how they threat these constructs, there are also some important similarities between these two traditions.

Research in self-efficacy can be characterized by its relatively short history compared to self-concept research. Bandura (1977, p. 3) defined self-efficacy as "beliefs in one's capabilities to organize and execute the courses of action required to produce given attainments." Self-efficacy differs from self-concept in that it is concerned less with the skills and abilities one thinks one has but more with what one can do with whatever skills one possesses (Bandura, 1986). Skaalvik and Bong (2003) furthermore suggest some other notable differences between these two constructs: a) Self-concept is oriented toward the past, whereas self-efficacy is oriented toward the future. This can be exemplified by self-concept and self-efficacy items. Whereas most self-concept items begin with the phrase "I can…" "I am satisfied…." or "I have done well…." (see Byrne, 1996) self-efficacy items usually start with "How confident are you that you can….?" or "How well can your…?" (Pajares, Miller, & Johnson, 1999; Skaalvik & Bong, 2003). These examples show that the self-concept wording are directed towards respondents past accomplishments whereas self-efficacy items make respondents to turn their attention against future expectancies. b) Whereas self-concept concentrates on general measurement, self-efficacy is more specific in measurements. Academic as well as physical self-concept has been measured at more general levels. As a result students typically respond about their general feelings of doing well or not so good in given areas. Beliefs of self-efficacy have usually been examined more specifically regarding to levels, and self-efficacy questions focus directly to target performance. c) Self-concept is relativistic, but self-efficacy is more absolute in evaluation of capability. Self-concept researchers claim that self-concept cannot be fully understood if frames of references are ignored (Marsh & Craven, 2000). Thus, self-concept is believed to be dependent on for example social comparison and reflected appraisals. Because required performances and standards against which to assess their confidence are clearly spelled out with regard to most

self-efficacy instruments there is less reason to engage in vigorous social comparison. d) Whereas self-concept researchers not clearly separate distinguishable aspects of self-concept, self-efficacy researchers make distinction between descriptive and evaluative aspects of self-efficacy and the resultant affective and emotional responses e) Self-concept research is more concerned about temporal stability versus self-efficacy researchers have less focus upon stability. To Shavelson et al. (1976) stability was one of the most important characteristics to the self-concept definition. Furthermore, researchers (Marsh & Yeung, 1998b; Shavelson & Bolus, 1982) have reported that general as well as domain specific self-concepts show high stability coefficients that were even stronger than the stability of corresponding achievements. Stability of self-efficacy in comparison has not been investigated systematically.

Despite differences in time orientation, measurement and context specificity, construct composition, and temporal stability, the two belief systems share some important similarities. In both self-concept and self-efficacy, perceived competence in well-defined domains or activities comprises the single most critical element. Furthermore, both self-concept and self-efficacy perceptions are reliably differentiated between domains and activities (Bong, 1997; Bong & Hocevar, 2002; Bracken, 1996; Damon & Hart, 1988; Harter, 1982, 1999; Hattie, 1992; Hattie & Marsh, 1996; Shavelson & Marsh, 1986). Self-concept and self-efficacy beliefs are both tied to specific content areas (Bong, 2002; Joo, Bong, & Choi, 2000; Marsh et al., 1988; Skaalvik & Valås, 1999). Also both academic self-concept and self-efficacy researchers claim that their construct is important both as desirable outcome and as a mediator of academic motivation and performance (Marsh, Walker, & Debus, 1991). A common underlying theme of self-concept and self-efficacy is that perceived self is the major determinant of intrinsic motivation, positive emotion, and performance both in the academic as well as in the sport domain.

Measures

In both the self-concept tradition and the self-efficacy tradition several instruments are developed to measure the different concepts. In the following section some examples of such instruments from both traditions are presented.

Self-concept measures

There exist several instruments that measures self-concept, among these are: a) Rosenberg's New York State Self-Esteem Scale (Rosenberg Self-Esteem) (Rosenberg, 1979); b) Harter's Self-Perception Profile for Children (Harter, 1985); c) Marsh Self-Description Questionnaire

(e.g., Marsh, 1990b, 1990d, 1990e). Although these instruments are not new, they are still widely used. All these instruments are paper-and-pencil self-report questionnaires, and intend to tap individual evaluative attitudes that respondents are able and willing to reveal.

The intent of Rosenberg's Self-Esteem Scale has been to directly measure one's experience of global self-esteem. It was initially intended for use with adolescents, although it has been used both with children and adults. The scale consists of 10 items e.g., "I feel that I have a number of good qualities," "On the whole, I am satisfied with myself," "I take a positive attitude toward myself," "All in all, I am inclined to feel that I am a failure." Individuals respond to these items on a four-point scale ranging from "Strongly agree" to "Strongly disagree." The scale is in particular recommended for those who wish a brief, but psychometrically sound, index of global self-esteem, tapped directly (Wylie, 1974).

The Harter's Self-Perception Profile for Children is a multidimensional instrument constructed to measure both domain-specific evaluations as well as an overall judgment of one's self-worth (Harter, 1985). This scale is designed for children ages eight to 15, and measures five specific domains: scholastic competence, athletic competence, social acceptance, physical appearance, and behavioural conduct, in addition to global self-worth. There are 36 items, six for each subscale, and these are constructed according to a structured alternative format designed to offset children's tendency to give socially desirable responses. Children are asked to respond on items in this way: "Some kids are popular with others their age BUT other kids are not very popular." The first thing a child must do is to decide which of the two statements are most like him/herself and then, for that statement, rate whether it is really true or just sort of true for him/herself. Harter's Self-Perception Profile for children has found to be valuable when testing predictions derived from theory, in program evaluation, and for individual clinical and diagnostic purposes (Harter, 1990).

The Self-Description Questionnaire instruments (Marsh, 1990b, Marsh, 1990d; Marsh, 1990e; Marsh, Barnes, Cairns, & Tidman, 1984) have been developed for preadolescents (SDQ I), adolescents (SDQ II), and late-adolescents and young adults (SDQ III), and they are derived from Shavelson's model of the self-concept. In SDQ I the following eight subscales were identified; physical abilities, physical appearance, relationship with peers, relationship with parents, reading, math, all school subjects, and general self-concept. These scales all consist of eight items and individuals respond on a five-point scale from "False" to "True." Examples of items are; "I can run fast," "I am good at sports," "I am a good athlete," "I have a lot of friends," "I like to run and play hard," "I can run a long way without stopping." This instrument contains distinctions that are not represented in other measures, for example math

and verbal self-concept are separated from each other (Harter, 1990). The SDQ II and SDQ III follow the same basis as SDQ I, however they consist of a six-point-response scale as well more items compared to SDQ I.

Self-efficacy measures

Self-efficacy is the perception of one's ability to perform a task successfully and Bandura (1977, 1986) advocates the use of self-efficacy measures that are specific to particular domains or problems rather than ones that assess global expectations or performance, which are in accordance with self-concept theory. In contrast to self-concept measures questions in self-efficacy measures are related to the future. Self-reports is the most commonly used method in self-efficacy traditions as in the self-concept tradition, and respondents are often asked to mark how much they agree with different statements on a Likert-type response scale. One usual method of measuring academic self-efficacy is to present a problem that is similar to the actual problems students must solve. Students estimate their confidence that they can solve each problem correctly (e.g., Bandura & Schunk, 1981). Pajares et al. (1999) presented an alternative method, in which academic self-efficacy items included written descriptions of problems or tasks in place of actual problems. Examples of such items are "How sure are you that you can write a simple sentence with good grammar?" (Pajares et al., 1999), "How confident are you that you can pass mathematics at the end of this term?" (Zimmerman & Bandura, 1994), "How confident are you that you can successfully solve equations containing square roots?" (Bong, 2002) or "I expect to do very well in a "subject"" (Pintrich & De Groot, 1990). Bandura originally argued that these statements should also contain a barrier since there is no use in asking for self-efficacy expectancies that are not difficult to perform. However, both Bandura as well as other researchers have not included such a barrier in recent self-efficacy items. Self-efficacy measurements are also used in the field of sport and physical activity. For example Ryckman and his colleagues (Ryckman, Robbins, Thornton, & Cantrell, 1982) constructed the Physical Self-Efficacy Scale (PSE) which contains two subscales that provide a more generalized measure of self-efficacy. These subscales assess a) the individual's perceived physical ability and b) physical self-representation confidence. Together they assess efficacy expectations across a variety of physical abilities (e.g., speed, strength, reaction time).

The studies in the present dissertation are built on the self-concept tradition, and next I will focus on physical self-concept and measures developed to measure this concept.

Physical self-concept and physical self-concept measures

The physical self has consistently emerged as a key component of the overall self and is related to a range of important health and achievement behaviours and global self-esteem (Fox, 1998, 2002). This would have significance particularly in cultures that attach importance and status to physical attractiveness and prowess. Several studies have shown that physical competence is of particular importance among young people (Adler, Kless, & Adler, 1992; Buchanan, Blankenbaker, & Cotton, 1976; Chase & Dummer, 1992; Nikitaras & Ntoumanis, 2003). Furthermore, there is considerable consensus that physical appearance is the particular domain that contributes most to global self-esteem during adolescence (Adams, 1977; Harter, 1987; Lerner & Brackeny, 1978; Simmons & Blyth, 1987; Simmons & Rosenberg, 1975). A discrepancy between the importance of being good-looking and one's actual evaluation of one's appearance would appear to be a major concern for children and adolescents, as judged by its impact on their global self-esteem.

With the establishment of multidimensionality, the physical self became a measurable part of comprehensive models together with perceived competencies in other life domains. For example components of physical self were included in both Self-Description-Questionnaire (SDQ-I) (Marsh, Parker, & Barnes, 1985) as well as in The Perceived Competence Scale for Children (Harter, 1982) and The Self-Perception Profile for Children (Harter, 1985). However, with the increasingly heavy reliance by exercise and sport psychologists on aspects of physical self-perception, it became clear that much more comprehensive and systematic studies were needed. As a result the development of measurement of the physical self has advanced rapidly and extensively in the past 20 years. After conducting several studies mainly in college populations (e.g., Fox, 1990; Fox & Corbin, 1989) these researchers developed the Physical Self-Perception Profile (PSPP). This instrument consists of four subscales to assess sport competence, physical strength, physical conditioning, and bodily attractiveness. In addition, to assess physical self-worth a fifth subscale was included. This instrument has recently been used in Sweden, and showed results that were similar to the factor structure suggested by Fox and Corbin (Hagger, Asci, & Lindwall, 2004). Other multidimensional measures have also been developed to address the range of self-perception content in the physical domain. For example Ryckman et al. (1982) developed the Physical Self-Efficacy Scale. Lintunen (1987) developed the Perceived Physical Competence Scale for Children, and Richards (1988) developed a seven-subscale Physical Self-Concept Scale (PSCS).

An even more extreme consequence of regarding physical self-concept as multidimensional is suggested by Herb Marsh and colleges (1994) in their *Physical Self-Description Questionniare (PSDQ)*. The PSDQ contains of nine subscales to measure specific aspects of physical self (*Appearance, Strength, Endurance, Health, Coordination, Physical Activity, Body Fat, Flexibility, Sport Competence*), along with general physical self-concept and general self-esteem. PSPP and PSDQ are two comprehensive physical self-concept instruments that have been developed in line with theoretical frameworks. Both instruments have leaned heavily on the Shavelson et al. (1976) self-concept model. Each instrument is multidimensional in design, and has subscales that allow assessment of perception at two levels of specificity. The PSDQ also includes a general self-esteem scale to provide a third level. Fox (1990) recommends that the 10-item Rosenberg Self-Esteem Scale to be used alongside PSPP to provide a global measure. The two instruments can be used to assess dimensionality and hierarchical and specificity element of the theoretical model and provide opportunities to investigate links with a range of behaviors and attributes (Fox, 1998). Both instruments have been subjected to several analyses demonstrating the PSPP (e.g., Fox & Corbin, 1989) and the PSDQ (e.g., Marsh, 1997; Marsh & Redmayne, 1994; Marsh et al., 1994) to be reliable and valid instruments.

How is self-concept formed?

Researchers seem to agree upon the assumption that self-concept is formed through experiences with and interpretations of one's environment (e.g., Shavelson et al., 1976). Skaalvik (1997) has identified some key elements to how self-concept is formed, and among these are; *frames of reference* exemplified by *social comparison* (external and internal comparisons), *reflected appraisals from significant others*, *mastery experiences* and *psychological centrality*. It can be argued that several of these key antecedents are dependent of frames of references, and this argument will be discussed below.

Individuals make self-evaluations as they interact with significant others in their environment. These self-evaluations require certain criteria or *frames of references* against which one's own performance, behaviour or attributes can be judged (Skaalvik & Bong, 2003). According to Marsh and Craven (2000, p. 75) self-concept is not fully understood if frames of reference are not taken into account. They suggest that …"the same objective characteristics and accomplishments can lead to disparate self-concepts depending on the frame of reference or standard of comparison that individuals use to evaluate themselves."

Major reference frames among self-concept researchers are typically reflected appraisals from significant others and social comparisons. According to *social comparison theory* (Festinger, 1954) individuals appraise themselves by using significant others in their environment as the bases of comparison, when objective standards of comparison are not available. Building on this assumption Marsh and his colleagues (Marsh, 1984, 1987; Marsh & Craven, 2002; Marsh & Parker, 1984) in an educational context have proposed a frame-of-reference model termed "the big-fish-little-pond effect" (BFLPE). This model explains that students compare their abilities with those of their classmates and use social comparison as their basis for forming their self-concept. The BFLPE is assumed to occur when equally able students have lower self-perceived skills and lower self-concepts when they compare themselves with more able students and higher self-perceived skills and self-concepts when they compare themselves with less able students. This BFLPE effect has been supported in a number of academic studies (Marsh & Craven, 2000). In the physical context this effect has been demonstrated by a recent study (Chanal, Marsh, Sarrazin, & Bois, 2005). This effect can influence girls' self-concept. Imagine a girl who runs faster than all other girls in class, but not faster than all other boys. Although this girl is a very fast runner she may suffer in self-concept because her running abilities are likely to be overshadowed by the boys who run faster. This is of course dependent on who this girl compares her self with, and who she includes as her reference group. If this fast running girl uses other girls as her frames of reference, she probably will not suffer in self-concept because she runs faster than all other girls. But, if she includes boys as her reference group this will probably have negative effect on her physical self-concept.

Children compare their competencies to those of their peers in order to discern their level of competence and worth in the physical domain. Social comparison processes are especially salient when discussing competition in sport and physical activity. Social evaluation or comparison of one's skills to others is key elements in the competition process (Scanlan, 2002). Children start to compare themselves with others around 5 or 6 years of age (Cook & Stingle, 1974; Ruble, Boggiano, Feldman, & Loebl, 1980). Throughout the elementary school, there is an increase in comparative behaviour, with the greatest intensity occurring around grades 4, 5 and 6 (Cook & Stingle, 1974). Of particular relevance to the social comparison process that children are going through within this age range is the importance of being competent in physical activities. Being favourably evaluated by their peers in sporting activities is suggested to be especially important to young boys in particular

(Roberts, 1977), thus, in our society, it is difficult to underestimate the importance of competence in physical skills for boys.

Another reference frame, comparative in the form, is when students instead of using an external comparison, use internal comparison. When students evaluate their ability in a particular subject with their own abilities in other subjects independently of how these self-perceived abilities are compared with those of other students represent another base for students' academic self-concept (Marsh, 1986; Marsh, Smith, & Barnes, 1985). The formulation of the Internal/External Frame of Reference Model (I/E model) has recently been included in the self-concept literature. The model (Marsh, 1986) was developed to explain an unexpected lack of correlation between math and verbal self-concept. According to this model, math and verbal self-concept are influenced by both external and internal comparisons.

Skaalvik and Skaalvik (2002) have suggested four types of internal comparisons related to schoolwork. First, a student may compare his or her achievement in different school subjects at a given time. Second, he/she may compare his/her achievements in the same subject over time. A third aspect might be that a student may also compare his or her achievements in different schools subjects with his or her goals and aspirations in the same school subjects. Lastly, a student may also compare his or her achievements in different school subjects with his or her perceptions of effort applied in the subjects in question.

The idea of internal comparison seems especially salient in the physical context and especially in sport. Sport differs from school in that participation is voluntary and individuals can choose which specific activity to participate within. Consider the following example. If an individual evaluate his/her sport abilities in soccer as not as good in gymnastics, it may be easy to continue participation in gymnastics and drop out of soccer. This would not be as easy in school, especially not in compulsory subjects.

The idea of *reflected appraisals* was introduced by Cooley (1902). For Cooley, the self was constructed by casting one's gaze in the social mirror to ascertain the opinions of significant others toward the self. Mead (1934) elaborated on this theme in his concept of the "generalized other," which represented the collective judgments of the significant others in one's life. Research supports the assumption that the individual tends to see him/herself as he/she is seen by others (Rosenberg, 1979; Tice & Wallace, 2003; Trent, Cooney, Russell, & Wharton, 1996). According to Harter (1985) parents, teachers, classmates, and friends represent four sources of regard and support that are especially important. Although people are not very accurate at judging what particular others think of them (Kenny & DePaulo,

1993). Therefore, as suggested by Tice and Wallace (2003) it is unlikely that people's self-concept reflect the views that particular others hold of them, but that they instead do reflect how they are viewed by others in general. Some researchers argue that appraisals from different sources have different impact on self-concept. There is for example growing evidence that parents' beliefs may contribute to individual differences in children's athletic outcomes. Researchers have documented a positive link between parents' perceptions of their children's ability and children's own ratings of their athletic ability (Eccles, 1993; Fredricks & Eccles, 2002; Jacobs & Eccles, 1992). To the degree that significant others let the gender influence their interpretations, they might also contribute to the emergence of gender stereotypes in children's own self-perceptions and expectancies. Research has documented that parents' beliefs can play an important role in the creation of gender differences in the competence and value beliefs of both children and adolescents (Eccles, 1993; Fredricks & Eccles, 2000, 2005). In both childhood and adolescence, parents of sons report that their children have more athletic ability and that sport is more important than do parents of daughters (Eccles, 1993; Eccles, Jacobs, & Harold, 1990; Jacobs & Eccles, 1992). These gendered beliefs of parents account for a significant portion of the variance in the gender difference in children's beliefs (Jacobs & Eccles, 1992).

It is acknowledged that *mastery experience* is important information to the individual (see Skaalvik, 1997), and the most importance source of self-efficacy is authentic mastery experience (Bong & Clark, 1999). Skaalvik (1997) claims prior mastery experience to be probably equally important for development of self-concept although self-concept researchers do not explicitly emphasize mastery experiences. Mastery experiences are not independent of social comparison and reflected appraisals, thus implicit in self-concept theory may be the assumption that mastery experiences affect self-concept through processes such as comparisons with others. Individuals' perception of success/failure must be based on some criterions. These could be objective for example to score a goal in soccer, to swim across a pool without drowning, or to ski down hill without falling. However, in sport the concepts of highest, fastest, and strongest are emphasized and thus the criterion to do better than others is especially relevant in the sport domain.

As stated above, self-concept is assumed to be affected by mastery experiences. However, to a person experiences in some areas are more important than experiences in other areas. These areas are referred to as "*psychologically central*." (Rosenberg, 1968)**,** and to Rosenberg (1968, p. 339) "…a man's global self-esteem is not based solely on his assessment of his constituent qualities; it is based on his self-assessments of qualities that count". Which

qualities or abilities that an individual concern about is to a large extent socially determined. Researchers assert that group membership influences the values and standards by which people evaluate themselves (e.g., Festinger, 1954; Kelly, 1952). Children expect themselves to succeed in areas that are appropriate to their gender, and sport is no exception. Therefore it is believed that for girls it becomes important to succeed in traditional feminine sports and behaviors, whereas for boys it becomes more important to achieve well in typical masculine sport. Harter and Mayberry (1984) have also demonstrated the significance of psychological centrality. In their study, fifth- to seventh-grade students rated both their own competency within five areas as well as the importance of the same different areas (school, sport, social relations, physical appearance, and behaviour). In this study, self-esteem was highest among students who rated their best areas as the most important.

Several of the principles discussed above are thought to be dependent on reference frames. For instance, in a specific achievement context one possible criterion for success might be based upon reflected appraisals from significant others. Evaluation from significant others may therefore function as a frame of reference for how the individual evaluates his/her own performance. Also, as suggested by Skaalvik (1997) mastery experiences are not independent of social comparison and reflected appraisals. Thus, how the individual perceive mastery must also be based on certain criterion or frame of reference.

Gender differences in self-concept

Many researchers have turned their attention to gender differences in self-concept (e.g., Maccoby & Jacklin, 1974; Marsh, 1989a, 1989b; Skaalvik, 1986; Wylie, 1979). It is believed that males when compared to females, perceive themselves more positively and that they are more self-confident, and that females underestimate their abilities compared to males (Bohan, 1973; Dowling, 1982; Prather, 1971). This is however a broad generalization and gender differences must therefore be examined within different aspects of self-concept.

Global self-esteem and gender differences

Early reviews (e.g., Maccoby & Jacklin, 1974; Wylie, 1979) reported few or no gender differences in global self-esteem. However, research analyzed in these reviews suffers from serious methodological problems. Among the problems are lacks of representative samples, mixing of different cultural or ethnic groups in which one might not expect to find the same gender differences, and taking sum totals of self-descriptions in different areas as measures of global self-esteem (see Skaalvik, 1986). Several researchers have criticized this method,

arguing that it overlooks both the multidimensionality of self-concept and the psychological centrality of different dimensions (Harter, 1982). Skaalvik (1986) reviewed research between 1975 and 1985, in which all studies used adequate measures of global self-esteem. These studies revealed consistent gender differences in favour of male students in middle school and high school. This notion is supported by several recent studies (Feingold, 1994; Skaalvik, 1989; Valås & Sletta, 1996; Wigfield and Eccles, 1994) that also demonstrated small gender differences showing boys to score higher than girls on global self-esteem.

Academic self-concept and gender differences

When studying gender differences in general academic self-concept, results have been inconclusive, varying from no differences found, to men scoring higher than women, to women scoring higher than men (Skaalvik, 1990, 1997). However, gender differences in particular areas have demonstrated to be more consistent. Research has consistently shown that by the end of high school boys perform better than girls on mathematics achievement tests, whereas girls typically perform as well as boys in elementary school and perhaps in middle school (Ewers & Wood, 1992; Marsh, 1989b; Skaalvik, 1990). Gender differences in mathematics self-concept also tend to favour boys (Byrne & Shavelson, 1986; Eccles, Wigfield, Harold, & Blumenfeld, 1993; Manger & Eikeland, 1998; Marsh & Yeung, 1998b; Skaalvik & Rankin, 1994; Skaalvik & Skaalvik, 2004).

It is less clear if girls have higher verbal self-concept than boys do (Skaalvik, 1997). However, when differences are found, they tend to favour girls (Byrne & Shavelson, 1986; Halpern, 1992; Marsh & Yeung, 1998b; Reuterberg, Emanuelsson, & Svensson, 1993; Skaalvik & Rankin, 1990, 1994; Wilgenbusch & Merrill, 1999). There is also some evidence that girls achieve better than boys on verbal tests (Halpern, 1992; Reuterberg et al., 1993). More recently, Liu and Wang (2005) found in an Asian context that both genders had comparable overall academic self-concept, but that female students scored higher on perceived academic effort compared to their male counterparts.

The increasing gender differences in mathematics achievement in the high school years are most frequently explained in terms of gender stereotypes and differential socialization patterns (e.g, Eccles, 1987; Fennema & Peterson, 1985; Meece, Parsons, Kaczala, Goff, & Futterman, 1982). Mathematics is viewed as a male domain (Eccles, Adler, Futterman, Goff, Kaczala, Meece, & Midgley, 1983; Fennema & Sherman, 1978) and reading and language (Stein & Smithells, 1969) are viewed as female domains when gender typed. These gender stereotypes may lead to differences in boys' and girls' socialization patterns that

may fail to reinforce adequately girls' positive attitudes, motivation and self-perceptions in mathematics and boys' attitudes, motivation and self-perceptions in reading and other verbal activities. Therefore, girls will be more confident of their verbal abilities than their mathematics abilities, whereas boys will be more confident of their mathematics abilities than their verbal abilities (Eccles, 1987; Eccles, Adler, Meece, 1984). Although boys have better mathematics achievement compared to girls, the boys' mathematics self-perceptions compared to that of girls' may be even higher than can be explained by differences in achievement. In a study by Marsh et al. (1988) gender differences in mathematics self-concept in favour of boys were found to be larger than could be explained by differences in achievement. Marsh (1989b) explains these differences as a result of gender stereotypes and Marsh et al. (1988) suggested a self-fulfilling prophecy that gender stereotypes influence self-concept which in turn influences achievement.

Physical self-concept and gender differences

Physical self-concept is maybe the domain where gender differences have shown to be most consistent. Previous research on children and adolescents has demonstrated consistent gender differences in favour of boys in physical self-concept (Crain, 1996; Crocker & Ellsworth, 1990; Eccles et al., 1993; Fox & Corbin, 1989; Hattie, 1992; Hayes, Crocker, & Kowalski, 1999; Marsh, 1989a, 1998; Marsh et al., 1991). More recent research has also demonstrated gender effects consistent with previous work (Asci, 2002; Cole et al., 2001; Hagger, Biddle, & Wang; Shapka & Keating, 2005). For instance Hagger et al. (2005) demonstrated boys to score higher on domain-level physical self-concept, as well as on the subdomain-level constructs of sports competence, physical condition, body attractiveness, and physical strength. Also Shapka and Keating (2005) found boys to have higher perceptions of their competence in the physical domains of appearance and athletic ability compared to girls. Asci (2002) proved males to score higher compared to females on four of five physical subscales among university students. Although the research mentioned above was carried through using different measures, it is interesting to observe that it shows almost similar results.

Among studies presented here few researchers have used the Physical Self-Description Questionnaire (PSDQ) when investigating gender differences in physical self-concept. Marsh (1998) used this measure in a study when investigating gender differences in physical self-concept among elite and non-athletes in Australia. In general this study also documented that males had higher physical self-concept compared to females.

With respect to gender differences, there tends to be consensus that most differences exist not at the general or global level of self-esteem, instead they vary from domain to domain, generally along gender stereotypical domains (Crain, 1996; Harter, 1999; Marsh, Craven, & Debus, 1998). In other words, gender differences in self-concept are most frequently explained in terms of gender stereotypes and differential gender role socialization patterns (Eccles, 1987; Fennema & Peterson, 1985; Marsh, 1998; Meece et al., 1982).

In certain domains of physical self-concept it may be assumed that males have higher self-concept compared to females, and this would be areas that males achieve higher than girls. For instance after puberty males generally develop more muscle mass, especially in the upper body than do females (AAstrand, Rodahl, Dahl., & Strømme, 2003), and this would mean that they may become stronger than their female counterpart. If they demonstrate more strength, it is not surprising that males demonstrate higher self-concept in this particular domain compared to females. But in other areas where males are not expected to achieve better than females, for instance in health, flexibility and coordination it is not obvious that males should score higher than females on these domain specific physical self-concept. Before puberty, there are also no significant differences between boys and girls when it comes to strength and endurance, indicating that boys and girls can achieve the same (AAstrand et al., 2003). Research has shown that gender differences in self-perception are usually larger than one would expect given objective measures of actual performance and competence (Eccles, Barber, Jozefowicz, Malenschuk, & Vida, 1999), and thus gender differences in physical self-concept, not tied to actual performance may be explained alternatively, and this is when gender stereotyping becomes an interesting explanation. To this matter I will now turn.

Gender stereotypes and gender socialization

Gender differences in physical self-concept are most frequently explained in terms of gender stereotypes and differential socialization patterns (Eccles, 1987; Meece et al., 1982). This section starts with a discussion of gender stereotypes and how different characteristics and activities are tied to men and women, respectively. Next, a selection of research showing that boys and girls are gender stereotyped by significant others in their social milieu is presented. Several theories try to explain how children and youths become stereotyped, and one theoretical framework is of particular relevance in the present dissertation, namely the

expectancy - value theory (Eccles et al., 1983; Eccles, Wigfield, & Schiefele, 1998). This model takes into account the impact gender stereotypes play upon an individual's own perception of gender stereotypes, self-concept and activity choices.

Gender stereotypes

The concept of gender stereotypes refers to structured beliefs people hold about differences between women and men (Archer & Lloyd, 2002; Ashmore & Del Boca, 1979) thus representing those cognitive categories (i.e., masculinity and femininity) used about men and women boys and girls respectively. This dissertation makes the claim that these cognitive categories are tied to an individual's gender rather than to their biological sex, and these differential beliefs about differences are not necessarily based upon actual achievements.

The term gender stereotypes is multidimensional, including information about physical appearance, attitudes and interests, psychological traits, abilities, roles, and occupations (Ashmore, Del Boca, & Wohlers, 1986; Deaux & Lewis, 1984; Guimond & Roussel, 2001). The influence of gender stereotypes is particularly strong because they are both descriptive and prescriptive, and they represent norms of behaviour from which deviations are often punished or seen as deviant (Fiske & Stevens, 1993). Gender stereotypes exist on both a cultural level (i.e., as reflected in the media), and on a personal level (i.e., our implicit personality theory regarding the attributes linked with being female or male) (Ashmore et al., 1986). The content of gender stereotypes varies between and within cultures and social groups, and stereotypes are also likely to vary across time (Chia, More, Lam, Chuang, & Cheng, 1994; Koivula, 1995; Lii & Wong, 1982; Milham & Smith, 1981; Smith & Midlarsky, 1985; Twenge, 1997; Williams & Best, 1990). Nevertheless, there are some cross-cultural universal patterns that can be found more often than others. Studies conducted during the late 1960s and early 1970s in the United States with nearly 1000 males and females (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Rosenkrantz, Vogel, Bee, Broverman, & Broverman, 1968) demonstrated a broad consensus regarding the existence of different personality traits in men as compared to women. This consensus was found regardless of the age, sex, religion, educational level, or marital status of the respondents. More than 75% of those asked agreed that 41 traits clearly differentiated females and males. These traits were divided into 29 male-valued traits (competency clusters) and 12 female-valued traits (warmth-expressive clusters). Females were consistently characterized by traits such as weak, helpless, non-athletic, emotional, passive, neat, gentle, sensitive to others, caring, nurturing and able to devote themselves to others, good at domestic tasks and childrearing, and avoidance of

masculine behaviour. In addition attractiveness has been tied to females (Williams & Bennett, 1975). Males, by contrast were described by characteristics such as aggressive, dominant, athletic, competitive, strong, courage, risk-takes, interested in business, sports and politics, and avoidant of feminine behaviour. After the findings of these classical studies were presented research has continued to report prominence of these different dimensions in the stereotypes of men and women, not only in the United States, but in other cultures as well (Best & Williams, 1993; Dèsert & Leyens, 2006; Smith & Bond, 1999; Smith & Midlarsky, 1985; Spence & Sawin, 1985; Ward, 1985, Williams & Best, 1982, 1990; Zammuner, 1987). Here, it must be emphasized that the majority of research on conventional masculine and feminine stereotypes have been carried out in an American context, and the methods used in these studies do not necessarily picture those (sometimes) large variations we can observe among men and women in behaviour as well as values.

Femininity and masculinity

About 20 years ago, femininity and masculinity were regarded as key concepts within gender stereotyping, referring to the degree to which people see themselves as masculine or feminine given what it means to be a man or a woman in a certain society (Burke, Stets, & Pirog-Good, 1988; Spence, 1985). Thus a man in Western societies would be considered masculine if he inhabited characteristics such as being aggressive, dominant, athletic, competitive, or strong, and participate in activities assigned to males, and a woman would be seen as feminine if she showed features such as being weak, emotional, neat, gentle, sensitive to others, caring, or nurturing, and takes part in activities regarded as appropriate to females.

Societies may differ greatly in expected gender roles, thus the concept of femininity and masculinity may have other meanings in western societies compared to societies in other parts of the world. In this regard, this concept of masculinity and femininity also implies sanctions, of varying degree of severity, that are imposed on individuals who deviate too far from prescribed gender roles (Maccoby, 1987). Although, individuals draw upon the shared cultural conceptions of what it means to be male or female in society, it is possible for one to be female and see herself as masculine, or to be a male and see himself as feminine.

Femininity and masculinity are rooted in the social gender rather than the biological sex, and societal members in a particular society decide what being male or female means (e.g., dominant or passive, brave or emotional). For example, in Norway as well as in other parts of the world women are not allowed to participate in ski flying competitions. Such a rule may be based upon an assumption that women are not capable of performing that kind of ski

jumps through a physical limitation rather than upon actual achievements. This may serve as an excellent example of how certain sport leaders decide what appropriate behaviour for females and males is. Yet some women challenge these rules. They do perform ski jumping which they also do successfully.

Measuring femininity and masculinity

In psychology masculinity and femininity have been measured to assess the degree to which men and women respectively, have internalized gender stereotypic personality traits. Most psychological thinking before the 1970s invoked a unidimensional, bipolar model of the constructs of masculinity and femininity. That is, masculinity and femininity (as culturally defined) were viewed as opposites, so that a person high in masculinity would necessarily be low in femininity. Men, for example, were often described not only as independent and competitive but also as interpersonally insensitive. Instruments designed to measure masculinity and femininity in this pre- 1970 period therefore used a single masculinity-femininity scale (e.g., Hathaway & McKinley, 1943; Strong, 1936; Terman & Miles, 1936). Within the Terman and Miles framework, masculinity and femininity was implicitly assumed to be explained in terms of biological sex. This bipolar model of measuring masculinity and femininity received criticism because: a) the feminine characteristics in masculinity-femininity scales often carried negative connotations, b) it failed to grip with masculinity and femininity as abstract psychological concepts, c) the bipolar conception of masculinity and femininity was problematic, in that, one could be masculine or feminine but not both, and d) of the concept of androgyny was ignored with no scale to assess it (see Constantinople, 1973; Morawski, 1987).

In the 1970s and early 1980s different measures based on a new view of masculinity and femininity were proposed (e.g., Bem, 1974; Spence, Helmreich, & Stapp, 1974). Bem, building on the assumption of gender schematization as an internalized tendency to see the world in gendered terms developed the Bem Sex Role Inventory (BSRI), and Spence and her colleagues with gender identity or one's sense of being masculine or feminine as the underlying construct, developed the Personal Attributes Questionnaire (PAQ).

In the BSRI, self-descriptions are used to measure the extent to which men and women describe themselves in terms of personality traits that make up the stereotypes for their own and the other sex (Archer & Lloyd, 2002; Bem, 1974). The gender stereotypic traits of women and men were defined according to their social desirability determined by society. An individual's gender role was defined as a function of the expression of masculine and

feminine traits rather than biological sex. “Feminine” traits were those that were evaluated as more suitable for women than men, and those features thought of as more appropriate for men than for women were called “masculine.” In this scale femininity and masculinity are not opposite ends of a single continuum, but rather they are separate and independent. A new concept in the BSRI measure was androgyny building on the assumption that androgyny was a combination or balance of the feminine and masculine. It allows for the possibility that individuals can express both masculinity and femininity.

As argued by Cook (1985) there are however several problems with this operational solution of what androgyny means, and it is difficult to answer whether androgyny is a special combination of masculinity and femininity. Furthermore, it has long been debated whether the BSRI actually measures what it claims to measure (see Bem, 1981a, Bem, 1981b; Gill, Stockard, Johnson, & Williams, 1987; Spence, 1991). Choi and Fuqua (2003) reviewed 23 studies of the BSRI conducted during the 25 years since its publication, and they suggest that masculinity/femininity have not been adequately operationalized in the measure. This way of categorizing femininity and masculinity are also criticized by feminist researchers who instead view femininity and masculinity as prototypes of essential expressions – something that can be conveyed fleetingly in any social situation and yet something that strikes at the most basic characterization of the individual” (Goffman, 1976). Hall (1981) a sport’s feminist taking a political stand, has argued that since androgyny simply combines the old dualities of masculinity and femininity, which are themselves socially constructed, the concept and the working models will do little to bring about real change in a society that is fundamentally oppressive to women. She argues that there exists a conflict between gender and culture and that this conflict exists only in the realm of the feminine because cultural practices, such as for example sport are defined by masculine standards (Hall, 1996).

Today, most research on femininity and masculinity is grounded in feminist cultural studies (Barker, 2002). Researchers focus on how the practices of femininity and masculinity are socially constructed, how they create cultural meanings, and their role in establishing differential power and privilege in society, building on the assumption that gender is something we constantly “do.” For example, in Krane, Choi, Shannon, Baird, Aimar, and Kauer (2004) female athletes were asked to define femininity, and in general their definitions of femininity concerned being “petite and dainty” and engaging in specific behaviours. Femininity was for instance defined as “having a gentle spirit,” “having proper etiquette,” “being clean,” and “being girly.” Most of the athletes in the present study believed that being soft, girly, and clean implied femininity, whereas being athletic was equated with being

masculine. Furthermore, Fasting, Pfister, and Scraton (2004) showed in a qualitative study that female soccer players from four different European countries had attitudes about femininity and masculinity that were in accordance with traditional standards in society. Femininity was associated with appearance and clothes, less on behaviour and personality. Although some females expressed that femininity had to do with being good in communication, shy, able to do several things at the same time, and that it also was connected to emotions. Masculinity was described as the opposite to femininity and the participants in this study referred to a big person, in a certain way to present one self, and body language.

More recent research (i.e., Auster & Ohm, 2002; Harris, 1994; Holt & Ellis, 1998; Özkan & Lajunen, 2005) has demonstrated that the rigid gender stereotypes as suggested by Bem (1974) continue to exist, and thus highlights the continued centrality of conventional definitions of femininity and masculinity as suggested by previous researchers (e.g., Best & Williams, 1993; Broverman et al., 1972; Rosenkrantz et al., 1968; Smith & Bond, 1999). The BSRI was recently used in a study about gender stereotypes in sport in which the main focus was to examine the relationship between respondent's views of sports as either feminine or masculine and their gender and self-beliefs concerning gender-role personality (Lauriola, Zelli, Calcaterra, Cherubini, & Spinelli, 2004). The results demonstrated that male and female students who assigned masculine characteristics to themselves rated sports as more feminine compared to their counterparts.

How is gender conceptualized?

The criticism of the bipolar nature of masculinity and femininity is closely tied to how gender is conceptualized. Although a detailed discussion of the sex-gender debate is beyond the scope of the present thesis, some broad lines of the gender research in psychology will be presented, and also some recent understanding of the gender concept will be highlighted.

From the end of the 18th century until the beginning of the 19th century researchers were concerned about sex differences in for example intelligence (e.g., Terman & Miles, 1936; Terman & Merrill, 1937). According to the "sex differences approach," psychologists considered how and why average differences in personality, behaviour, ability, or performance between the sexes might arise (see, Maccoby, 1998; Maccoby & Jacklin, 1974). Many theorists in this period argued that this presumed sex difference in intelligence was rooted in physical differences between males and females and that these differences were found especially in the brain (Shields, 1975, 1982). In the 1940s and 1950s the major and most revolutionary development in sex-gender research was the introduction of "masculinity"

and "femininity" as opposite personality traits, and Terman and Miles' (1936) underlying framework was the following: nature and nurture → masculinity – femininity → individual differences in behaviour and adjustment. From mid 1950s to mid 1960s, the primary focus was on sex-role development (Tyler, 1965), and how little boys and girls become adult men and women. Some researchers looked for answers in the Freudian concept of "identification," others used a notion borrowed from sociology, "sex role," and still other researchers combined these two ideas into "sex-role identification," which indicated both what the child was to learn and how this was learned (Pleck, 1984). Hall (1981) criticized the notion of sex-roles by arguing that in sociology there is no attempt to explain differential behavioural patterns on the basis of sex alone, but rather they are explained in terms of a power differences. Furthermore, her critique against sex role stereotyping was that this concept was used as if it existed concretely rather than being based on analytic constructs.

The next major development in this field came with the introduction of cognitive developmental- (Kohlberg, 1966) and social learning theories (Mischel, 1966) of sex-role identity and sex differences in behaviour respectively. Bem (1974) introduced the new psychological construct, "androgyny," which was viewed as a blending of masculinity and femininity, and something that was not possible under the earlier conceptual theoretical framework that viewed these as opposites. In 1974, the book *The Psychology of Sex Differences* was published (Maccoby & Jacklin, 1974). In this book, a number of studies about differences between men and women in a wide variety of domains were reviewed, and the general conclusion was that there were few documented sex differences. Thus, sex differences, that were generally thought to be widespread and large, were then "minimized" (Lorber, 1981).

In the 1960s there was a paradigm shift in the sex-gender debate with the introduction of the term gender. This sex-gender dichotomy represents sex, on the one side, referring to biological aspects of a person, involving characteristics which differentiate females and males by chromosomal, anatomical, reproductive, hormonal, and other physiological characteristics (Entwistle, 1998). Gender, on the other side, was believed to be a social label, and Unger (1979) explained that this term describes the traits and behaviours that are regarded culturally appropriate to women and men. Sherif (1982) proposed a similar definition of gender as a "scheme for social categorization of individuals." A focus on sex differences is argued to ignore the large variance within gender on many characteristics (Martin, 1994), and therefore may tend to overstate sex differences, or even reinforce or create them in the mind of public as argued by Hare-Mustin, and Marecek (1990). To avoid such exaggeration, some

psychologists selected the "gendered" phenomenon. Thus for example, Eccles and Jacobs (1986) noted that both math ability and math performance are "gendered" in that at certain ages boys demonstrate higher average ability and higher performance than girls (see Eccles et al., 1990). Their assumption is that to the extent that parents form rigid ideas about the math ability and behaviour of boys and girls, and act on these ideas, differences between boys and girls are likely to be exaggerated.

Some researchers object to the use of different terms for sex and gender, arguing that attempts to distinguish between the biological and social aspects of sex is not possible (Maccoby, 1988). One problem arises with the separation of sex defined by biology and gender as defined by culture due to the complex interaction between biology and cultures themselves (Hall, 1996). To avoid the general tendency to think in black-and-white terms it is important to highlight the fact that human biology and culture are not isolated from each other. Quite to the contrary, biology and culture are inextricably interwoven (Fiske, Kitayama, Markus, & Nisbett, 1998; Kenrick, 1987; Kenrick & Trost, 1993; Kenrick, Trost, & Sundie, 2004).

During the last decades, the order of sex versus gender has been radically questioned in for example feminist research (Haavind, 1994, 2000; Lie, 2002; Lorber, 1994), and as I understand it, the gender concept in this theoretical framework is emphasized as more abstract and dynamic compared to its earlier definitions. It is argued that given the variety and multiplicity of human differences and the many similarities among people regardless of what gender categories they might be assigned to, the question about what creates the categories of "men" and "women" and makes them socially meaningful is needed to be explained differently to the notions identified earlier in the literature.

Instead, many feminist theorists currently understand gender as essentially being part of the basic process that constitutes social life (see for example Acker, 1989). Within this view "men" and "women" involve social processes at all levels – the individual or structural, the cultural, the interactional and the organizational or institutional level of societies. Acker uses these concepts related to employment, and as I see it this perspective can also be useful within a sporting context, in that many of the processes in sport are similar to what we find in employment. Within this perspective the processes on the different levels are dynamic and constantly changing.

On the individual level there are differences between boys and girls when it comes to sporting activities. For the most part both boys and girls are free to participate in whatever activities they like, but there are still some activities they are not free to choose. For example,

girls are not allowed to participate in ski flying competitions, and few ski jumping events, especially at an international level are arranged for girls. The International Ski Federation (FIS) has just recently (May, 2006) decided that World Championship (ski-jumping) will be open for women in 2009 or 2011. Boys, on the other side are not allowed to compete in rhythmic gymnastics. Such rules may certainly influence boys' and girls' sport activity choices. Moving to the next level, the cultural level, how are these differences understood and explained? For example do certain sport leaders explain that girls do not inhibit the physical qualities required to perform ski flying jumps, and certain leaders argue that at worst the girls can hurt themselves. This represents a patriarchal explanation that such rules are for the girls' own best interest. These kinds of attitudes and rules may lead to more boys participating in ski jumping, and ultimately these attitudes are internalized within organizations and are formalized through rules and legislations. To conclude it will be harder for girls to find their place in traditional male sports, and harder for boys to compete in feminised activities without being viewed as deviant.

At the individual level, it is the individuals' own understanding that matters, and how the individual understands him/her self as for example a ski jumper and as a man/woman becomes essential. The Norwegian ski jumper, Anette Sagen seems to have an understanding of herself as a ski jumper, and keeps on challenging the system and organization by insisting on participation. On the individual level, it seems easier to be "free" from the expectations about gender stereotypes, it is more up to the individual, him/her self to be what he/she likes to be in accordance with his/her own understanding. If people around are also "free" from gendered thoughts it could be argued that there exist no strict rules about gendered expectations. But on other dimensions of the system (i.e., cultural or structural levels), it is more difficult to be "free" from gendered expectations, for instance because rules become part of our culture that we interact with. These changes at the individual level, are however, very important because they can indeed change attitudes on all levels of a system. Participation in the Olympic Games for women can serve as a good example in this regard. In 1900 women were allowed to participate in the Olympic Games for the first time in history, and just in a very few disciplines. Because an increasing number of individuals continued to insist on participating, this may have influenced other peoples' attitudes about women's participation in sports, and as time went by, more women became active participants in sports – it became culturally accepted and after a while the formal institutions could no longer deny women, participation in the Olympics. Today only two (summer) sports that are open to men remain not opened for women (Choi, 2000; Pfister, 2000).

Many feminist historians and sociologists use gender as an analytic concept to refer to meanings that are socially created, relationships, and identities organized around differences (e.g., Connell, 2002). Within this view, gender is now understood as dynamic processes, one that is by several researchers referred to as "doing gender" (Lorber, 1994; Haavind, 1994, 2000; West & Zimmerman, 1987, 1995). As West and Zimmerman argues "……gender is a situated accomplishment of societal members, the local management of conduct in relation to normative conceptions of appropriate attitudes and activities for particular sex categories (West & Zimmerman, 1987, p. 134-135). From this perspective, gender is thus a performance, something we constantly "do" as we interact in the family, at the workplace, and other institutions such as for example in sports. We also "do" gender as we use our language as well as in sexuality. Gender in this view is never fixed, but rather is continually constructed and re-constituted, and as Haavind (1994) points to, it is the individual themselves who is responsible for these changes.

Several theorists have suggested that by recognition gender is critically linked with social status, which opens up opportunities to think about gender as a set of power relations rather than merely as characteristics or features of individuals (Fiske, 1993; Haavind, 2000). Haavind (1998, 2000) talks about gender as a code, and she argues that this is to say that in the most general sense it is not the content that is identified as masculine or feminine, it is more a kind of regulation through making distinctions. She suggests that regulations of the gender code consist of two distinctive features. First, the regulation within language that positions phenomena as either feminine or masculine is necessarily and always (dis)connection as opposites (p. 364). Secondly, the regulation within language of whatever is identified as the masculine and the feminine is simultaneously and automatically ranked. When Haavind talks about the relationship between femaleness and maleness she argues that this relationship is connected to power and that power is the reason why these two phenomena are divided. What is assumed to belong to maleness is superior relative to that what is assumed to belong to the femaleness. Phenomena or things connected to manliness are thus, more powerful, and also more important than those things or phenomena connected to womanliness (Haavind, 1989, 1998). Although power relations of gender in sports are complex and contradictory one can say that sport was for a long time identified as a male domain (Boutilier & SanGiovanni, 1983; Bryson, 1994), and this unequal power relation with males being superior to females has been recognized in sports organization, leadership, participation rates, as well as in the media. These relative power relations are not as visible on the individual level as they are on levels such as for example on the cultural or the structural

levels. Thus again, changes are more easily made on the individual level, and these changes can influence on those stages higher in the system.

Another way power relations become very visible through sport is when males and females are compared with each other in physical achievements. Within competitive sport, winning means everything and the one who runs fastest, who lift the heaviest, or who throws furthest thus earn status and authority. Because female athletes do not regularly perform better than male athletes they are implicitly understood as inferior to the male athletes.

Several theorists de-emphasize the meaning the body plays on gender, and Glenn (1999) for example argues that by loosening the connection to concrete bodies, the notion of socially constructed gender frees us from thinking of sex/gender as solely, or even primarily, a characteristic of individuals. Connell (2002, p. 47), however, emphasizes the role of bodies in the gendering process, and argues that bodies are both objects of- and agents in social practices. Pfister (2002) suggests it can be very appropriate to bring the body back into the discourse on gender, and in some areas for example in the physical domain where bodies play an important role it can be especially essential. It is interesting to discuss the body as related to femininity and masculinity in sport, especially when it comes to male and female bodies that differ from the masculine and feminine ideals, respectively. Within ski jumping for example the male bodies are very often very lean with no large muscles on the upper part of the body. This seems to differ from the masculine ideal that is often represented by an athletic body, with well-defined muscles, especially on the upper part of the body. Within body building we observe that the female body, with well-defined and often big muscles, is very different from the typical feminine ideal.

Gender in sport

Gender stereotypes have a strong influence on the society, and sport is no exception. In fact, gender stereotypes seem even more persistent in sport than in other social contexts (Gill, 2002). Despite this reality, there has been little research on gender stereotypes within sport. Pfister (2002) suggests sport is a place where bodily differences, gender differences and gender as a whole are re/produced and presented. She argues that doing sport is thus about performing gender, it is always about presenting oneself as male or female, with more or less demonstrative masculinity and femininity. Sport is one of few areas in our culture in which the body and its capacities play a decisive role, for example physical strength, endurance, power, grace and elegance (Pfister, 2002). Thus, the sports help to support general ideals about male and female bodies and their physical capabilities and limitations.

Sport was for many years considered a typical male activity (Matteo, 1986; Messner, 1988, 1990; Pedersen & Kono, 1990), and those women who participated in sporting competitions were often portrayed by the people in the society as engaging in gender-inappropriate behaviour, and thus disobeyed gender role expectations (for a review, see Cann, 1991). Today, these social and normative constraints to female participants are weaker compared to earlier, and in principle women today are free to participate in gender appropriate as well as so-called gender-inappropriate sports. Although, women are less involved in sport than men (Antshel & Andermann, 2000), and they participate in different sports than do men. Recent studies among children (e.g., Fredricks & Eccles, 2002, 2005) demonstrated that boys in elementary school also are higher in sport participation than are girls. When studying the participation numbers in organized sport in Norway, there are some interesting differences as relative to gender. Among the 55 sports organisations 49 are dominated by males, whereas 6 have more female members than males, these are, not surprisingly; gymnastics, handball, horse riding, swimming, volleyball, and dance (NOCCS, 2004). Together, this may indicate that the conventional constraints do influence our beliefs about participation in sport as related to gender as well as what we think is the appropriate sports for both males and females.

In sport, activities regarded as masculine often consist of characteristics such as strength, violence, speed, danger, risk, endurance, courage, aggression and challenge (Koivula, 2001; Metheny, 1965). Sports such as for example bandy, boxing, marital arts, ice hockey, motor sport, rugby, wrestling and weight lifting have come to be regarded as "masculine" (Koivula, 2001; Lauriola et al., 2004). Dancing, figure skating, aerobics, horse riding, gymnastics, and synchronized swimming have on the contrary traditionally been viewed as "feminine" activities (Koivula, 1995; Lauriola et al., 2004; Matteo, 1986; Metheny, 1965; Pfister, 1993). These activities are found to score high on aesthetic features such as gracefulness (Metheny, 1965). Also sports emphasizing lean bodies are rated as appropriate for women (Hallinan, Snyder, Drowatzky, & Ashby, 1990). A recent study (Riemer & Visio, 2003) investigated whether children and adolescents age 4 - 19 perceived certain sports to be masculine, feminine, or neutral. This study supported past research, indicating that certain sports continue to be masculine domains (e.g., boxing, football, wrestling). Perceptions of best sports for girls has expanded to include more masculine sports, however, the children and adolescents in this study did not perceive feminine sports as appropriate for boys. While it is assumed that both males and females can participate in all activities mentioned above, reasons other than biological explanations may be used to clarify why certain activities still are regarded as "masculine" and other activities as "feminine."

Another study (Alley & Hicks, 2005) examined gender stereotypes in peer ratings of femininity and masculinity for adolescent participants in three different sports. Results showed that the specific sport in which males and females participated might alter how others perceive them. Although, women were generally perceived as more feminine than men and vice versa regardless of the sport in which they participated, females may be also perceived as more masculine and males as more feminine if they frequently participate in a "gender-inappropriate" athletic activity.

In recent years, researchers have shown interest in the ways in which participation in organized sports contributes to the social construction of "feminine" and "masculine" behaviours. It has become clear that sports are not only a "gendered institution" but a "gendering" one as well. That is, sports actively, and sometimes aggressively, contribute to the continual reproduction of the gendering ordering and maintenance of masculine and feminine stereotypes. When femininity and masculinity are tied to sports, masculinity seems to be viewed as having more status and being superior to femininity. As Hargreaves (1994) states the idealized male sporting body – strong, aggressive and muscular – has become a popular symbol of masculinity against which women have been characterized as relatively powerless and inferior.

Gender stereotypes can certainly play a role at the individual level where it for example may influence an individual's self-concept (Basow, 1992). Imagine a boy who does not like, nor is good at playing soccer - a typical masculine stereotyped sport, and instead he prefers to engage in stereotyped feminine activities such as gymnastics, ballet, dance, or rhythmic gymnastic. Because boys are punished by significant others, peers in their environment when they engage in atypical behaviour, such as sports viewed as typical feminine (Fagot, 1977, 1984; Lamb, Easter-Brooks, & Holden, 1980), this may lead the boy, if he continues this behaviour, to become more negative about his physical self-concept as he probably will perform poorer in physical activities that are important in relation to his peers. Furthermore, to loose status among his male peers could also have a negative influence on his social self and global self-esteem.

From the discussion presented above, we have seen that gender and stereotypes are today assumed to be dynamic, something we "do" and that constantly change. However, the changing face of this dynamic appears to be very slow, and as I see it, conventional gender stereotypical mechanisms may forestall the process of these dynamics. These mechanisms are for example strongly connected to the socialization process, and seem hard to change.

By interacting with children and youths in sports today, by studying participation rates within different sports for example in Norway, by assessing sports media (newspapers, TV, radio) conventional stereotypes seem to rule both on the individual as well as on the cultural and structural levels. When results also consistently show that boys score higher than girls on different facets of physical self-concept even on domains where they do necessarily not achieve better, and also that boys rate values differently in sport compared to girls, the use of conventional gender stereotypes may provide an appropriate base to investigate gender differences in physical self-concept and values when a physical context is examined.

Are boys and girls gender stereotyped during their childhood?

Children learn at a very early age what it means to be a boy or a girl in a particular society. Through activities, opportunities, encouragements, discouragements, overt behaviour and various forms of guidance from significant others children may experience the process of gender role socialization. This kind of learning is emphasized in for example social learning theory (Bandura, 1977; Mischel, 1966, 1970) that will be described later.

The agents involved in children's socialization are numerous, they are for example parents, teachers, the media, peers and institutions which are all believed to convey gendered beliefs in many direct and indirect ways (see e.g., Antshel & Anderman, 2000; Eccles, 1993; Fagot, 1974; Greendorfer, 2002). The focus here will be on those agents that are thought to carry the most influence in determining our gender roles, especially as related to primary socialization.

Although some researchers argue that there are few gender differences in parent's general socialization (e.g., Lytton & Romney, 1991; Maccoby & Jacklin, 1974), it is generally accepted that toys, games, and activity choices are important aspects of gender development (Fagot & Leinbach, 1987; Huston, 1983; Lytton & Romney, 1991).

From early infancy, parents are likely to describe and interact with their sons and daughters differently. Daughters are more often described as smaller, softer, cuter, and finer featured than sons who are portrayed as big and tough (Karraker, Vogel, & Lake, 1995; Stern & Karraker, 1989; Sweeny & Bradbard, 1988), and interestingly, fathers are reported as more stereotyped than are mothers when it comes to ratings about their newborn babies (Barry, 1980; Lynn, 1979). Male infants are also given more physical stimulation compared to female infants who are held, touched, and talked to more (MacDonald & Parke, 1986; Moss, 1967; Parke & Sawin, 1980; Ross & Taylor, 1989). Clothing, toys, and activities all carry with them a formidable force for socialization, and parental behaviour is fairly stereotypic in this regard

(Etaugh, 1983; Pomerleau, Bolduc, Malcuit, & Cossette, 1990; Rheingold & Cook, 1975; Snow, Jacklin, & Maccoby, 1983).

Parents seem keen to ensure that no confusion arises about their child's gender when it comes to clothes, as they dress their girls in pink, decorative clothes and their boys in blue, functional ones (Fagot & Leinbach, 1987; Pomerleau et al., 1990; Shakin, Shakin, & Sternglanz, 1985). Although many girls today are also dressed in functional clothes with varying colours, to observe a boy in dress, and in pink and purple colours are not very common.

At a very early age, both boys and girls receive many of the same kinds of toys, for example stuffed animals, rings that stack on a pole, blocks etc., however, some of the toys are likely to be designated as appropriate for the sex of the particular child. Whereas girls are more likely to get passive toys, such as dolls, clothes, jewelry and colouring books, boys are more often given mobile- and action toys, vehicles, military toys, guns, and sports equipment (Almquist, 1989; Bradbard, 1985; Etaugh & Liss, 1992). A recent study (Owen Blakemore, & Centers, 2005) demonstrated that toys are still seen as strongly gender stereotyped in very predictable ways. A quite remarkable difference in sport equipment is for example that boys get hockey skates, whereas girls receive figure skates. The subtle message is not lost; boys skate fast and play rough games, whereas girls do graceful figure eights. Another notable difference is the colour and shape of boys' and girls' bikes. Purple and pink seem very popular on the girls' bikes, whereas these colours are mostly avoided on boys' bikes.

From an early age children are encouraged to engage in gender-typed activities and punished or not encouraged for gender-inappropriate play as well (Caldera, Huston, & O'Brien, 1989; Fagot & Hagan, 1991; Fagot & Leinbach, 1987; Langlois & Downs, 1980; Lytton & Romney, 1991; Snow, Jacklin, & Maccoby, 1983). Whereas girls learn to be concerned with physical appearance, attractiveness and fashion by playing with Barbie dolls, boys are encouraged to be active and mobile by playing with cars and trucks and engage in sports activities (Eccles et al., 1990; Liss, 1983). Parents promote sharper differentiation of gendered conduct with boys than with girls. They view feminine toys and activities as more gender stereotypical than masculine toys and activities. This contributes to their greater acceptance of cross-gender conduct by girls than by boys (Campenni, 1999). Fathers held a stronger dichotomization of acceptance than mothers, and they continued this differential treatment throughout childhood (Fagot & Hagan, 1991; Maccoby, 1998; Siegal, 1987). As a result, boys are more likely than girls to expect censure from their fathers for engaging in

female-typical activities. The more strongly boys hold these expectations the more likely they were to engage in male-typical activities (Raag & Rackliff, 1998).

Research has also shown sports and physical activity to be gender stereotyped. In both childhood and adolescence, parents of sons report that their children have more athletic ability and that sport is more important than do parents of daughters (Eccles, 1993; Eccles et al., 1990; Fredricks & Eccles, 2005; Jacobs & Eccles, 1992). As a result, they sign up boys for more sports/physical activities, take them to sports events more often and buy them more sports clothing and equipment.

Peers and peer interactions also serve as strong socialization agents (Frønes, 1995; Hartrup, 1983), and they become increasingly important during the school years. In many cases, peer pressure is stronger and more effective than parental and other adult pressure, particularly during adolescence. For example, research has shown that both sexes prefer same-sex groups when entering school, a process observed in both Western and non-Western societies (Carter, 1987; Feiring & Lewis, 1987; Whiting & Edwards, 1988). Other children reinforce their peers for selecting the same sex playmates and engaging in gender typed play (Bruce Carter, 1987; Langlois & Downs, 1980). Several studies have shown that from preschool through adolescence, children who engage in traditional forms of gender role behaviour are more socially acceptable to their peers than those who do not adopt traditional behaviours (Fagot, 1977, 1978, 1984; Martin, 1989). This may be particularly true for boys, and may be due to their more intense socialization and more rigid gender roles. Children in Preschool and Kindergarten reliably are found to punish boys who engage in gender atypical behaviour such as playing with dolls, while rewarding them for engaging in gender typical behaviour such as playing with trucks (Fagot, 1977; Lamb et al., 1980; Lamb & Roopnarine, 1979; Zucker, Wilson-Smith, Kurita, & Stem, 1995). Moreover, boys are much more likely to be criticized for activities considered feminine than are girls for engaging in masculine activities (Fagot, 1985). The intense peer pressure toward gender conformity may be one reason why there is so little cross-gender-typing in elementary school children, even though the categories of "tomboy" and "sissy" exist (Hemmer & Kleiber, 1981). Given the more rigid gender role for males and the greater importance attached to the males gender role, it is not surprising that the term "sissy" is a far more negative term than the term "tomboy."

The result of gender segregation is that boys and girls tend to grow up in different peer environment and different subcultures (Maccoby & Jacklin, 1987). Larger groups, more public play, more fighting and physical contact, and the establishment of a hierarchical order become a part characterized by the subculture boys. The subculture of girls is in comparison

to boys characterized by smaller and more intimate groups, a strong convention of turn taking, and more empathy in play and conversations. Both the school and sport are helping to establish symbolic representations of opposites between boys and girls. School uniforms (for those countries that have this practice), practices such as lining boys and girls up separately, or creating classroom competitions for "the boys" against "the girls" all do this job (Connell, 1996). Sport might even be a stronger influence of differences between boys and girls in that they use the perfect system of gender segregation. In sport boys and girls play in separate teams, they usually exercise at separate times and they very rarely compete against each other. Even though males and females use separate toilets and wardrobes can justify sex segregation in our cultures many of the other segregation practices seem to be addressed by social rules in the environment more than can be attributed simply to biological needs. Media such as television, films, music, movies, and magazines represent a powerful institution that does not simply reflect but indeed shapes perceptions and behaviours, thus their way of presenting gender can influence our gender stereotypes and research has shown that popular media are highly stereotyped in the ways in which they represent gender (e.g., Craig, 1992; Glascock, 2001; Leaper, Breed, Hoffman, & Perlman, 2002).

For some time now, researchers have highlighted the degree to which the media in sports contributes to and reinforces gender stereotypes that perpetuate male superiority and female inferiority in sports (e.g., Duncan, 1990; Duncan & Sayaovong, 1990; Kane, 1996; Shifflett & Revelle, 1996; Tuggle, 1997). Investigations of television, newspaper, and popular magazine coverage of female and male athletes reveal clear gender bias (e.g., Buysse & Embser-Herbert, 2004; Choi, 2000; Duncan & Messner, 1998, 2000; Knoppers & Elling, 2004; Messner, Duncan, & Cooky, 2003; Messner, Duncan, & Jensen, 1993; Sagas, Cunningham, Wigley, & Ashley, 2000). First, female' athletes receive little coverage (less than 10%) whether considering TV airtime, newspaper space, feature articles, or photographs. The disparity in females and males coverage reflects a gender hierarchy. Generally athletic ability, physical strength, muscularity and accomplishments are emphasized for men, whereas women more often are described in terms of personal characteristics, such as their physical attractiveness, their domestic interest and skills, and their vulnerability and weaknesses (Eastman & Billings, 1999; Weiler & Higgs, 1999). They emphasise sexual attractiveness, personal relationships and/or questions of sexuality (Kay, 2003). Furthermore male athletes are typically featured in uniform and in action, whereas female athletes are typically posed in non-sport and non-active settings. Also men's sports events often are promoted or described as if they had some special historical importance, while women's sport events are usually

promoted in a lighter, less serious manner (Duncan & Messner, 1998). Men's events are also unmarked by references to gender and represented as the "real" events, while women's events almost always are referred to as "The Woman's World Cup" in soccer coverage of the men's and women's tournament around the world (Coakley, 2001). Coakley, however, argues that girls and women now can see and read about achievements of women athletes in a wider range than ever before. This is important because seeing women athletes on television and reading about them in newspapers and magazines may encourage girls and women to become active as athletes themselves. Also, Messner (1995) argues that women athletes are commonly being covered by "objective" reports that do not trivialize their performances. Despite the fact that coverage of women's sports has increased since the mid-1990s, Urquhart and Crossman (1999) argue that sports magazines have been notoriously slow to cover women athletes and women's sports. This pattern of under representation of women's sports in the media still exists around the world.

Theories of gender development

The acquisition of gender-appropriate preferences, skills, attributes, behaviors, values and self-concept is called the process of gender typing and over the years different theories have emerged to explain this process. Although the focus in the present dissertation will be on social cognitive theory and the expectancy-value theory, some other theories will be shortly described because of the importance they have played within this field.

Some theories, for instance the psychoanalytic theory (Freud, 1916) explained masculinity and femininity as the outcomes of biology. Events occurring in the Oedipal period determine gender identity, an identity that is believed to be stable throughout life. However, many social scientists have questioned the psychoanalytic explanation with arguments that gender identity is impossible to understand if the environment and social context are not taken into account. In the 1960s and the 1970s social learning theory (Bandura, 1971) emerged as the dominant approach to understand gender socialization. This theory suggests in contrast to psychoanalytic theory that the child develops gender identity through a learning process involving modelling, imitiation, and reinforcement. The theory is not interested in biological influences, but views gender socialization in terms of environmental influences, and theorists within this field explain children's development of gender typed behaviors as the result of interactions between the child and his or her social environment (e.g., mother, father, the media, school, and peers). Social learning theory may appear to treat the child as relatively passive in this process, thus the cognitive-developmental

theory offered by Kohlberg (1966) and Kohlberg and Ullian (1974) fits the development of gender-related concepts into the growth of cognitive abilities and emphasizes the active role of the child in acquiring gender related behaviors. Kohlberg argues that gender identity or self-categorization as a boy or a girl is the primary organizer of gender attitudes and that basic universal gender stereotypes develop from the child's conceptions of body differences, which are give further support by visible social role differences. The ability to grasp these constancies is related to mental maturity. One limitation with this framework is that it attributes a great deal to the influence of gender constancy as the primary force underlying the development of gender identity. Because gender constancy is assumed to be a relatively late achievement, and children seem to behave in gender specific ways from much earlier Martin & Halverson (1981; Martin, 2000) proposed the gender schematic processing theory. This theory argues in contrast to Kohlberg that children's active cognitive processes of gender information begin much earlier, as soon as the child discovers their own gender identity. In this view gender related behaviors appear not only as a result of general cognitive development but also due to the adoption of special schemata related to gender. As children develop, they acquire schemata that guides their cognitions related to gender. Important in the present theory is that it incorporates a motivation dimension at its core. So does the social cognitive theory (Bussey & Bandura, 1999, 2004) that in contrast to earlier theories includes biological, cognitive, and social factors. It is although different from the other theories in that it focuses on the interplay of various factors within the larger social context in gender development. In this theory, gender development is neither totally shaped and regulated by the environment or biology nor by socially disembodied in intrapsychic processes. Instead, it explains gender development in terms of the reciprocal interaction among personal, behavioural, and environmental factors. As an alternative to most theories of gender development that focuses on the early years of development (Freud, 1916; Kohlberg, 1966), or have focused on adults (Deaux & Major, 1987) social cognitive theory adopts a lifespan perspective.

Within the social cognitive perspective, the child develops diverse self-regulatory functions and these self-regulatory mechanisms are rooted in personal standards linked to self-evaluative sanctions. They operate together with beliefs about personal efficacy in the management of circumstances of one's life, behavioural outcome expectations, situational circumstances, structured relationships and belief systems about institutional opportunities and constraints (Bandura, 1986; Bussey & Bandura, 2004). In this perspective that is agentic, people are self-organizing, proactive, self-regulating, and self-reflecting (Bandura, 2001,

2002). In social cognitive theory, gender development is promoted by three major modes of influence and the way in which the information they convey is processed (Bandura, 1986). These include social modelling, performance experiences in which gendered conduct is linked to evaluative social reactions, and direct guidance (Byssey & Bandura, 2004). Modelling by for example parents, peers, significant persons in educational contexts as well as mass media is regarded as one of the most pervasive and powerful means of transmitting values, attitudes, and patterns of thought and behaviour (Bandura, 1986). The second mode is through enactive experience and how others respond to it. Gender-linked behaviour is heavily sanctioned in most societies, for example are boys sanctioned when playing with feminine toys (Fagot, 1985; Idle, Wood, & Desmarais, 1993). The third mode of influence is through direct guidance in which children are instructed in the behaviour that is regarded appropriate for their gender (Bussey & Bandura, 2004). Social cognitive theory suggest that as the child develop, the regulation of behaviour shifts from external sanctions to increased amount of self-sanctions and self-direction grounded in personal standards (Bandura, 1986, 1991). As self-regulatory functions develop, children will guide their conduct by sanctions they apply to themselves (Bussey & Bandura, 2004). The development of self-influence does however not eliminate the sway of social influence, but instead self-evaluative reactions and social reactions may operate as complementary processes.

As we have seen many theories explain why individuals become gender stereotyped and they are all quite general when speaking about gender stereotypes. In contrast Eccles and her colleagues (e.g., Eccles et al., 1983; Eccles et al., 1998) offers a theoretical framework, the Expectancy-value theory that emphasizes the role significant others play upon gendered values and activity choices in individuals. The social cognitive theory is believed to fit well into this theoretical framework, that explains how the social milieu may influence the course of stereotypical self-concept and values in children and adolescence, and that further motivates boys and girls to participate in gendered activities such as for example gendered sports.

The expectancy-value model

During the past 20 years Eccles and her colleagues (see Eccles et al, 1983; Eccles & Wigfield, 2002; Eccles et al., 1998) have developed a theoretical framework based on the theoretical work of Lewin (1938) and Atkinson (1964) to explain individual differences in motivation and choice behaviors with gender being a major focus. This theoretical framework also explains how socialisers may influence children's self- (competence) and task (value) beliefs

in a gender-stereotypical way, and therefore I believe it provides an excellent framework for understanding how and why boys and girls differ in physical self-concept and values. Eccles et al. (1983) defined expectancy beliefs in a manner analogous to measures of Bandura (1986). However, as we have seen self-efficacy and self-concept has many similarities for example competence, and furthermore the self-concept is also included in Eccles et al. model. Thus the expectancy-value theoretical framework is regarded as valuable also when self-concept is the focus of research.

In this model (see Figure 1), expectancies and values are assumed to directly influence performance, persistence and task choice. Both expectancies and values are assumed as influential by task-specific beliefs such as perceptions of competence, perceptions of the difficulty of different tasks, and individuals' goals and self-schemata. These social cognitive variables, in turn, are influenced by an individual's perception of other peoples' attitudes and expectations for them (i.e., gender stereotypes), by their affective memories, and by their own interpretations of their previous achievement outcomes (Eccles & Wigfield, 2002).

Because gender stereotypes and gender socialization affect each of the mediating variables (e.g., the socialisers' behaviour, one's self-schemata, and one's perceptions of the available options), gender stereotypes are assumed to impact on both the expectations one holds for success and the value one attaches to various options. According to the expectancy-value model, socialisers (parents, teachers, and peers) influence children's motivation through their beliefs and behaviors.

According to this model, there exist several important predictors of choice behaviors such as expectations for success and values. Because females are often stereotyped as less competent in physical domain compared to males, incorporation of gender stereotypes into one's self-concept could lead girls to have less confidence in their general physical self than boys. This, in turn, could lead girls to have lower expectations for success in physical sub-domains.

In terms of task value, Eccles et al. (1983) outlined four components: a) *Attainment value* that is defined as the personal importance of doing well on the task. Attainment value is also linked to the relevance of engaging in a task for conforming or disconfirming salient aspects of one's self-schemata. Because tasks provide the opportunity to demonstrate aspects of one's actual/ideal self-schemata, such as masculinity or femininity, tasks will have higher attainment value to the extent that they allow the individual to confirm salient aspects of these self-schemata (Eccles & Wigfield, 2002). For example a girl who feels that it is expected of her to do well in traditional feminine sports may put more energy in doing well in such sports,

whereas a boy would more likely do well in typical masculine sports. b) *Intrinsic value* is the enjoyment the individual gets from performing the activity or the subjective interest the individual has in the subject, for example the immediate feeling of enjoyment when an individual perform ballet, play soccer with friends or compete against others. c) *Utility value* is determined by how well a task relates to current and future goals. For instance which subjects an individual chooses in school may be relevant for future occupation choices for the same individual. d) *Cost* is considered as a critical component of value (Eccles et al., 1983; Eccles, 1987), and is conceptualized in terms of the negative aspects of engaging in the task such as performance anxiety fear of both failure and success. For example would a girl's decision to engage in a typical masculine activity lead to negative comments from the social environment. Because boys are much more likely to be criticized for activities considered feminine than are girls for engaging in masculine activities (Fagot, 1985), it is believed to be even more critical to boys' emotional costs if they decide to participate in traditional feminine sports.

When this theory suggests that individual's are influenced by gender stereotypes in their social milieu it is very important to emphasize that the expectancy-value model is built on the assumption that it is one's interpretation of reality rather than reality itself that influences the individual's values. In this regard elements from the social cognitive theory appear significant to incorporate. In summary, the social cognitive theory suggests that the individual is the one to control one's gender conduct and this is important, because, at the end of the day it is the person him/herself who; interprets signals from the environment, posits feelings of his/her physical self, decides which values he/she rates as important and finally decides on which activities to participate within.

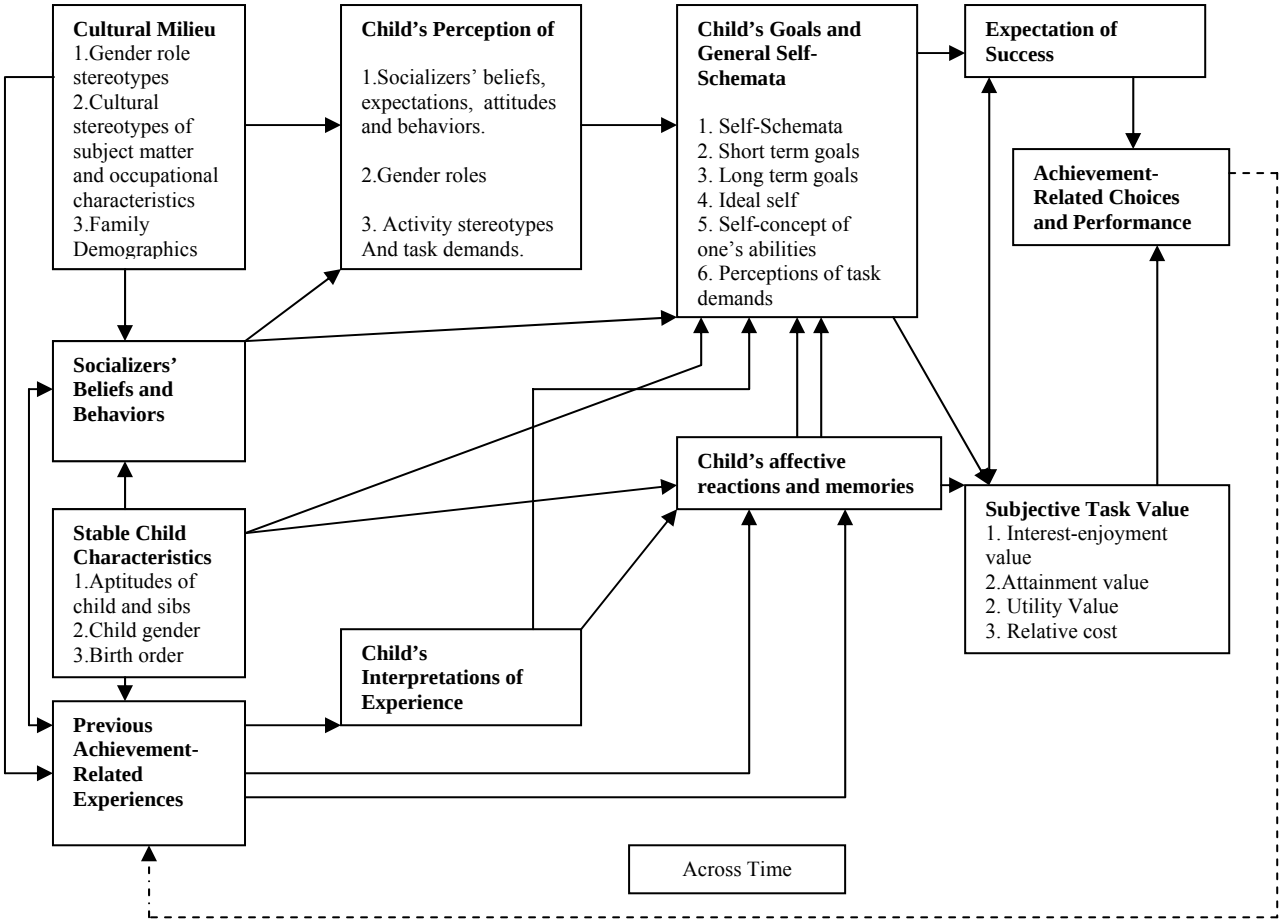

Figure 1. Eccles et al. Expectancy – Value model of achievement choices (see Wigfield & Eccles, 2000).

Most of the work validating this model has focused on school achievement patterns (math and English), however the expectancy-value model has proved to be very suitable for the sport domain as well. In cross-sectional and longitudinal studies, boys rate their ability, their competence and the value of participating higher than do girls in sports (Eccles et al., 1983; Eccles & Harold, 1991; Eccles et al.,1993; Fredricks & Eccles, 2002, 2005; Jacobs, Lanza, Osgood, Eccles,& Wigfield, 2002; Wigfield, Eccles, Yoon, Harold, Arbreton, & Blumenfeld, 1997).

Competence and value beliefs play an important role in children's motivation and participant decisions, and several researchers using the expectancy-value model have documented that children's competence and value beliefs are shaped by messages from significant others in the environment (i.e., Eccles, 1993; Eccles et al., 1998; Fredricks & Eccles, 2002, 2004; Jabobs & Eccles, 1992, 2000; Parsons, Adler, & Kaczala, 1982). A long-

term link between parental beliefs and children's own beliefs as related to sport was demonstrated by Fredricks and Eccles (2002). They demonstrated an effect of parent socialization on sports competence and value beliefs. Parental beliefs were more predictive in sports than in for example math, thus highlighting the important role that parents play in socializing children's athletic motivation.

Research has revealed that parents' beliefs can play an important role in the creation of gender differences in the competence and value beliefs of both children and adolescents (e.g., Eccles, 1993; Fredricks & Eccles, 2002), and these results seem to be in accordance with conventional stereotypes. In both childhood and adolescence, parents of sons report that their children have more athletic ability and that sport is more important than do parents of daughters (Eccles, 1993; Eccles et al., 1990; Eccles et al., 1993; Fredricks, Simpkins, & Eccles, 2005; Jacobs & Eccles, 1992). These gendered beliefs of parents accounts for a significant portion of the variance in the gender difference in children's beliefs (Jacobs & Eccles, 1992). As a result, they sign up boys for more sports/physical activities, take them to sports events more often and buy them more sports clothing and equipment. If parents do not enrol daughters in traditional masculine sports, but continue to introduce them to more suitable activities, and enrol sons in typically masculine sports at an early age, it is unlikely that their children will have opportunities to support the development of their competence and value beliefs in other sports in accordance with traditional gender stereotypes. Therefore, stereotypic beliefs should continue to be prevalent in sports. There is evidence that parents are gender-typed in their provision of sporting opportunities offered to sons and daughters. In both childhood and adolescence, parents report providing less encouragement of athletic activities and fewer sport-related opportunities for their daughters than for their sons (Eccles et al., 1990; Greendorfer, Lewko, & Rosengren, 1996). A recent study (Fredricks & Eccles, 2005) showed that parents of sons reported their child to have higher sport ability and that sport had more value than did parents of daughters. Also, parents of sons bought more athletic equipment, encouraged their child to participate in sport, and spend more time on sport activities than did mothers and fathers of daughters. Fathers were however, found to be more gender-typed than mothers, and they reported that they perceived that sport had more value for their sons and provided more encouragement, time investment, and equipment to support this involvement than they did for their daughters.

Research has also shown that fathers' beliefs were more strongly associated with children's sports competence and value beliefs than mother's beliefs (Fredricks & Eccles, 2002). It is suggested that fathers are more involved in their children's participation. In fact,

fathers report spending significantly more time on athletics than do mothers (Eccles, Freedman-Doan, Arberton, Yoon, Harold, & Wigfield, 2002).

Sport – men and women

Definitions of sport

Although we seem to know the meaning of sports, the concept is not as obvious as it first seems to be; in fact Young (1995, p. 263) describes it, as "…notoriously slippery concept". Is it sport when a group are getting together to play sand volleyball at the beach, when children or adolescents participate in a soccer game or what about girls who perform aerobics? This is very much depending on the rules and the competition – and also whether these are formalized or not.

Talking about sports, there are a number of definitions available, and most of them as argued by Coakley (2003, p. 21) seem to emphasize that sports are institutionalized competitive activities that involve rigorous physical exertion or the use of relatively complex physical skills by participants motivated by internal and external rewards (e.g., Edwards, 1973; Singer, 1976). The Nordic understanding of sports seems to be in accordance with this definition (e.g., Patriksson, 1982).

Within these definitions there are however no objective rules for how "physical" an activity must be to qualify as a sport. There are major differences in the amount of physical activity in different sports, for example in billiard, curling, archery, running, swimming, and triathlon. According to this definition, sport is competitive in nature, but the competition in an official soccer tournament is different than competition in an informal neighbourhood soccer game. Because sports have rules that define a formal, official set of behavioural and procedural guidelines and restrictions, this make them different than physical activity performed by individuals simply getting together on an informal basis, even though they also may compete against each other in a soccer game. That official regulations rule the sport is also important within these sports definition. This can be regulatory agencies at all levels, from local rules to organized rules of the International Olympic Committee (IOC). Some (e.g., Stensaasen, 1982) argues against a sports definition that focuses too much on competitiveness in activities. Such a definition is not appropriate because the Norwegian term "idrett" with less focus on competitiveness has significant importance in Scandinavia. Stensaasen (1982, s. 18) offers an alternative definition: "sport is physical activity, of a competitive or a non-

competitive character, ordinarily performed during leisure time and regulated by socially and culturally determined rules, norms and values; its aim is to improve one's achievement capacity, or to obtain good health and recreation." As we see it is not easy to make a clear definition of sport, and some researchers talk about different forms of sport for example "recreational sport" vs. "competitive sport." Patriksson (1984) also makes a distinction between different categories of sports; recreational sports, achievement sports and elite sports and he suggests that physical-psychological abilities, institutionalization, rules and competitiveness play different roles upon these levels. The definition offered by Patriksson (1982) are valuable to use when participants in organized sport are the focus of research (*Study IV*), but not as suitable when physical education students and participants who are not affiliated members of a sport federation are within the focus of the research (*Study I, Study II, Study III*). Because an individual do not participate in organized sport does not necessarily mean that he/she is less active in amount of time or that he/she does not compete against other. For example, many girls participate in the activities of dance and aerobics. Although these activities are not always affiliated in a sport federation, girls may be very physical active and they are likely to perform their activity within certain frames of rules. Furthermore it is likely that they compare themselves with each other and also that certain forms of competition exist within the group.

The European Federation of Sport Psychology (FEPSAC) uses the term sport as an "umbrella term that includes all kinds of exercise and physically active pursuits" (The Sport Psychologist, 1996) and offers a definitional stance that more closely approximates the spirit of the present dissertation that includes both students who participate in competitive sport, physical education students and individuals who are active in sport clubs that are not affiliated members of a sport federation as focus of research.

Women's participation in sports in the past

In order to understand gendered sport today it is necessary to study how women's sport was formed in the past and how women's sport has evolved over time.

Several authors argue that sport have been thought of as a male preserve (Matteo; 1986; Messner, 1988, 1990; Pedersen & Kono, 1990; Snyder & Spreitzer, 1983). However, it is important to emphasize that evidence indicates that women have participated in sport at all times, although, in a very different manner compared to men. In ancient times, women also seem to have participated in physical activities, for example pubescent girls among African tribes often wrestled as a part of their ritual initiation into mature womanhood (Paul, 1987;

Rummelt, 1986). According to Guttmann (1991) there were female boxers in Melanesia in the eighteenth-century. Guttmann furthermore argues that women in Sparta (800 BC to 500 BC) were required to train physically and to compete seriously in athletic festivals and contests such as the Herean games (Blue, 1988; Kennard & Marshall Carter, 1994; Olivovà, 1984). The Herean games were held especially for women nearby where the Olympic Games were situated, in which they were not allowed to participate, and consisted of a foot race, which women ran in age groups. Through this exercise they developed skills in racing, wrestling and throwing the discus and javelin (Kennard & Marshall Carter, 1994). Kennard and Marshall Carter (1994) suggested that their interpretations of Bishop Sidonius Apollinaris' works from the early Middle-Ages indicated evidence that sport and recreation had an important role for both men and women of all social classes and women as well as men engaged in for example several varieties of ballgames.

During later times it is no doubt that women have participated in sport. For example in the northern Italian city of Venice an annual regatta for women was held beginning in the late 1600s (Park, 1994). In England, women and children as well as men engaged in the annual Stamford Bull running (Thiselton Dyer, 1876), and in the parish of Inverness (Scotland) there was an annual "standing match at foot-ball" between the married and unmarried women (Hone, 1826). During the 1700s female pedestrians engaged in competitive walking and running contests (Park, 1994), and in countries with frozen water on the channels during the winter, racing on skates became a popular event for both men and women during the early 1800s (Park, 1994). During the 18th century archery, croquet and tennis became popular sports among upper-class English women (Vertinsky, 1994). Women could also be found participating in horseback riding, bowling, rowing, canoeing, and ice and roller-skating, although none of these activities achieved mass appeal (Vertinsky, 1994). Archery too became quite popular as an acceptable female sport, along with tennis. Bicycling became very popular among women in the late 1880s and early 1890s (Smith, 1972), and offered the potential for physical mobility and the benefits of healthy, active recreation, as well as a new sense of liberty from restrictive dress and chaperonage.

However, at the same time as sport became more and more popular among women, considerable forces were ranging against the full participation of late-19th-century women in sports and recreation. Bicycling received for example strong criticism from a number of leading medical doctors who, initially having viewed the sport as an excellent means for women to gain health and strength, began to have doubts about its effect (Vertinsky, 1994). Excessive activity was said to be the problem as too many women abandoned the law of

moderation and exposed themselves to the dangers of overstrain, "bicycle-face" (a condition that included wild, staring eyes, a strained expression, and a protruding jaw), and damage to the spine and reproductive system (Whorton, 1982). Medical authorities mainly expressed these and they came to influence opinions about women's participation in sport up to the 1950s (von der Lippe, 2000, 2001).

The opposition to women's participation in the Olympic Games has also been strong, for example Baron Pierre de Coubertin, founder of the modern Olympics, was opposed to women's participation because he considered it to be unnatural and unaesthetic (Hargreaves, 1994). In 1902 he stated that "Women's sports are all against the Law of Nature." Accordingly, not a single woman was able to participate in the first modern Olympic Games in Athens in 1896. The first Olympics to have women participating were held in Paris in 1900. Twelve women participated in the upper-class sports of golf and tennis, although "without the official consent of or comment from the IOC" (Blue, 1988; Mitchell, 1977; Simri, 1977). The number of female participants rose slowly but steadily in the following Olympics, even though women's programmes were limited to only a few sports; archery, tennis, figure skating, and swimming. A decisive breakthrough for women's Olympic sports came after the first world war when the women's events were extended to include fencing in 1924 and even team gymnastics and track-and-field events in 1928 (Pfister & von der Lippe, 1994).

The inclusion of the 800-meter track event for women in 1928 was highly controversial as this was considered to be an exceedingly long way for women to run (Welch & Costa, 1994). The media made claims that a number of women collapsed at the finishing line from exhaustion, and this women's event was withdrawn from future Olympic Games until 1960. However, doubts about women's ability to participate in endurance events remained long after the women's 800 meters was reinstated in 1960 (Welch & Costa, 1994). For example, in 1978 the all-male International Olympic Committee (IOC) decided not to include a women's 3000 metre event in the 1980 Moscow Olympics because it was considered too strenuous (Women's Sports Foundation, 1995). This argument had no basis in modern medical science, and some medical doctors at that time claimed that females were better suited physiologically and psychologically than men for long endurance training (Ferris, 1979). It was not until 1984 that this event and the marathon were finally included and the 5,000 and 10,000 metres were only included as recently as the Seoul Olympics in 1988. According to Coakley (2001) the men on the IOC have justified these restrictions by claiming that "women need to be protected from such demanding events." Judo was not included for

women until 1992 and until very recently sports such as ice-hockey, football, modern pentathlon, weightlifting, some track and field events and the 1,500 metres freestyle were also among the exclusions. However, at the Olympic Games in Sydney, 2000, eight additional sports were opened for women: hammer throw, modern pentathlon, pole vault, tae kwon do, trampoline, triathlon, water polo and weight lifting. Now, only two (summer) sports that are open to men, remain to be opened to women – boxing and wrestling (Choi, 2000; Pfister, 2000). In winter Olympics, both men and women participate in almost all sports, except for ski jumping that is not yet allowed for women (IOC, 2006). However, the courses and distances, especially in endurance sports such as down hill, biathlon, and cross-country skiing differ between men and women. For example in cross country-skiing, men participate in 15 km individual start, 30 km pursuit, 50 km mass start and 4 x 10 km relay, whereas women participate in 10 km individual start, 15 km pursuit, 30 km mass start and 4 x 5 km relay (IOC, 2006). The same pattern is obvious in biathlon.

Since the first Olympics open to women in 1900, the percentage of female competitors has increased slowly, and among all competitors in the 2000 Sydney Olympic Games 3,947 (38%) women compared to 6,435 (62%) men participated. As suggested by Coakley (2001), if the past rates of participation progress continue, one half of the participants will be women at the 2012 Summer Games in London.

Even though there have been examples of women participating in sport at all times, there is little doubt that women have been regarded as inferior to men, and that women's sport also has been trivialized at all times. For example, in the United States it took years of lobbying before Congress passed Title IX of the Educational Amendments in 1972[2]. Title IX declared, "No person in the United States shall, on the basis of sex, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any educational program or activity receiving financial assistance" (Carpenter & Acosta, 2005). Sports and athletic activities have been main targets of Title IX, and before its passage, athletic scholarships for women were nonexistent. However, with the passage of Title IX great progress has been made for financial assistance in women's sport.

Kay (2003) suggests three rationales for opposing women's sport participation. The first, the medical rationale argued that women are physiologically unsuited to sporting activity and may be damaged by it. The second rationale, the aesthetic one, put forward that women

[2] Title IX of the Education Amendments of 1972 barred sex bias in "any education program or activity receiving federal financial assistance" [Title IX of the Education Amendments of 1972, 20 U.S.C., Section 1681 et seq. (1972)].

engaging in sport are unattractive spectacles. Lastly, the social rationale advised that the qualities and behaviours associated with sport are contrary to 'real' femininity. Change has clearly taken place: few people would for example today argue that it is 'unnatural' for women to take part in sport but traditional notions of what is 'appropriate' are still influential (Kay, 2003).

Although opportunities for women to participate in sport have increased over the past century, gender equity has not been achieved. Equity is of course sometimes difficult to achieve because of, for example customs in certain cultures preventing women to expose any surface of their bodies to the sight of men. Women in traditional and poor societies often face barriers that preclude or discourage sport participation, as well as limit the extent to which any woman could take sport seriously enough to train at any elite level. These barriers are both ideological and structural. In other words, they are related to ideas about what is and isn't appropriate (ideology) and to the availability of opportunities and resources to take advantage of them (social structure).

Sport and power relations between men and women

Organized sport has for a long time been a crucial arena of struggle over basic conceptions of masculinity and femininity, and as such has become a fundamental arena of contest in terms of power relations between men and women. Sport researchers studying gender in sport have been criticised for having minimized the extent to which gender relations are based on power (Messner, 1995). Some important factors that enable understanding of the different status between femininity and masculinity in sport can only be explained through the power relations between men and women.

Sport has for many been identified as a supremely male activity (Boutilier & SanGiovanni, 1983; Bryson, 1994; Dunning, 1986) and a wide range of scholars have depicted sport as a particularly powerful setting for the construction of masculinity (e.g., Birrell & Theberge, 1994a, 1994b; Bryson, 1987, 1990; Connell, 1987; Hall, 1993; Hargreaves, 1994, Messner & Sabo, 1990; Willis, 1982). Although, sport is of great interest to many women, sports seem to be a powerful institution through which male hegemony is constructed and reconstructed. This seems to be especially true for the competitive part of sport. Bryson (1994) argues two fundamental dimensions to the support that sport provides

for masculine hegemony[3]. First it links maleness with highly valued and visible skills and second it links maleness with the positively sanctioned use of aggression/force/violence. The process of co-opting sport for males has the effect of making femaleness and female activities appear inferior. By implication, Bryson argues that it seems that females are unable to do things that are skilful and valued highly.

In her book "Towards a psychology of women", Baker Miller (1976) discusses the broad issue of the way emphasis in society on psychological characteristics regarded as masculine has an inferior effect on those considered feminine, for example skills in interpersonal relationships, nurturing and responsiveness. She suggests that lots of the things that women do are seen as "not doing anything" (Baker Miller, 1976). Sport is a very significant domain for perpetuation of this ideology. Sporting activities in which women are predominant such as ice-skating and gymnastics are treated as different from the "real sports" as defined in the male interest. Ballet dancing, while recognised as an art form for its grace, is not recognised for the strength, skill and endurance of the performers. Talbot (1990) argues that the relationship between masculinity and dance is a root of the more general 'problem of gender equality', and that activities such as dance, which are normally associated with women and girls are treated as low-status activities.

Another important aspect within sport is the fact that those responsible for sport's policy at both national and international levels are overwhelmingly male (Acosta & Carpenter, 2000; Bryson, 1994; Coakley, 2001; Hargreaves, 1994; Hovden, 2000; Kay, 2003; NOCCS, 2003; Theberge, 1994). If women are underrepresented in powerful roles, their positions can easily be marginalized. Women's under-representation in the organisational and administrative structures of sport is a worldwide phenomenon. In comparison to men, women hold fewer positions of power in sport, and they hold positions of less power (Kay, 2003). For example Acosta and Carpenter (2000) in a longitudinal study documented gender trends (favouring men) for US College coaching and administration during the period from 1977 – 2000.

In Norway, only two out of nineteen sport districts have female presidents in 2006 (NOOCS, 2006), the same number as in 1998 and in 1993. In the present year, only seven of the 55 sports organisations in Norway have female presidents (NOOCS, 2006). This however, represents three more female presidents since 1998, when the total was four (Fasting, 2003).

[3] Hegemonic masculinity can be defined as the configuration of gender practice which embodies the currently accepted answer to the problem of the legitimacy of patriarchy, which guarantees the dominant position of men and the subordination of women (Connell, 2005, p. 77).

The Board of Sports in Norway is headed by a male, and this has been so for a long time. All since the Confederation of Sports was formed in 1861 and up to the modern organisation of today The Norwegian Olympic committee and Confederation of Sports (NIF) – only men have been in the leading position – with one exception when a woman had the function as a president for a few months in 2004.

The International Olympic Committee (IOC), probably the most powerful administrative body in global sports, had no female members from 1896 until the 1980s. Today the IOC consists of 100 men and 14 women (IOC, 2006).

On top of this direct control of the sport's organizations themselves, we have an overwhelming maleness of commentators, politicians who are responsible for decisions of direct relevance to sport, and business people who are responsible for decisions about sponsorship. Thus, with few exceptions men are making critical decisions that frame the environment in which women's sport exists. The effects of men having the majority of control may translate into women having, for example poor -funding, -access to the media, -sponsorship, -training facilities, less educated coaches etc. The absence of woman from such positions may also reinforce the gender stereotyping traditionally associated with the sports world and women in general.

Many countries have now tried to address women's under-representation in sport by adopting formal policies to enhance their position (Kay, 2003). One example is that the Norwegian Olympic Committee and Confederation of Sports (NOCCS) which aims to put more effort towards girls and women in terms of recruitment of leaders (NOCCS, 2003).

Physical differences between males and females

To perform well in for example physical strength, endurance, power, grace and elegance are essential in sports. However, when it comes to males and females some important possible physical differences should be discussed.

Sex differences in the present thesis refer to male and female biology and the fact that they differ in genes, hormones and anatomy. The most obvious difference between the sexes at birth lies in their external genitalia, which also has implications for their gender. The sexes also typically differ in size and weight. Males are slightly bigger than females until age five. From that point until females begin to grow as they enter puberty, around 11 years of age, boys and girls grow at about the same pace. At puberty, girls temporarily grow faster than boys (Armstrong & Welsman, 2000; Money & Ehrhardt, 1972). Before puberty, boys and

girls show no significant difference in maximal aerobic power, nor in strength (Aastrand et al., 2003).

Despite considerable overlap, after puberty, the average male adult generally is taller, stronger and heavier than the average female. Furthermore, the average male has a narrower pelvic outlet, wider shoulders, more muscle mass, a greater lung capacity, larger heart, and therefore a more efficient delivery of oxygen to working muscles. They also tend to have a smaller body-fat-to-muscle ratio than females at all ages (Dyer, 1982; Holloway & Baechle, 1990; Malina, 1988, 1990; Percival & Quinkert, 1987; Wardle, Gloss, & Gloss, 1987; AAstrand & Rodahl, 1986; Aatrand et al., 2003). Females have comparatively lesser muscle mass, more body fat, shorter and less dense bones, a smaller lung volume and total chest capacity, and are on average more agile and flexible, though slower and less strong than men. Women's maximal aerobic power and maximal strength is, on average, 65 to 75% of the men's (Aastrand et al., 2003). They also have to accommodate in their sports to the physiological changes which occur during menstruation, pregnancy and childbirth (Dyer, 1982). These differences contribute to males generally having more strength (especially upper body strength), more ease in running and over-arm throwing, less flexibility, and poorer ability to float and withstand cold, whereas different skeletal structures and greater flexibility in women make for superior performances on a balance beam, for instance. Also women's higher body fat ratio gives them greater buoyancy in water and greater insulation from heat loss, which has translated into women's best time in swimming in the English Channel both ways being considerably faster than the best time recorded by men. However, these are average differences and they may also be a function of athletic training. Training and experience have been found to eliminate sex differences in many physical and athletic accomplishments (Hall and Lee, 1984; Puhl, 1986; Roth et al. 2001; Ryan et al. 2004).

Messner (1995) raises the question whether women possibly can compete at the highest levels with men in football, track and field, hockey or baseball? Although, women have some physical differences from men that could be translated into athletic superiority, the fact is, that the major sports (especially the "money" sports) are defined largely according to the most extreme possibilities of the male body. If cross-sex competition is truly on the agenda, women are going to be competing at a decided disadvantage, "fighting biology all the way" (Brownmiller, 1984), on a male-defined territory. The notion of longest, highest and strongest means a lot – and sometimes everything in sport competitions, and thus represent an critical factor for understanding why femininity are seen as inferior to masculinity in sport.

Although it may seem intuitively logical to conclude that women are indeed less suited to sports due to lesser physical ability and because of women's role in reproduction it is not generally considered conductive to such activities. It must also be acknowledged that women are now allowed to compete in sport, they are breaking athletic records that men previously held, and this presents a counter argument against the biological position that men are naturally more suited to sports (Choi, 2000). One example is the participation of Paula Newby-Fraser in the 1988 Bud Light Ironman Triathlon World Championship. She was the female winner and completed this event, a 2.4-mile ocean swim, 112-mile bike ride and a 26.6-mile marathon, in 9 hours, 1 minute and 1 second (Burton-Nelson, 1991). This time is faster than all of the men in every Ironman triathlon prior to 1984, yet the Olympic triathlon were only open to women for the first time in the Sydney 2000 games. This observation could serve as an example that women's supposed inferior physical prowess is due to their having had less opportunity, resources and encouragement to develop these skills.

As beliefs and perceptions (such as physical self-concept and values) are not necessarily tied to actual performance or biology it is believed that males and females receive different rewards for the same behaviours within sport and physical activity, which in turn influence the perception of themselves.

Study objectives

Major goal

The main aim of the present thesis was to study multidimensional physical self-concept and values among adolescent boys and girls.

Sub-goals

The main aim of *Study I* was to test whether the multifaceted Physical Self-Description Questionnaire (PSDQ) is a useful instrument among Norwegian adolescents. Physical attributes and competencies seem very important to young people, and boys and girls in Norway are no exception. Despite this, no Norwegian instrument exists to measure multidimensional physical self-concept, thus there is of great value to validate a Norwegian version of PSDQ that has already shown good psychometric properties in Australia.

Previous research has demonstrated gender differences in physical self-concept (Asci, 2002; Cole et al., 2001; Crain, 1996; Hagger et al, 2005; Hayes et al., 1999; Marsh, 1989a;

Wigfield, Eccles, MacIver, Reuman, & Midgley, 1991). Not many studies have investigated gender differences in multidimensional physical self-concept in Norway recently, thus the purpose of *Study II* was to explore gender differences on 11 different subdomains of physical self-concept.

In *Study III* the main aim was to explore gender differences in adolescent's perceptions of values related to sport and physical education. Previous research has demonstrated boys and girls to rate general sport values differently. For instance, boys believe that doing well in sports is much more important than do girls, and both girls and boys think that it is more important for boys than for girls to have abilities in sports (Eccles & Harold, 1991; Jacobs & Eccles, 1992; Wigfield et al., 1997). Few researchers, however, have investigated gender differences in values more specifically, for example whether boys and girls rate masculine and feminine values differently.

Considering the importance of the influence significant others play on adolescents the aim in *Study IV*, was to examine how boys and girls perceive significant others' values related to sport and physical education.

<u>Research questions in the present dissertation were:</u>

Study I:

I) Is the factor structure of the Physical Self-Description Questionnaire (PSDQ) as suggested by Marsh et al. (1994) similar in a Norwegian population?

II) Is the PSDQ a reliable measure among students as young as 10 and 11 years of age?

Study II:

I) Are there gender differences in multidimensional physical self-concept, and if there are, do these differences run along gender-stereotypical lines?

Study III:

I) How do boys and girls perceive feminine and masculine characteristics within sport and physical education?

II) Are ratings of the importance of masculine and feminine values related to participation in gendered sport?

Study IV:

I) Do adolescent boys and girls perceive significant others' values differently?

Method

Design

All studies in this thesis are cross-sectional and based on self-report questionnaires. Each variable is only measured on one occasion for each participant. Cross-sectional designs are useful for identifying correlates and associated features. They are well suited when studying conditions or characteristics of individuals, such as for example physical self-concept and values in different age groups. However, causal relations cannot be directly demonstrated, and sampling biases may occur, depending on how the cases are identified (Kazdin, 2003). These designs however, can determine the type of association as well as the strength of the association between two or more variables. Furthermore, the extent to which this association is affected by controlling other variables can also be assessed (Howitt & Cramer, 2005). By using such a design it is possible to examine gender differences (*Study II, III, IV*) and also to test the factor structure of an existing instrument (*Study I*).

Study I and Study II

Participants

In spring 2001, students in all 53 elementary- and secondary-schools in Trondheim, Norway were invited to participate in a study about physical self-concept. At the time of data collection, the majority of citizens in Trondheim were white Norwegians. As Trondheim is a university city, schools are very often asked to participate in different research projects. This means that some schools were already included in other research project when they received invitation about the present study. As a result we knew it could be quite challenging to include a very large number of schools in the project. Thus, to ensure an acceptable number of participants, it was a major point to start out with a large number of schools. Many things may have influenced the principals' decision about participation, such as his or her opinion about the importance of this actual project. Also, the fact that the school was busy within other research project or otherwise preoccupied at that specific point in time. Lack of parental consent or students being absent when the questionnaire was administered has of course also influenced the number of participants.

A number of 11 schools were positive to participate, and a total of 1233 students from 5^{th} – 10^{th} grade were asked to fill in a self-report form. Out of these, 1098 (89%) returned completed forms. Missing data is likely to have a more dramatic effect on student level than on school level. In the present study missing on student level (11%) is regarded as acceptable.

The schools represent different parts of the city, and they are believed to represent a mean of the population.

Instrument

The Physical Self-Description Questionnaire (PSDQ) **(see Appendix I)**

The Physical Self-Description Questionnaire (PSDQ) is a 70-item questionnaire that measures nine specific components: Appearance (e.g., "I have a nice looking face," "I am good looking"); Strength (e.g., "I am a physically strong person," "I am stronger than most people my age"); Endurance (e.g., "I can run a long way without stopping," "I can be physically active for a long period of time without getting tired"); Flexibility (e.g., "My body parts bend and move in most directions well," "I am quite good at bending, twisting, and turning my body"); Health (e.g., "I hardly ever get sick or ill," "When I get sick it takes me a long time to get better"); Coordination (e.g., "I feel confident when doing coordinated movements," "I can perform movements smoothly in most physical activities"); Physical Activity (e.g., "I often do exercise or activities that makes me breathe hard," "I do lots of sports, dance, gym or other physical activities"); Body Fat (e.g., "I have to much fat on my body," "My stomach is too big"); and Sports Competence (e.g., "I am good at most sports," "I have good sports skills"); one Global Physical scale (e.g., "Physically, I am happy with myself," "I am satisfied with the kind of person I am physically"); and one Global Self-Esteem scale (e.g., "Overall, most things I do turn out well," "Overall, I am no good").

Each of the PSDQ sub-scales contains six items except for the Health and Global Self-Esteem subscale that has eight items. Each PSDQ item is a declarative statement, and participants respond in the original instrument on a six-point true-false scale with the respond alternatives; "false" – "mostly false" – "more false than true" – "more true than false" – "mostly true" – "true." However, these six-point respond alternatives may be difficult to comprehend for young children. Especially, the two alternatives "more false than true" and "more true than false" may represent a challenge to young children when they shall distinguish between these two in addition to the other alternatives.

Marsh and his colleagues (1990d, 1984) have successfully used a five response scale with the respond alternatives; "false" – "mostly false" – "sometimes false/sometimes true" – "mostly true" – "true" in their Self-Description Questionniare I upon which the PSDQ is based, and that also focuses on younger children (from grade 2). In SDQ I, the categories "more false than true" and "more true than false" are replaced with the one category "sometimes false/sometimes true." It is assumed that it will be easier for young children to

comprehend this one category. Based upon this argument, the original six-point scale was reduced to a five-point scale also in the present study because children as young as 10 years of age were included as participants. Furthermore, in the Norwegian PSDQ scale a five-point scale with the respond alternatives; "totally disagree" – "disagree" – "disagree a little/agree a little" – "agree a little" – "totally agree" were used. This change in wording was done because results from a pilot study, carried out in a Norwegian sample, showed that these respond alternatives turned out to be more understandable among Norwegian adolescents compared to the original "true-false" alternatives. Furthermore, idiomatically it fits better with the Norwegian language, and it is better in understanding with the English semantic meaning of the expressions. By the use of a five-point scale, results from the present study would not be comparable with previous research when comparing mean values. This represents however not a problem when comparing relations between variables. More important than being able to compare mean values is the question about good reliability of an instrument.

The questionnaire was translated into Norwegian by the author of Study I using the version provided by Marsh et al. (1994). Then, a cross-translation was conducted by a researcher who is fluent in both English as well as Norwegian.

Procedure

After granted permission to perform the studies from the schools, teachers helped by sending information letters to parents. The letters briefly explained the purpose of the studies, and consent from parents was deemed necessary before participation in the project. The Physical Self-Description Questionnaire (PSDQ) was administered during class hours. The students were informed about the study and the questionnaire was not a test and there were no right and wrong answers. Participants were assured that their responses would be completely confidential and that they were free to participate and that they could opt out at any point of time. For students who felt that they did not understand the questions, questions were read aloud by one researcher. To take account of possible differences in reading and writing skills, students were given as much time as needed to complete the items.

Statistical analyses

Statistical analyses were carried out by the use of SPSS for Windows, version 12.0.1 and LISREL, version 8.54.

In study I, Confirmatory Factor Analysis (CFA's) was conducted to test factorial invariance of an 11 dimensional model for PSDQ across age and gender among Norwegian

elementary- and secondary-school students. Factor analysis was performed to examine the factor structure in the Norwegian sample.

In study II, univariate statistical analyses on scales and sums of scales were performed. T-test was conducted to detect gender differences in multidimensional physical self-concept. Two-way ANOVAs were used to assess the main effects of age and gender, as well as possible age by gender interactions across the nine subdomains of physical self-concept and the Global Physical and Global Self-Esteem scales. To ascertain the effect of the various independent variables on Global Self-Esteem, multiple regression procedure was used.

Study III and Study IV

Participants

Early autumn 2003, all 19 secondary public schools in Trondheim, Norway were invited to participate in a study about values in a physical context. Also here, we started out with a large number of schools, because we from experience knew that many schools already were busy within other research projects or otherwise preoccupied (for further discussion, see Study I and Study II, under participants). Out of these, four schools responded positively about the study. A total number of 388 students in 8^{th} – 10^{th} grade were invited to participate, and out of them 357 (92%) completed the self-report form.

Instrument

The Gender Value Scale I (GVS) **(See appendix II and appendix III)**

The Gender Value Scale (GVS) was developed specifically for the purpose of studying adolescent's own, as well as their perception of the values of significant others in a physical context. The GVS is based on the Physical Self-Description Questionnaire (Marsh & Redmayne, 1994; Marsh et al., 1994) that was originally developed to measure physical self-concept in nine specific components: Appearance, Endurance, Strength, Flexibility, Health, Coordination, Physical Activity, Body Fat, Sports Competence, as well as Global Physical self-concept and Global Self-Esteem. However, since the purpose of the present study was to reveal values rather than self-concept, some changes from the wording in the PSDQ became necessary.

In the GVS, the aim was to measure stereotypic masculine and feminine values within a physical context, and based upon previous literature (Broverman et al., 1972; Rosenkrantz et al., 1968; Williams & Bennett, 1975) Appearance – Strength, Strength, Endurance, Sports Competence, and Masculine traits in general were labelled as stereotypic masculine values,

whereas Appearance – slender, Appearance – good looking body, Appearance – good looking face, Flexibility, and Feminine traits in general were considered as stereotypic feminine values. These categories were based upon a pilot study in which a group of adolescent boys and girls were asked to categorize these words into feminine and/or masculine.

The GVS consisted of seven different parts. Part one measured how the individual him/herself rated values, and in parts two – seven individual's perception of the values of different significant others (female peers, male peers, mothers, fathers, coaches, and teachers, respectively) were measured.

Characteristics to be investigated in the present study were; Appearance – good looking body (e.g., "To have a great body," " To have a nice body"); Appearance – good looking face (e.g., "To be good looking," "To have a nice looking face"); Appearance – slender (e.g., "To have a slender body," "To have a thin body"); Appearance – strength (e.g., "To bee good at lifting heavy objects," "To do well in a test of strength"); Endurance (e.g., "To run a long way without stopping," "To run a long way without getting tired"); Flexibility (e.g., "To have a flexible body," "To be good at bending, twisting, and turning the body"); Sports Competence (e.g., "To be good at sports," "To do well at sports competitions"); Masculine traits in general (e.g., "To be competition oriented," "To be tough/hard"); and Feminine traits in general (e.g., "To be caring," "To be good with children"). The characteristics Masculine and Feminine traits in general were not part of the original PSDQ, but were included in the GVS for the purpose of the present study.

In part one, individuals were asked to think about a sporting or physical education context and rate the importance of different values (e.g., "How important is it to you that you have a nice looking face?" "How important is it to you that you are good at lifting heavy objects?" "How important is it to you that you can run a long way without stopping?").

Because we know that significant others' values can be conceived quite differently depending on who of the significant other we are talking about, it became necessary to distinguish between different significant others. Thus, in the parts two – seven of the questionnaire adolescents were asked about their perception of the values of the significant others (female peers, male peers, mother, father, coach, teacher) (e.g., "How important do you think it is for your mother that you are good at lifting heavy objects," "How important do you think it is for female peers that you have a nice looking face?").

Each part of the GVS contained 30 items, in which 3 items were used to assess each of the ten characteristics. For example the characteristic "Strength" was measured by the following items: It is important to "be good at lifting heavy objects," "do well in a strength

test," "to be good in doing push ups, squats and sit-ups." Each item was a simple declarative statement, and participants responded using a five-point Likert type-scale ("not at all important" – "not very important" – "sometimes not important/other times important" – "quite important" – "very important").

The initial step in developing the questionnaire was a pilot study, in which 20 secondary-school students responded to different trait questions. Students were also interviewed about the wording in the questions, and how the understood and interpreted the meaning of the questions. Based upon their responses, minor changes were made.

Procedure

We were granted permission by the schools to perform the studies, and the teachers helped by sending information letters to parents. The letters briefly explained the purpose of the studies, and consent from the parents was deemed necessary before participation in the studies. Students who agreed to participate, and who returned an informed consent from their parents, completed questionnaires. The Gender Value Scale (GVS) was administered during class hours. Information about the study and questionnaire was read aloud before handing out the questionnaires. Students were informed that the questionnaire was not a test and there were no right or wrong answers. Participants were assured that their responses would be completely confidential and that they were free not to participate and that they could opt out at any point of time. As there were differences in reading and writing skills, students were given as much time as needed to complete the items.

Statistical analyses

Statistical analyses were carried out by using SPSS for Windows, version 12.0.1 and LISREL, version 8.54.

In study III, Cronbach's alpha was conducted to measure internal consistency for the 10 factors in the GVS. A Confirmatory Factor Analysis (CFA) was conducted to test the factor structure in the GVS questionnaire. Univariate analyses on scales or sums of scales were performed. A multiple discriminant function analysis and path analysis were conducted to demonstrate the role of perception of masculine and feminine values play in shaping gender differences in sport.

In study IV, Cronbach's alpha was conducted to measure internal consistency for seven dimensions (Self, Female Peers, Male Peers, Mother, Father, Coach and Teacher) in GVS. Confirmatory Factor Analysis (CFA) was conducted to test the factor structure in the

questionnaire. A one-way multivariate analyses of variance (MANOVA) was performed to test gender differences on the importance ratings in Self, Female Peers, Male Peers, Mother, Father, Coach, and Teacher. Means and standard deviations were calculated. Correlations through the method of CFA was computed to reveal how boys' and girls' own importance ratings of masculine and feminine values were related to their own perception of the values of significant others. Multiple regression procedure was used to assess the relative weight of significant others' values upon adolescents' own values.

For further details of methods, see the separate studies.

Summaries of the studies

With gender differences in physical self-concept and values as a departure point, the aim of *Study I* was to test the Norwegian version of the Physical Self-Description Questionnaire (PSDQ) that measures 11 different dimensions of physical self-concept in a Norwegian sample. In *Study II* gender differences and physical self-concept in sports were investigated. The focus in *Study III* was to examine gender differences in boys' and girls' perceptions of masculine and feminine characteristics within sport and physical education. In *Study IV* sporting students perceptions of significant others' values were analyzed in order to gain knowledge whether the values of significant others (as perceived by adolescents themselves) were related to gender categories and perceived values in adolescents.

Summary of Study I: Factorial invariance and factor structure of a revised five-point multidimensional PSDQ model for young children

The Physical Self Description Questionnaire (PSDQ) measures multidimensional physical self-concept. It has shown strong psychometric properties among Australian participants, and recent cross-cultural research has provided strong support for the appropriateness of the PSDQ in non-English countries as well. Although physical attributes and competencies are believed to be very important to young people, very few instruments have been developed to measure multidimensional physical self-concept in a Norwegian context. Since the PSDQ has shown good reliability and validity among students in other cultures, it would be assumed that the Norwegian version of the PSDQ also was a useful measure for multidimensional physical self-concept. Thus, one aim was to test the factorial invariance of the 11 dimensional PSDQ

across age and gender among students in a Norwegian sample. Researchers in earlier studies of the PSDQ have focused on participants older than 12 years of age. However, it is also assumed that students younger than 12 years are concerned about their physical appearance and competencies. A second aim was to explore whether the PSDQ could be used as a valuable research tool among students as young as 10 and 11 years of age.

Method

Participating in this study were 1098 students (514 boys and 584 girls) attending public schools in Trondheim, Norway. Students were divided into three age groups; Group 1 consisted of students in 5th and 6th grade (mean age = 10.51, sd = .531), group 2 were students in 7th and 8th grade (mean age = 12.35, sd = .641), whereas group 3 included students in 9th and 10th grade (mean age = 14.46, sd = .701).

Instrument

The Physical Self-Description Questionnaire (PSDQ) is a 70-item test designed to measure 11-dimensions of physical self-concept. Each item is a simple declarative statement, and participants responded on a 5-point true-false response scale. The PSDQ was translated into Norwegian, followed by a back-translation procedure widely described in the literature. For the purpose of the study, one a priori 11 dimension PSDQ model was specified for testing. This model was based upon the assumption that the 70 items of the PSDQ described 11 latent factors; Global Self-Esteem, Global Physical, Health, Sports Competence, Physical Ability, Appearance, Body Fat, Endurance/Fitness, Strength, Flexibility, and Coordination.

Results

Confirmatory Factor Analysis' (CFA) were conducted, using maximum likelihood estimation to test factorial invariance across three different age groups as well as gender. In evaluating the goodness of fit in the study, primary emphasis was placed on the RMSEA. The findings across age groups and gender in the Norwegian sample were satisfactory in that the RMSEA for all models varied from 0.053 to 0.068 which indicate reasonable fit (Browne & Cudeck, 1993), and thus support results in earlier studies carried out in other countries. Of great importance was the finding that the PSDQ in the present study supported that the pattern of fit indices also was consistent among the 5th and 6th grade students.

Summary of Study II: Physical Self-Concept and Sports: Do Gender Differences Still Exist?

Previous research has shown that boys score higher than girls in physical self-concept. Not many researchers, however, have investigated gender differences in multifaceted physical self-concept recently, thus the aim of study II was to reveal gender differences in multidimensional physical self-concept. Earlier research has demonstrated that boys score higher than girls on global self-esteem and global physical self-concept as well as on the subscales physical ability and appearance. However, we do not know whether they score higher compared to girls on other dimensions of physical self-concept such as health, body fat, sports competence, endurance, strength, flexibility, and coordination. Of particular interest in this study was to explore whether girls scored higher than boys on flexibility, which is considered to be a typical feminine dimension. Age differences and gender effects from the various independent variables of the subscales of global self-esteem were also examined.

Method

Data were collected in two age groups: elementary and secondary school students. The first group consisted of 591 students: 317 girls and 274 boys (mean age = 10.95 years, SD = .863). In the second group were 507 students: 267 girls and 240 boys (mean age = 13.74 years, SD = .991). The participants were students from 11 public schools in Trondheim, Norway.

Instrument

In order to measure physical self-concept, the Norwegian version of the Physical Self Description Questionnaire (PSDQ) was used (see Study I).

Results

Independent-samples t-tests (two-tailed) demonstrated significantly lower means in girls compared to boys in all domains except for flexibility. Gender differences were large in the global physical, endurance, strength, appearance, and body fat-scales. In the health, flexibility, and coordination dimensions, gender differences were smaller. Furthermore, age was significantly related to all domains with the exception of Health. Physical self-concept decreased with increasing age, and there was a significant age by gender interaction in the global physical, body fat, appearance, sports competence, and strength dimensions. Physical appearance was the sub-domain that most strongly predicted global self-esteem. This was not

surprising, and the emphasis placed by popular culture on appearance and its relationship to acceptance, may well serve as an explanation. There are of course several possible explanations why boys scored higher than girls on physical self-concept. One argument suggested in this article is that the social context through gender stereotyping can exert a major influence on these gender differences.

Summary of Study III: Adolescents' perceptions of masculine and feminine values in sport and physical education: A study of gender differences

Sport is gendered in that boys and girls participate in different kinds of sports. Despite cultural differences, more boys than girls participate in sports such as boxing, ice hockey, martial arts, bandy, and football, whereas more girls participate in sports such as ballet, dance, horse riding, figure skating, and aerobics. These sports may, based on their characteristics, be defined as masculine and feminine, respectively. However, these distinctions between masculine and feminine characteristics and activities in sport are regarded to be social-constructions based upon how people think boys and girls differ, and not how they actually differ. More specifically, these gender differences are the result of generally held images or stereotypes of boys and girls.

Research from Western sport cultures has shown that boys believe that doing well in sports is much more important than do girls. Furthermore, both boys and girls think that it is more important for boys than for girls to have abilities in sport. However, these studies have been general in nature, and it might therefore be fruitful to look at feminine and masculine values in sport more specifically. Thus, the primary aim of Study III was to examine boys' and girls' perceptions of feminine and masculine characteristics within sport and physical education. A further aim was to examine whether ratings of the importance of feminine and masculine values were related to their participation in gendered sport.

Method

A total of 357 (190 girls, mean age = 14.34, sd = .71; 167 boys, mean age = 14.50, sd = .74) students in eight to tenth grade in four different public schools in Trondheim, Norway completed the questionnaire. All the students participated in the compulsory physical education (PE) during school time, and 277 (130 = 77.8% boys and 147 = 77.4% girls) of the students participated in some sort of organized sport in their leisure time.

Instrument

The participants completed a questionnaire, the Gender Value Scale (GVS) regarding masculine and feminine values within a sporting context. This questionnaire is based upon the well-known Physical Self Description Questionnaire (PSDQ) (Marsh et al., 1994). Characteristics in the questionnaire were: Appearance – good looking face, Appearance – good looking body, Appearance slender, Appearance Strength, Endurance, Flexibility, Sports Competence, Masculine traits in general, and Feminine traits in general. The participants performed their ratings on a 5-point scale. In addition, students were asked in open-ended questions to give their opinion about; an ideal female body and an ideal male body, whether any sports were more appropriate for boys than for girls, and whether any sports were more appropriate for girls than for boys.

Results

The results indicated that boys rated appearance strength, sports competence, endurance, strength and masculinity as significantly more important than did girls whereas girls rated appearance good looking face, appearance slender, and femininity as significantly more important than did boys. Further, more boys participated in traditionally masculine sports, whereas girls to a greater extent participated in traditionally feminine sports. A discriminant function analysis separated the masculine sport group from the feminine sport group, which suggests that higher scores on the masculine function were indicative of lower value on appearance slender and flexibility, accompanied by higher value on appearance strength and masculinity. For the feminine sport group, this pattern was the opposite. The reason for boys and girls to be stereotyped in sport participation as well as how they rate the importance of masculine and feminine values within sport and physical education may be explained by social expectations and role models that heavily influence adolescents.

Summary of study IV: Gender differences in perceptions of significant others values: A study of boys and girls in organized sport

Previous research has demonstrated gender differences in how boys and girls rate the importance of masculine and feminine values within a sporting context. According to the expectancy-value model developed by Eccles et al. (1983) gender-stereotyping beliefs among adolescents are believed to be derived in part from interpretations of the attitudes of significant others such as peers, parents, coach and teacher. Thus, one aim in the present study

was to explore whether adolescent boys and girls perceived significant others' masculine and feminine values differently as well as identifying how masculine and feminine values of significant others (as perceived by adolescents) were related to adolescents' own values. As existing instruments of masculinity and femininity were found to be too general in nature for the present study, a second aim was to develop and validate a suitable instrument. Thus, the Gender Value Scale (GVS) was developed specifically for this purpose.

Method

Participants in the present study consisted of 147 sporting girls (mean age = 14.27, sd = .727) and 130 sporting boys (mean age 14.42, sd = .735).

Instrument

In order to measure adolescent's perceptions of significant others masculine and feminine value beliefs the Gender Value Scale (GVS) was used (see *Study III*). The participants first answered questions about their own feminine and masculine values within a sporting context. Then, they completed questions about how they perceived different significant others' (female peers, male peers, mother, father, coach and teacher) masculine and feminine values.

Results

The GVS was found to be a reliable instrument and the results were in accordance with the expectancy-value model, showing that girls and boys differed in their perceptions of masculine and feminine values within sport. Also they differed in how their own sport related values were associated to their perception of different significant others values. Boys' values were most closely related to those of the opposite sex, then coach and father, while girls values seemed to be more influenced by their coach, then male- and female peers, and father. These gender differences may be explained by old stereotypical attitudes that suggest masculinity to be men's and boy's things, whereas femininity is still tied to women and girls.

Discussion

The main aim of the present thesis was to examine physical self-concept and values among adolescent boys and girls in a Norwegian population. The first study asked whether the factor structure of the PSDQ as suggested by Marsh and his colleagues (1994) was similar in a Norwegian population. The Norwegian version of the PSDQ was used in the second study where gender differences among multidimensional physical self-concepts were explored. If gender differences were found, it was also an aim to explore whether these followed gender stereotypical lines. Evaluating boys and girls perception of masculine and feminine characteristics within sport and physical education was explored in the third study. Expectancy-value theory suggests that physical self-concept and values are influenced by significant others in the social milieu and in the forth study the aim was to explore adolescent boys and girls perceptions of significant others' values, and whether a relationship between adolescents own values, and their perception of significant others' values emerged.

In general the findings showed that the PSDQ could be regarded as a valuable research tool for measuring multidimensional physical self-concept among adolescent boys and girls in Norway. When using the PSDQ in a Norwegian population, results demonstrated boys scored significantly higher than girls in eight subdomains as well as on global physical self-concept and global self-esteem. For the majority of dimensions in physical self-concept conventional gender stereotypic explanations seemed to be supported. However it was against these stereotypical expectations that girls did not score higher than boys on flexibility and coordination previously viewed as typically "feminine" characteristics. The observation that boys and girls valued different characteristics in this Norwegian population was an important finding from the current research. To boys, appearance strength, sports competence, endurance, strength and masculinity were rated as significantly more important than to girls, who in comparison rated the appearance of a good looking face, appearance slender, and femininity as significantly more important than boys. The results showed that boys and girls also differed in their involvement in sport activities. More boys participated in sports rated as masculine, whereas more girls participated in sports rated as feminine. Furthermore, the results supported expectancy-value theory in that adolescents' own perception may be "coloured" by significant others' attitudes in their social milieu when it comes to gender stereotyping. The major differences between boys and girls were evident on the strength and appearance strength dimensions. Furthermore, results may indicate that certain significant

others' opinions were more important than others. The results are discussed in more detail below.

Testing of the PSDQ in a sample of Norwegian students

Early perspectives on the self-system viewed self-concept in a simplistic and unidimensional way (see Byrne, 1984; Marsh, 1990a). In the last 20-25 years several researchers (e.g., Shavelson et al, 1976; Shavelson & Marsh, 1986) have shown that any sound understanding of self-concept must take into account the multidimensional nature of the construct. For instance Shavelson et al. identified four different domains (physical, academic, social, emotional) in addition to global self-esteem in their model. Marsh (1986) has shown that it is not possible to view the academic domain as unidimensional, and argues that also within this domain multidimensionality must be regarded. More recently, researchers have started to analyze the multidimensionality of physical self-concept, and Marsh and his colleagues (1994) among others have developed a scale, the PSDQ, to measure the multidimensionality of physical self-concept.

To my knowledge the PSDQ has not been used in a Scandinavian sample before, and results in the present dissertation (*Study I)* have contributed to the physical self-concept research in several ways. Factor analyses have shown that the multidimensionality of physical self-concept as suggested by Marsh and his colleagues (1994) was also supported in Norway. Therefore, Norwegian students' physical self-concept should be measured according to a multidimensional view for example with the use of the PSDQ, and future studies should not exclude the multidimensionality of physical self-concept.

Fox (1998) suggested that although the PSDQ is viewed as a strong instrument to measure multidimensional physical self-concept, most of the validation work has been conducted on the same groups of Australian adolescents. Thus, *Study I* in the present thesis added further support to the notion that the PSDQ is a valid research tool when measuring multidimensional physical self-concept in countries other than in Australia. This is in accordance with previous research carried out in Turkey, Spain and France (Marsh, Marco, & Abcy, 2002; Guerin, Marsh, & Famose, 2004). In addition it has been confirmed through results from *Study I*, that the physical dimension in self-concept must be separated from global self-esteem, thus supporting the notion that physical self-concept must be regarded conceptually different than global self-esteem.

Furthermore, the PSDQ seems applicable to younger children than showed in previous research, as the factor structure was consistent over the age groups from 5th to 10th grade. One

'new' aspect of the present thesis *(Study I)* was the introduction of a five-point response scale and the inclusion of children down to 10 years of age. If a five-point scale is used in future studies it will be possible to compare results among younger and older children as well as comparing results within different cultures. These results do not only add important information to the testing of the PSDQ, but they also indicated that the development of a multidimensional physical self-concept begins early, and that the factor pattern demonstrated among older age groups is also obvious with children of 10 and 11 years old. It is however not possible, from data obtained in the present dissertation to confirm how early this multidimensional pattern starts to develop, and this should therefore be focus of future research.

It is relevant to discuss that *Study I* has some limitations when comparing mean values with previous research, because the present study used a five-point response scale instead of the commonly used six-point scale. This was done to include 10 and 11 years old participants in the study, and this was not believed to represent a problem when relations between variables were compared. Also in *Study I*, seven items did not load on to their expected factor, and this may be partially du to do changes in the wording due to the translation process. Although the Norwegian culture is not very different from the Australian, minor changes in wording can have significant importance in the semantics of terms used.

Gender differences in multidimensional physical self-concept

In *Study II* the focus was on gender differences, and results in this study demonstrated significant differences in multifaceted physical self-concept among boys and girls in elementary- and secondary school. Boys scored significantly higher than girls in eight subdomains, as well as on global physical self-concept and self-esteem. These results largely support earlier findings concerning gender differences in physical self-concept (Crain, 1996; Hayes et al., 1997; Marsh, 1989a; Marsh & Craven, 1997; Wigfield & Eccles, 1994) although these studies were more general in nature.

There may be several reasons to explain why boys were more positive when reporting their physical self-concept than girls. One possible explanation could be that boys may through more physical activity become physically superior to girls. Research has shown that boys and girls from early infancy are treated differently. For example are baby boys given more physical stimulation compared to baby girls (e.g., Mac Donald & Parke, 1986; Ross & Taylor, 1989). Furthermore, boys receive more sports equipment than do girls (Almquist, 1989; Etaugh & Liss, 1992), and boys are also encouraged to engage in sporting activities to a

greater extent than are girls (Eccles et al., 1990). Research has also shown that parents of sons report that their children have more athletic ability and that sport is more important than do parents of daughters (Eccles et al., 1990; Fredricks & Eccles, 2005). These differences in socialization may give boys more opportunities to be physically active compared to girls, and through physical activity their skills in the physical domains may be enhanced, and thus may lead boys to describe their physical self-concept differently than girls.

If boys exercise more and participate in activities that require strength and endurance and therefore become stronger and faster, this can justify why they respond more positive on the endurance and strength dimensions, but this explanation cannot hold for the appearance, health, and flexibility dimensions. The strength and endurance dimensions are objective criterions in that it is believed to be easy comparing their competence with others when for example running 60 meters, lifting 20 kg, jumping 1 meter like in athletics. On other dimensions such as appearance and health it is more difficult to compare themselves with others due to no objective criterions. Thus these dimensions need a different explanation.

According to physical differences between males and females discussed earlier, there exists no evidence that boys are higher in maximal aerobic power and strength than girls before puberty (e.g., Aastrand et al., 2003), thus an explanation based on biology seem not appropriate. However, boys may believe they are stronger and faster compared to girls, an alternatively, the expectancy-value theory (Eccles et al., 1983) can offer a plausible explanation. This theory suggests that gender stereotypes represented by significant others in the social milieu may impact upon an individual's own perceptions of stereotypes and self-concept. If socialization agents "agree" that sports competence, athletic abilities, building muscles and strength are a male thing, these gender-stereotyping attitudes could contribute more positive self-concepts among boy's compared to girl's physical self-beliefs and lead boys to believe that they are stronger and faster. This may seem a plausible explanation as researchers that have used the expectancy-value model have documented that children's competence and value beliefs are shaped by messages from significant others in the social milieu (Eccles, 1993; Frederick & Eccles, 2002, 2004; Jacobs & Eccles, 1992, 2000).

Several factors are believed to influence on self-concept, and one key element in this discussion is the frames of reference concept (Marsh & Craven, 2000). One frame of reference is social comparison (Festinger, 1954), and who boys and girls compare themselves with can influence their physical self-concepts. If conventional masculine and feminine stereotypes that males are physically stronger than females are accepted, girls should not be expected to score lower on physical self-concept compared to boys if they use other girls as

their reference group when evaluating their own physical abilities. However, it is possible that girls also include boys in their reference group when evaluating their own physical abilities and competencies. As suggested by Haavind (1994), women do not only compare themselves with other women, because they now have claimed the opportunity to compare themselves to men. This might also be true for younger girls who may include boys as their frames of reference. In organized sport, this does not seem relevant because boys and girls in general do not exercise together, nor compete against each other. However, in physical education, the frames of reference discussion seems plausible because this subject is compulsory in Norway, and boys and girls usually exercise together.

That girls compare themselves with boys might be reasonable in many fields such as the academic domain however it may not be fair to all girls when related to the physical domain. If boys do more running and participate in more activities that require strength compared to girls they will most likely become stronger and faster than girls. Evidence in the present dissertation (*Study III*) has demonstrated that boys and girls participate in different sports. Whereas more boys than girls participated in soccer, ice hockey, boxing, martial arts; girls participate in dance, horse riding, figure skating and aerobics. These sports may require different skills, and maybe the boys' sports mentioned here require more strength and endurance. If so, this can influence girls' physical self-concept negatively if they include boys in their frame of reference. It is not possible from data obtained in the present thesis to confirm whether girls compare themselves with boys, and this should therefore be focus of future research.

For the majority of dimensions in physical self-concept the conventional gender stereotypic explanation seem to be supported. However, it was against the expectations that girls did not score higher than boys on flexibility and coordination that were previously stereotyped as typically feminine characteristics *(Study II).* This might therefore be explained in another way. Alternatively, this can be a methodological question, and a result of boys and girls responding differently to questionnaires. There is some evidence that girls generally make more realistic estimations of their abilities and have lower aspirations than boys (Erkut, 1983; Gitelson, Peterson, & Tobin-Richards, 1982; Huston, 1983; Ilardi & Bridges, 1988; Maccoby & Jacklin, 1974). Boys in contrast to girls have higher expectations about their abilities and tend to overestimate them (Cross & Madson, 1997; Ehrlinger & Dunning, 2003). If this explanation is correct, it must also explain gender differences on the other dimensions of physical self-concept and not only on flexibility and coordination. However, gender stereotypes could also explain these findings. If boys have a more positive view about their

physical self as well as a more positive view about themselves in general it is possible that this predict boys having higher self-concepts in typically male domains (i.e., strenght and endurance), but not necessarily lower self-concepts in typical feminine domains (i.e., flexibility and coordination). Results in the present dissertation (*Study II*) support the notion that boys do have a more positive view about their general self. A similar reflection has also been made in the academic domain by Skaalvik and Rankin (1994).

Gender differences and values

In relation to the explanations discussed above, observations of what boys and girls value as most important to them provides support for the influence of social influences on their development (*see Study III*). Boys valued appearance strength, sports competence, endurance, strength and masculinity as significantly more important than girls, whereas girls rated appearance good looking face, appearance slender, and femininity as significantly more important than boys. At the same time more boys participated in sports traditionally characterized as masculine (e.g., soccer, ice hockey, martial arts), whereas girls to a greater extent participated in typical feminine sports (dance, gymnastics, horse riding, aerobics). If the sports boys participate in require more strength and endurance it is likely that they value these characteristics as being more important. If these characteristics are not important in sports that girls participate, they may not value strength and visible strength to the same degree as boys

It is possible that gender differences in physical self-concept and values (*Study II and Study III*) can be explained in terms of conventional gender stereotypes. According to Broverman et al. (1972) and Rosenkrantz et al. (1968) females were characterized as weak, non-athletic, passive, neat and gentle whereas males were described as aggressive, athletic, competitive, strong and dominant. If young boys and girls in the present dissertation have internalized such conventional stereotypes of masculinity and femininity, this may explain gender differences in physical self-concept and values. This explanation has support from the academic domain when for example gender differences in mathematics are explained in terms of gender stereotypes and differential socialization patterns (e.g, Eccles, 1987; Eccles et al., 1983; Marsh, 1989b; Meece et al., 1982). This explanation does not anticipate that boys are stronger, faster, or have more visible muscles. However, it anticipates that these are expectations or conventional stereotypes that rule in general.

The explanation based upon gender stereotypes about how boys and girls are, and what is appropriate for boys and girls receives more attention in *Study III and Study IV*.

Results from *Study III* have shown that conventional stereotypes exist regarding both what boys and girls value as important characteristics, as well as the activities that boys and girls participate in. A possible explanation to these gender stereotypes may be found in social cognitive theory (Bandura, 2001; Bussey & Bandura, 2004) and expectancy-value theory (Eccles et al., 1983). The expectancy-value theory explains how socialisers may influence children's self-competence and value beliefs in a gender-stereotypical way. In this model, expectancies and values are assumed to directly influence self-concept and task choice. According to social cognitive theory, gender development is promoted by three major modes of influence and the way in which the information they convey is processed. Modelling by significant others (parents, peers, media) are regarded as the most pervasive and powerful means of transmitting values and attitudes (Bandura, 1986). Furthermore, gender-deviant behaviour is sanctioned in most societies (Idle et al., 1993), and through direct guidance children are instructed in the behaviour that is regarded as appropriate for their gender (Bussey & Bandura, 2004). Although the social milieu may be gender stereotyped, it is according to social cognitive theory, the person him/herself who interprets signals from the environment, posits feelings of his/her physical self, decides which values he/she rates as important and finally decides on which activities to participate within. Some individuals may be more easily influenced by attitudes in their social milieu, and this can therefore explain why some young individuals are gender stereotyped in physical self-concept, values and activities, whereas others are not. As discussed in the present dissertation *(Study IV)* boys and girls differ in stereotypical ways; by how they perceived significant others' values, especially on the endurance, strength and appearance strength dimensions. Boys seemed to perceive most of the significant others to value these dimensions as important, thus supporting that conventional stereotypes exist especially on these dimensions. In light of expectancy-value theory which suggests the social milieu is important when it comes to gender stereotyping, I will now turn to a more general discussion about how strength has become to be assumed as a male thing, and not so much a female thing, how beauty is tied to femininity, and how the media supports these beliefs. Then I ask if gender stereotypes can be challenged, and whether this is necessary? Although data in the present thesis cannot fully explain all these elements, I believe these reflections may provide some valuable perspectives to the discussion.

Strength – a male thing and not so much a female thing

The 'doing gender' approach suggests that gender is socially constructed (Lorber, 1994; Haavind, 2000; West & Zimmerman, 1987). Although boys and girls may have the same

abilities, they come to value different characteristics because they face different societal constraints and expectations from the social milieu. Gender expectations can thus act as self-fulfilling prophecies, and boys and girls may come to adopt attitudes they believe is 'right' for their gender. Expectancy-value theory (Eccles et al., 1983; Eccles et al., 1998) suggests that gender stereotypes that may exist in a certain milieu can influence children's and adolescent's own beliefs. If conventional views of strength and masculinity are tied to views of males and not so much to females this may be a reasonable explanation why boys place more value on strength and appearance strength than girls (*Study III and Study IV*).

Hargreaves (1986) has argued that physical size or muscularity is an essential symbol of male power, and as discussed in the introduction gender can be thought of as a set of power relations (e.g., Fiske, 1993; Haavind, 2000).What is assumed to maleness for instance strength is superior relative to what is assumed to belong to femaleness. Based on this assumption it may become important for boys to be strong and to value strength as important. Previous research has shown that popularity is for many boys in Western societies associated with strength and athletic bodies and athletic skills (Evans & Roberts, 1987; Miller, 1989; Richardson, 1981), and recent studies have confirmed the importance of being muscular in adolescent males (e.g., Jones, 2001; McCreary & Sasse, 2000, 2002). For example McCabe, Ricciardelli, and Finemore (2002) found that to boys one important reason for exercising was in order to increase their body bulk so that they could conform to socio-cultural ideals for males.

Because sport ultimately is about physical activity, sports offer a perfect arena for male physicality or muscularity. Such attitudes may have their origin far back in history. Medical authorities in Norway at the end of 19th century and even in the beginning of the 20th century for example strongly argued that visible muscles were "men's birthright" in comparison to females who were advised to avoid strength training (von der Lippe, 2000).

Although sports participation has many positive consequences, an overemphasis on sports skills for boys can have negative ones. Males who are not interested or talented in sports are strongly stigmatized (Fasteau, 1974; Stein & Hoffman, 1978). Such males may experience role strain and feelings of failure and inferiority for not living up to male gender role expectations. Imagine a clumsy boy who gets ridiculed for dropping the ball, or even worse to be beaten by a girl in an athletic event. One of the worst insults that could be aimed at him would be "You play like a girl!" or "Sissy."[4] Kimmel (2003) furthermore, argues that

[4] A failed male can be translated "Sissy", and this term is mostly used by kids to label boys who for example perform poorly at sports (Thorne, 1993).

the fear of being seen as a sissy dominates the cultural definitions of manhood. If sports participation, success, strength and muscular power are psychologically central to boys and are the sole bases of their identity, this can have negative influence on a boy's global self-esteem.

In the present dissertation, girls valued strength and appearance strength as significantly less important than boys (*see Study III and Study IV*). These findings are not surprising in that building muscles can have the potential to challenge the traditional notion of female athletes' femininity, thus supporting the idea that conventional stereotypes as suggested in the 1960s and 1970s are present today. The activity of bodybuilding could serve as a good example in this regard. Bodybuilding is an activity that builds muscles and the aim, according to Daniels (1992), is to develop "traditional masculine he-man dimensions." Thus, leaning on conventional beliefs, bodybuilding can be viewed as a masculine domain. Women do participate in the masculine sport of bodybuilding, but as suggested by (Choi, 2000) thy must follow certain rules such as they must be feminine – they must have muscular development, but not too much, and they must still be sexy. Thus, female bodybuilders often try to neutralize the socially forced stigma of having muscles that are "too big." They use "femininity attributes" (long hair, manicured and polished finger nails, make-up) to carefully construct a presentation of self that highlights the "look" of dominant femininity. It is suggested that they do this to appear "natural" according to dominant definitions of femininity (Bolin, 1998). In a recent study (Grogan, Evans, Wright, & Hunter, 2004) seven female body builders were interviewed about their motivation for body building including social pressures to become muscular and not to become more muscular. Although the women emphasized the freedom to choose to be muscular within a cultural context with slimness as the norm, they also stressed the importance of aspects of traditional femininity. Even though they were muscular, they wanted to present themselves as feminine. This showed that although these women may reject mainstream cultural ideals however they are not completely free to develop their own ideals. These findings seemed to be in line with expectancy-value theory that suggests individuals are influenced by attitudes in the social milieu. It also shows that although attitudes changes take place on the individual level it can be stressful to live with that changes have not been made at the institutional or cultural level.

Women bodybuilding is regarded as an unfeminine of sport, because it is in total contrast to conventional definitions of femininity, as discussed in the introduction. It pushes the boundaries of social acceptance, and raises questions about what is natural when it comes to the bodies of women (Coakley, 2001). According to the gender logic used by most people,

all humans can and should be classified into two distinct and mutually exclusive categories: females and males. People using this logic assume that females and males have different qualities and characteristics, and these differences are grounded in nature, and that females are socially viewed as the "weaker sex" when it comes to muscles and strength. According to Heywood (1998, p. 171), female body builders have challenged this gender logic and threatened dominant ideas about men and women and about what is natural. She explains that women's bodybuilding is a direct confrontation with traditional roles, and argues that in a culture that still mostly defines women's purposes as service for others, it is no wonder female bodybuilding is so controversial.

Of course, not everyone accepts this gender logic, and, for those seeking new or expanded definitions of femininity, for example women's bodybuilding has provided new possibilities. There is evidence in the literature of complacency regarding the impact that gender stereotyping may have on the individual. Fasting et al. (2004) stated that female soccer players were clearly ambivalent about the traditional feminine and masculine stereotypes.

The gender-logic debate in that we mostly put people into the two categories males and females is quite interesting in terms of more recent theories of gender. Several researchers (e.g., Lorber, 1994, Haavind, 2000, West & Zimmerman, 1995) suggest that gender is socially created, and that this is a dynamic process. According to this view, one should probably try to see everybody as individuals with their own original interests and attitudes towards the concepts of femininity and masculinity. For example, we are able to see a biological female or male (sex), and we interpret her as a cultural woman or him as a cultural man (gender), but we actually do not know anything about who she/he is or what kind of person she/he is until she/he let us know, or even more important until we allow her/him to do so. This way of thinking would of course represent an enormous challenge to all of us, because the conventional concepts of masculinity and femininity seem to pervade our way of thinking about people. In this sense it is possible to believe that more recent thinking about masculinity and femininity as socially constructed, building on the assumption that gender is something we constantly "do," can add some valuable perspectives.

To what degree are we allowed to present our gender in sport? This becomes an essential question not only in sport of course, but in society. The sports field however appear as a bit conservative, and therefore it may remain a challenge until boys and girls can participate in sport without the present issues of gender which requires crossing the gender boundaries. Girls' participation in typically masculine sports seem to be more accepted by the social milieu than boys' participation in traditionally feminine sports, thus it will possibly

represent a bigger challenge to people in the social milieu to accept boys who like to participate in typically feminine sports as not deviant. This may be due to conventional ideas that masculinity is strongly tied to males, and that boys are much more likely to be criticized for participating in feminine activities than are girls for engaging in masculine activities (Fagot, 1985). However, in sport, as in everywhere else we need to understand, it is not about boys and girls, men and women – it is about individuals – and their right to perform gender in whatever way they feel is right for them.

Beauty and femininity

Evidence in the present thesis demonstrated that girls valued a good looking face and being slender as significantly more important than boys (*Study III and Study IV*). Although physical appearance is important to both males and females, beauty is generally defined as a feminine attribute (Williams & Bennett, 1975), and thus this element is regarded as especially relevant when the expectancy-value theory is taken into account. If the general attitude in a certain culture is that beauty is tied to females and femininity it may lead adolescent girls to experience certain expectations when it comes to appearance.

Beauty of the body has been central to femininity all since ancient times, although beliefs about what is attractive or gender-appropriate vary enormously from one culture to another and from one historical era to another (Hesse-Biber, 1996). For example, in Europe, plumpness was considered fashionable and erotic in the 1600s (Grogan, 1999). The idealisation of slimness in women is a phenomenon, dating from the 1920s, and the trend for slimness became particularly acute in the 1960s when the flat-chested fashion model Twiggy, with her boyish figure became the role model for a generation of young women. Slimness came to exemplify freedom, youthfulness, and was adopted as the ideal by women of all social classes (Orbach, 1993). In the 1960s, "Miss America" winners became slimmer and taller compared to earlier, and this trend also occurred in Europe. Studies of the portrayal of the female body in the media have reliably found that models became thinner and thinner between the 1960s and 1990s (Sypeck, Gray, & Ahrens, 2004). Today, the ideal of a slender body is the accepted norm in most of the western world (Crawford & Unger, 2000), and slenderness is generally associated with attractiveness, happiness, self-control and social acceptability (Grogan, 1999). Recent research has demonstrated that girls place a great deal of emphasis on conforming to conventional standards of physical attractiveness such as an unrealistically thin featured ideal (Dittmar, Lloyd, Dugan, Halliwell, Jacobs, & Cramer, 2000; Low, Charanasomboon, Brown, Hiltunen, Long, & Reinhalter, 2003; Sands & Wardle, 2003)

suggesting that the conventional stereotypes about appearance as important to females exist among adolescents today. Results in the present thesis *(Study III)* support this assumption. In addition, when adolescents were asked to describe an ideal female body, several boys and girls emphasized a pretty face as important.

Physical appearance and global self-esteem are strongly correlated (Harter, 1989) and the consequences for young women setting up an ideal of beauty that few of them can attain may often result in less positive forms of self-concept and self-esteem. In order to prevent such consequences it is in line with expectancy-value theory essential that significant others in the social environment change their signals about what is attractive and what values are important for individuals' well being. Western societies of today, as presented through the media (television, magazines, news papers) seem very concerned about using exercise and work-outs as a way to achieve a better look, to reduce weight, risk of getting health problems, and to be happy. The focus on having fun and feeling good when being physically active are however, less emphasized. One way in changing people's attitudes would be for magazines, television, and advertisement to focus more upon enjoyment of sports and physical activity, and less on physical attractiveness, and appearance. Today both females and males hear confusing cultural messages about ideals that are almost impossible to achieve.

In the present study, boys were also concerned about their appearance. This may be explained due to an increasing focus on good-looking men in advertising and other media (Agligata & Tantleff-Dunn, 2004; Ward, 2003). This shows that there are not only differences between boys and girls, but similarities as well, which supports the argument that gender cannot only be studied through differences.

Media

In the expectancy-value model (Eccles et al., 1983; Eccles et al., 1998) the social milieu are suggested to convey gendered beliefs both indirectly and directly, and one important factor that is believed to transmit such gendered beliefs is the media. The sports media for example in many countries in the Western world continue to treat sports women and men differently. Sports men are generally described in terms of athletic ability, physical strength and muscularity, whereas sports women are more often described in terms of physical attractiveness, their domestic interest and skills, and their vulnerabilities and weaknesses (e.g., Buysse & Embser-Herbert, 2004; Choi, 2000; Knoppers & Elling, 2004; Messner et al., 2003; Sagas et al., 2000). Implicit in these gender differentiated media presentations, higher status seems to be tied to being men or masculinity. This may be related to the values that exist in

competitive sport telling us that status is connected to running the fastest, jumping the highest or being the strongest. After puberty significant differences in maximal aerobic power and strength can be found between males and females (Aastrand et al., 2003). This may lead male athletes to become generally stronger, to run faster, and to jump higher compared to female athletes. Girls and women might try to live up to the masculine achievements in sport to earn acceptance, but the price to pay when comparing themselves with other boys and men might be a feeling of less confidence in the physical self. If presentations by the sports media lead to male stereotypic characteristics and abilities becoming the ideal to girls, girls will have an ideal or frame of reference that many of them will have difficulties living up to, thus leading to negative consequences for girls' self-concepts.

Is it possible to challenge conventional gender stereotypes in sport?

Gender stereotypes in for example sport participation reflect receivers' observations of which sport activities boys and girls respectively, should participate in. However, according to the view that regards gender as dynamic (e.g., Lorber, 1994; Haavind, 2000), these stereotypes, however, can be challenged and changed, at all levels from the individual to the institutional. This can be demonstrated by the activity of cheerleading. The very first cheerleaders in the late 1800s were men (Coakley, 2001). The sport of cheerleading was defined as male activity, and women were not allowed. Therefore the first women cheerleaders were considered rebels and deviants because they invaded male space. Through the 1940s, women received warnings from educators that cheerleading was bad for their health and overall development as women. Many women ignored these warnings, and social definitions of both femininity and cheerleading continued to change. In the 1950s, and ever since, women have dominated cheerleading. Most men dropped out because they did not want to be associated with what was becoming a "girls activity" (Davis, 1994). By the 1970s, many people thought that cheerleading was "naturally" suited for females and females were "naturally" suited for cheerleading. This represents an excellent example of how the concept of femininity and masculinity in sport can be challenged and changed, and also it is remarkable to notice how quickly these changes can happen.

Another example is the development of soccer in Norway. Women were excluded from this sport until 1976. Today soccer is the largest female sport in Norway (NOCCS, 2004). Soccer was for a long time viewed as a "masculine sport," however the fact that the participation numbers have increased rapidly, shows that rapid changes concerning people's attitudes to women's participation in a particular sport may occur.

This change is really interesting, regarding what might happen to traditional masculine sports such as ice-hockey, wrestling, boxing and ski-flying in the future. It will also be interesting to observe whether boys/men will be allowed to compete in sports such as rhythmic gymnastics or synchronized swimming that are today strictly viewed as women's competitions. It is however possible that we will not experience the same struggle for boys/men's participation in these sports, and this may has to do with cross-gender conduct being less accepted for boys than for girls (Sandnabba & Ahlberg, 1999). As a result sports mentioned above may have less status compared to conventional masculine sports, and boys who participate in sports such as rhythmic gymnastics or synchronized swimming will most probably gain no status.

In this regard it becomes necessary to discuss whether boys and girls must participate in the same activities, and whether it is an aim that they shall value different characteristics as important to the same degree. That boys and girls participate in different activities or that they value characteristics differently may not only be negative. It may even be positive for boys and girls self-concept that there are separate domains for boys and girls respectively. More importantly than boys and girls participating in the same activities and that they value different characteristics to the same degree, is that the value within the social milieu for boys' and the girls' domains should be equal. As it is today this do not seem to be the case. For example, men's and women's sport do not seem to gain equal status. One brilliant example in this regard is the World Championship in soccer for males arranged in Germany in summer 2006. The media coverage is enormous and there is a lot of money involved in this business. It may be reasonable to ask whether the next World Championship in soccer for females will receive the same media coverage, and the same status in the amount of money invested. These are only reflections, and should therefore be tested empirically in future research.

As outlined in the introduction, the majority of formal positions in sport are posited by men (e.g., Acosta & Carpenter, 2003; Hovden, 2000; Kay, 2003; NOCCS, 2003), and as suggested that women's positions should be enhanced. However, it is assumed that the sporting world will not change by simply enhancing women's formal positions within sport. In sport as elsewhere formal policies do not guarantee effective action (Kay, 2003). However, challenging young children's perceptions of conventional masculinity and femininity concepts might stimulate their critical thoughts about conventional stereotypes in sport as elsewhere. According to social cognitive theory (Bandura, 2001; Bussey & Bandura, 2004) the individual is the one to control one's gender conduct, and this is important because a change at the

individual level when it comes to challenging gender stereotypes is important because this can also change gender stereotypes at other levels as the formal and institutional levels.

This debate could easily turn into a chicken and egg dilemma. How can children become more tolerant towards different gender identities in sport, when the milieu strongly emphasizes conventional gender stereotypes? If this is going to happen, social agents have to become more critical towards gender stereotypes in sport, and more tolerant towards different gender identities. However, according to expectancy-value theory, significant others are believed to convey gendered beliefs in children and adolescents in many direct and indirect ways, and the way they interact with young people is therefore essential. If significant others become more liberal towards the masculinity and femininity concepts this could also influence children and adolescents own attitudes. There seems to be a tendency towards an increasing number of programmes in the media that deal with individuals crossing the gender line. This might lead people to make more critical thoughts about conventional concepts of femininity and masculinity in sports media as well as in society in general. It is to be hoped that the pendulum will swing towards a greater acceptance for different types of gender identities in sport as well as for masculine and feminine values and stereotypes. These open-minded attitudes toward femininity and masculinity might influence children who after all represent the future. They are the ones to have important positions within sports as well as in general in the years to come, and thus, creating the opportunity to make the sport's system more liberal towards conventional stereotypes.

General comments on methodology and suggestion for future research

Through the descriptive method of surveys, information is gathered via questionnaires. Surveys typically rely on self-reports rather than direct observations of attitudes. This is obviously due to the fact that attitudes can hardly be directly observed. Although, the responses that adolescents gave in the present studies may not accurately reflect their beliefs. This however does not represent a validity problem. Replies to survey questions are open to bias, for instance to boys' and girls' beliefs about social standards and their tendency to present themselves in a favourable way. This bias can invalidate question/s of a survey, and information obtained through self-reports must therefore be interpreted carefully. For example several studies have documented boys as overestimating their abilities compared to girls (Cross & Madson, 1997; Ehrlinger & Dunning, 2003; Maccoby & Jacklin, 1974; Stake, 1992), and this may have influenced the results in the present dissertation. It is difficult to know whether people respond truthfully, but in questionnaires where the same question often

is repeated several times it is possible to measure whether individuals respond similarly on related questions.

The participants in the studies of the present dissertation were mainly white Norwegian boys and girls who participated in sports that are common in Norway. If adolescents with different cultural backgrounds, such as immigrants from other countries (Pakistan, Africa, Eastern Europe, Turkey, and Asia) as well as uncommon sports were included, the results may have differed. In future work, the same questionnaire should be used among adolescents with a different cultural background, for example in the capital Oslo – where the number of immigrants, at least in certain parts of the city, is much higher compared to Trondheim.

All studies in this thesis are cross-sectional surveys and based on self-report questionnaires. This reflects the situation adolescents experience at the moment, but how we experience, understand, and relate to sport varies with time and to the changes in society. More longitudinal studies might therefore be a relevant design to include in this kind of research. Although longitudinal studies portray how behaviour actually changes over time, only experimental design can explain causal relations. Attitudes and values are assumed to be difficult to measure in experimental studies, but longitudinal studies such as done by Jacobs et al. (2002) and Frederick and Eccles (2002) may have certain advantages in this regard and should therefore also be carried out in the future.

Furthermore, gendering is seen as a continuous process developing within a social context. This means that adolescents' experience within sport can change, and thus influence their self-perception in more directions. Gender relations, also in sport, are part of a constant process of negotiation, struggle and change therefore future studies with qualitative approach might add some important perspectives because methods used in such an approach may give more information about what the nuances of change in gender relations.

Femininity and masculinity are complex concepts that might represent diverse meanings to different individuals and they may also change over time. Thus, the present thesis should be regarded as a departure point from which feminine and masculine attitudes among sporting and physical education students can be further explored. In contrast to earlier research, many researchers today focus on how the practices of femininity and masculinity are socially constructed, how they create and reinforce cultural meanings, and their role in establishing differential power and privilege in society, building on the assumption that gender is something we constantly "do." Thus, future studies of masculinity and femininity as related to a physical context may also imply other theoretical approaches and methodology

than those used in the present dissertation. Alternatively, what adolescents mean by the masculinity and femininity concepts should be explored. This may be done by more qualitative research, for example by interviews or observations. Interviews are more detailed in information than are "paper and pencil" measures, and they may allow a better understanding of individuals conscious meanings about femininity and masculinity.

Based upon methodological considerations, I suggest that an intervention could be incorporated in future research. For example research could start out by measuring students' physical self-concept and values. Then an intervention could be incorporated that allow students to become aware of gender socialization and how socially they are being constructed. Then, students' self-beliefs and values over a given period could be retested and this might give important information about eventually changes in physical self-concepts and values.

Practical implications

If research shows such a programme could yield positive results it may be used as a way of challenging the conventional masculine and feminine gender stereotypes as related to a physical context. This will be important at all levels (individual, cultural, institutional) because the strict rules at the institutional levels may be released, and this might stimulate to an increased understanding for boys and girls as "free" individuals. By "free" I mean that they are free to perform whatever activity they like without being punished for choosing a "wrong" gendered activity.

In such a programme, teachers, coaches, parents, students, and sport participants should learn how gender stereotypes are constructed and taught both at an institutional as well as on a personal level, thus, encouraging them to think about educational as well as interpersonal practices that are likely to evoke to change in their specific environments. This programme should also include teaching subjects about gender differences and self-concept as well as physiological differences and similarities. This may be developed and arranged through work shops for parents that provide guidelines for ways to interact with their child as an athlete. It is critical that parents are given the message that both their sons and their daughters can benefit from athletic participation and that they provide equal opportunities for both sexes to enjoy these benefits.

To increase even more individuals' knowledge about gender stereotypes, future physical education teachers and coaches should be encouraged to write neutral plans and coaching manuals regarding the gender issue. Teachers and coaches are the work force of educational reforms in school and sport; if anything significant in remaking gender is to

happen in school and sport, teachers and coaches must be engaged in making it happen (Connell, 1996). McKay (2002) suggests that instead of considering sport as an immutable, monolithic entity – it should be viewed as a montage of dominant, emergent, and residual practices, characterized by inconsistencies and tensions, and thus masculine and feminine gender stereotypes can be challenged and transformed. Furthermore, if gender is not fixed in nature and that gender logic grounded in a binary classification system can be preserved only if people work hard to police gender boundaries, maintain them through myths, rituals, and everyday cultural practices it should be possible for people to change their attitudes about gender and their relations to femininity and masculinity.

Through such programmes, improved lesson plans and coaching manuals that put gender stereotypes on the agenda, children and adolescents might develop more self-confidence and become more secure in them selves to follow their own gender identity, values and interests in for example sport participation. Individuals, whether they are male or female should follow what is right for them and know that while sex is either male or female, your values are formed through the social construction of gender which has many facets. For example, you can be a macho male, an ultra feminine woman, a tomboy, or a feminized male, but regardless, acceptance of who you are is probably one of the most important components of psychological well being. To the individual it is crucial to acknowledge your gender beliefs, so you can move onto excel in your given sports domain without limitations being imposed psychologically.

In conclusion I hope the present dissertation is a small step forward into the understanding of multidimensional physical self-concept and values among children and adolescents. In general the findings support the notion that conventional gender stereotypes exist. Further research is however needed to clarify firmer statements about this topic. In line with the expectancy-value theory to raise and educate children in ways that do not promote gender as a basis for categorizing behaviour and attitudes is suggested as the most important element for future gender equality.

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Paper I

Factorial invariance and factor structure of a revised five-point multidimensional PSDQ model for young children.

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The Physical Self-Description Questionnaire (PSDQ) measures multidimensional physical self-concept. It has shown strong psychometric properties among Australian participants, and recent cross-cultural research has provided strong support for the appropriateness of the PSDQ in non-English countries such as for example Turkey, Spain and France. However, the PSDQ has neither been used in Scandinavian samples nor among adolescents below the age of 12 years prior to the current investigation. From previous research there is reason to believe that a six-point scale may be too difficult to comprehend for children as young as 10 years of age. The purpose of this study was to test factorial invariance and factor structure of a revised five-point multidimensional PSDQ scale among Norwegian elementary- and secondary-school students. The factor structure was reasonably invariant over large samples for Norwegian students. The present study supported the factor structure of the PSDQ as postulated by Marsh et al. (1994) suggesting that the PSDQ is an appropriate instrument to use within Norwegian populations. Furthermore, the study showed that the PSDQ could be regarded as a valuable research tool among students as young as 10 and 11 years of age.

There has been an increasing interest in adolescents' perceptions of themselves and their abilities, not only in academic research but also in the sport literature (Horn, 2004). A number of theorists and researchers have attempted to describe, define and differentiate between the various terms most commonly used in psychological and sport's psychology articles when referring to individual's self-perceptions (see for example, Davis-Kean & Sandler, 2001; Feltz & Chase, 1998; Fox, 1998; Harter, 1999; McAuley & Mihalko, 1998; Weiss & Ebbeck, 1996). Despite relatively minor differences among these writer's perspectives, there has been general consistency regarding the definitional frameworks of these constructs within the self-concept tradition.

The term self-concept is most generally conceived to be a relatively stable assessment or description of the self in terms of personal characteristics, attributes, and abilities (Horn, 2004). Rosenberg (1979, p. 7) defined self-concept as…"the totality of the individual's thought and feeling having reference to himself as an object." As we have conceptions of ourselves in different areas, we might therefore speak of self-concepts in plural. Self-concept is suggested to be formed through experiences with the environment (Shavelson, Hubner, & Stanton, 1976), and self-concept researchers (i.e., Skaalvik, 1997) emphasize that self-concept is formed through reflected appraisals from significant others, social comparisons, psychological centrality and mastery experiences. Therefore, as suggested by Skaalvik (1997) we have conceptions of ourselves in all areas where we gain experience. Self-concept range from specific conceptions (e.g., "I am good at running") to more general conceptions (e.g., " I am good at sports"). In addition self-concept researchers have also studied "global" self-concept or self-esteem (e.g., "I am satisfied with who I am").

Early perspectives on the self-system viewed self-concept and self-esteem in a simplistic and unidimensional way (e.g., Coopersmith, 1967; Piers & Harris, 1964). This unidimensional approach presumed that the individual's self-assessments in a variety of contexts was additive and formed an overall or global self-concept. This early view of self-concept as a unidimensional construct was dispelled as researchers and theorists (e.g. Bracken, 1996; Damon & Hart, 1988; Harter, 1982, 1999; Hattie, 1992; Hattie & Marsh, 1996; Shavelson et al., 1976; Shavelson & Marsh, 1986) discovered that individual's sense of themselves could be best described and captured in a multidimensional way. This multidimensional perspective reflects the notion that individuals describe and/or evaluate themselves in a variety of different life situations or

contexts such as academic, social and physical and that these individual situational self-descriptions or self-evaluations contribute to an overall level of global self-esteem. The multidimensional approach does not assume that each individual's self-evaluation contributes equally and completely to self-esteem, but rather that the individual self-evaluations combine in unique ways to form the global self-assessment construct. Thus, the global self-esteem construct must be assessed or measured as an independent and distinct entity.

More specifically, this means that by degree one's academic, social, and physical self-concept may contribute to their global self-esteem, however, this may vary from one individual to another depending on how important it is to the individual to succeed in that task, and on the discrepancy between perception of competence and the importance of success in that task (Harter, 1993; Skaalvik, 1997). For example, to individuals who are active in sports and consider competence in sport as important, and who live in an environment where sporting skills are regarded as having great value, it is anticipated that the physical self-concept, is of particular importance in shaping their global self-esteem.

The physical self has consistently emerged as a key component of identity and self-esteem, particularly in cultures that attach importance and status to physical attractiveness and prowess (Fox, 1998). Several studies have shown that physical competence is of particular importance among young people (Adler, Kless, & Adler, 1992; Bagwell, Newcomb, & Bukowski, 1998; Buchanan, Blankenbaker, & Cotton, 1976; Chase & Dummer, 1992; Feltz, 1978; Nikitaras & Ntoumanis, 2003; Williams & White, 1983). Furthermore, there is considerable consensus that physical appearance is the particular domain that contributes most to global self-esteem during adolescence

(Adams, 1977; Harter, 1987, 1989; Lerner & Brackeny, 1978; Lerner, Orlos, & Knapp, 1976; Simmons & Blyth, 1987; Simmons & Rosenberg, 1975).

Most of the earlier self-concept instruments have either ignored physical self-concept completely or have treated physical self-concept as a relatively unidimensional domain incorporating characteristics as diverse as fitness, health, appearance, sporting competence, body image, and physical activity into a single score (Marsh, 1997; Wylie, 1979, 1989). Although several instruments, reviewed by Shavelson et al. (1976) contained items relating to physical skills and elements of physical appearance, none provided a clearly interpretable measure of physical self-concept. In a later review, and empirical evaluation of a multidimensional self-concept instrument that also purported to measure physical self-concept, Marsh and Richards (1988) found that distinguishable physical components reflecting health, neat appearance, physical attractiveness, and physical fitness were incorporated into a single physical self-concept score. Several researchers (Fox & Corbin, 1989; Marsh & Redmayne, 1994; Marsh, Richards, Johnson, Roche, & Tremayne, 1994; Richards, 1987) argued that these global scales might confound distinguishable physical components. Such concerns led to the development of the Physical Self-Description Questionnaire (PSDQ: Marsh & Redmayne, 1994; Marsh et al., 1994).

The theoretical basis and design of the PSDQ follows research based on the Self Description Questionnaire (SDQ) that is widely acknowledged to be among the strongest multidimensional self-concept instruments (see reviews by Byrne, 1996, Hattie, 1992; Wylie 1989). Compared to the SDQ instruments (SDQ I, II, III), in which the intent is to measure academic, social, and emotional self-concept factors, the intent of the PSDQ is to provide a more detailed instrument of self-concept in the physical

domain. The PSDQ measures nine specific components of physical self-perceptions (body fat, appearance, health, sports competence, endurance, strength, coordination, flexibility, and physical activity), as well as global physical self-concept and global self-esteem. The PSDQ has shown strong psychometric properties: (a) good reliability (median coefficient = .92) across the 11 scales (Marsh, 1996a; Marsh et al., 1994); good test-retest stability over short-term (median r = .83 for 11 PSDQ scales, 3 month) and longer terms (median r = . 69, 14 months; Marsh, 1996a); (c) a well defined, replicable factor structure as shown by Confirmatory Factor Analysis, CFA (Marsh, 1996a; Marsh et al., 1994); (d) a factor structure that is invariant over gender as shown by a multitrait-multimethod (MTMM) study of responses to three physical self-concept instruments (Marsh et al., 1994); (f) convergent and discriminant validity as shown by PSDQ relations with external criteria (see Marsh, 1996b, 1997); and (g) applicability for participants aged 12 to 18 (or older) and for elite and nonathletes (Marsh, Hey, Roche, & Perry, 1997). These results demonstrate the appropriateness of the PSDQ and provide support for the reliability and construct validity of the questionnaire for Australian adolescents.

Examination of a measure's underlying factor structure and its stability across different cultures is one important step in legitimizing the wide spread of any given measure, and recent cross-cultural research has focused on systematic evaluation of physical self-concept responses in different cultures. For example in Marsh, Marco and Abcy (2002), the cross-cultural research provided strong support for the appropriateness of the PSDQ instrument for Spanish high school students and Turkish University students as well as the Australian High School students for whom it was originally developed. Also Guerin, Marsh and Famose (2004) found good support for the

generalizability of the PSDQ with French high-school students. This has shown that the PSDQ instrument can be regarded as a valuable research tool in non-English speaking countries such as in Spain, Turkey and France. However, cross-cultural applicability using a Scandinavian sample has not tested whether the PSDQ is a valid and reliable instrument.

Although physical attributes and competencies seem to be very important to young people (Adler et al., 1992; Buchanan et al., 1976; Chase & Dummer, 1992; Feltz, 1978; Nikitaras & Ntoumanis, 2003; Williams & White, 1983), few instruments have been developed to measure multidimensional physical self-concept in a Norwegian context. Since the PSDQ has shown good reliability and validity among students in other cultures and nations, it was assumed that the PSDQ may be applicable in measuring physical self-concept within a Norwegian sample as well. Thus, one aim of the present study was to test the factorial invariance of an 11 dimensional Physical Self-Description Questionnaire (PSDQ) across age and gender among elementary- and secondary-school students in a Norwegian sample.

Researchers in previous PSDQ studies have all focused on participants older than 12 years of age. However, it has become evident that also younger children are increasingly concerned about their own physical self (Thelen, Lawrence, & Powell, 1992). In a recent study Phares, Steinberg, and Thompson (2004) for example demonstrated body image disturbances among children as young as nine years old. There seem therefore to be a clear need for a reliable instrument that measures physical self-concept among even younger children as well. Therefore a second aim of the present study was to investigate whether the PSDQ is a reliable tool also among students as young as 10 and 11 years of age.

In the original PSDQ instrument as well as in the original SDQ-II and SDQ-III instruments participants respond to scales with six responses. However, in SDQ-I, which focuses on younger children Marsh and his colleagues (1984, 1990), successfully have used a five-point scale. For younger children a six-point scale may be difficult to comprehend, and thus it is believed that a five-point scale can bring valid data that allow us to compare physical self-concept among adolescents and younger children. After having carefully discussed pro and contra by using a five-point scale with researchers in the milieu a five-point scale was employed to measure multidimensional physical self-concept in the present study.

Method

Participants

Participants in the study were 1098 students (514 boys, 584 girls) attending public schools in Trondheim, Norway ranging from 10 to 15 years of age (mean age = 12.24, sd = 1.67). Students were divided into three age groups; Group 1 consisted of students in 5^{th} and 6^{th} grade (mean age = 10.51, sd = .531); Group 2 were students in 7^{th} and 8^{th} grade (mean age = 12.35, sd = .641); whereas Group 3 included students in 9^{th} and 10^{th} grade (mean age 14.46, sd = .701).

Procedure

Students from all 53 public elementary- and secondary-schools in Trondheim were invited to participate in the study. Trondheim city hosts a university with students representing about 1/7 of Trondheim's population, and public schools are therefore very often asked to participate in different kind of research project. This represented a challenge when trying to include a large number of schools. Thus, to ensure an acceptable number of participants, it was a major point to ask a large number of schools.

A total number of 11 schools were positive about participating in the study, and 1233 students from 5th to 10th grade were asked to fill in a self-report form. Out of these 1098 (89%) returned completed forms.

After granted permission to perform the study from the schools, the teachers helped sending information letters to parents. The letters briefly explained the purpose of the study, and consent from the parents was deemed necessary before participation in the study. The physical self-description questionnaire (PSDQ) was administered during class hours. Information about the study and questionnaire was read aloud before handing out the questionnaires. Students were informed that the questionnaire was not a test and there were no right and wrong answers. Participants were assured that their responses would be completely confidential that they were free to participate in the study and that they could opt out at any point in time. For students who felt that they did not understand the questions, questions were read aloud by the author of this study. As there were differences in reading and writing skills, students were given as much time as needed to complete the items.

Instrument

The Physical Self-Description Questionnaire (PSDQ) is a 70-item test designed to measure nine specific components of physical self-concept: Appearance (being attractive), Strength (being strong, having a powerful body with lots of muscles), Endurance (being able to run a long way without stopping), Health (not getting sick very often), Coordination (being good at coordinated movements), Physical Activity (doing lots of physical activities regularly), Body Fat (not being overweight), Sport (being good at sports, having good sports skills), Flexibility (being able to bend and turn one's body easily in different directions), and Global Physical (feeling positive about

one's physical self). In addition, Global Self-Esteem (the overall positive or negative feeling about one's self) is also measured. Each item was a simple declarative statement, and participants respond on a six-point true-false response scale. The PSDQ was originally designed for adolescents 12 years and older, but with some minor changes; a five-point true-false response scale was utilized instead of the original six-point, as it was assumed that the PSDQ would be appropriate for children down to 10 years of age. The change from a six-point scale to a five-point scale was supported by results of a pilot study carried out prior to the present study showing that some of the 10 and 11 year old students found the six-point true-false scale too complicated. Especially, they found the two alternatives "more false than true" and "more true than false" difficult. Furthermore, Marsh and his colleagues (Marsh, 1990; Marsh et al., 1984) also use a five-point scale in the SDQ-I instrument which are designed for children down to grade 2.

In the Norwegian sample, the PSDQ was translated to Norwegian, followed by a back-translation procedure widely described in the literature (Hambleton & Kanjee, 1995; Van de Vijer & Leung, 1996). The PSDQ was initially translated from English to Norwegian by the author of this study who is native Norwegian speaker. Then, a bilingual translator, whose native language was English and who had not seen the original English version of the PSDQ, translated this initial Norwegian version of the test from Norwegian back to English. The original and back-translated versions of the tests were then compared. Translation-differences were revealed by back translation were corrected. Next, a pilot study was carried out to test the adequacy of the questionnaire to be used with Norwegian adolescents. The Norwegian version of the PSDQ was administered to a group of 35 Norwegian boys and girls whose ages ranged

from 10-11 years. According to results from the pilot study, minor changes were introduced into the questionnaire to make the items more understandable.

The a priori model specification: For the purpose of the present study, one a priori 11 dimension PSDQ model was specified for testing. This model was based upon the assumption that the 70 items of the PSDQ described 11 latent factors; Global Self-Esteem, Health, Global Physical, Sports Competence, Physical Ability, Appearance, Body Fat, Endurance/Fitness, Strength, Flexibility and Coordination (Marsh et al. 1994). Each item was allowed to correlate freely (oblique model). The PSDQ model was based on PSDQ responses from a total sample of 1098 primary- and secondary-school students.

Statistical analysis: Confirmatory Factor Anlysis' (CFA's) were conducted with LISREL, version 8.54 (Jöreskog & Sörbom, 1993, 1999) using maximum likelihood estimation. Analyses were based on covariance matrices constructed from responses by 1098 students who had reasonably completed data for the PSDQ in that they had missing value for no more than 5 of the 70 PSDQ items. Covariance matrices were constructed using full information maximum likelihood (FIML) estimation for missing values although there were few missing data (0.17% missing responses).

Test of Factorial Invariance: When there is parallel data from more than one group – the three age groups and two gender groups in this study – it is possible to test the invariance of the solution by requiring any one, any set, or all parameter estimates to be the same in the groups. Typically, the initial step in tests of invariance is to establish that an a priori, or if necessary, a plausible a posterior model that is able to fit the data from each group when no invariance constraints are imposed. This baseline model is critically important, because it provides a basis of comparison for all subsequent models

in the invariance hierarchy. The minimal condition for "factorial invariance" is the equivalence of all factor loadings in the multiple groups (Marsh, 1994). Thus, for example Bollen (1989) noted that "if this model with factor loadings invariant does not hold, then it makes little sense to go further" (p. 360). According to these recommendations, in the present investigation tests for the invariance of factor loadings were followed by tests of factor correlations and then subsequent tests of uniqueness.

Goodness of fit: Following the recommendations of Hu & Bentler (1995), several fit indices were used to test the factor structure; the chi-square (χ^2 statistic), normed chi-square (χ^2/df), degrees of freedom (df), Root Mean Square Error Approximation (RMSEA), the Tucker-Lewis index (TLI) and the relative noncentrality index (RNI). The χ^2 is regarded as an absolute fit statistic. However, the χ^2 is sensitive to sample size and the larger the sample size, the more likely it is to reject the specified model. Another problem with the χ^2 is that the more complex the model the bigger the χ^2 will be and the more likely it is that the specified model be rejected. For this reason, a "normed" χ^2 is sometimes used. Because the normed χ^2 takes model complexity into account it can also be referred to as an index of model parsimony. Acceptable level of the normed χ^2 is between 1.0 – 2.0, although values between 2.0 and 3.0 indicate reasonable good fit. For RMSEAs, values less than .05 and .08 are taken to reflect a close fit and a reasonable fit, respectively (Browne & Cudeck, 1993). The TLI and RNI vary along a 0-1 continuum in which values greater than .90 and .95 are typically taken to reflect acceptable and excellent fits to the data (Bentler, 1992; Bentler & Bonnett, 1980). The RNI contains no penalty for a lack of parsimony so that improved fit due to the introduction of additional parameters may reflect a capitalization on chance, whereas the TLI and RMSEA contain penalties for a lack of parsimony. Although there

is a number of goodness of fit indexes available, primary emphasis was placed on the RMSEA in evaluating the goodness of fit in the present study.

Factor analysis (SPSS version 12.0.1) was performed to examine more closely the factor structure in the Norwegian sample, and on which factor the 70 items loaded. Kaiser-Mayer-Olkin Measure of Sampling Adequacy was used to test whether the distribution of values is adequate for conducting analysis and suggest that a measure above .9 is marvelous. Bartlett Test of Sphericity was used to measure the multivariate normality of the distribution, and the criteria to extract a factor were an Eigenvalue > 1.0.

Results and Discussions

Testing the invariance of the PSDQ factor structure across the three age-groups: In the a priori PSDQ model, each item was allowed to load on only the factor it was designed to measure, correlations among the 11 PSDQ factors were freely estimated, and uniqueness terms (reflecting measurement error) associated with each measured variable were posited to be independent of uniqueness terms associated with other variables. The model was initially fitted to responses from each of the three age groups. Based on the RMSEA this a priori model provided a good fit to the data of responses from Norwegian primary- and secondary school- students (see Table 1, Model 1).

Table I. Goodness of fit indexes for age and gender

Model	Group	X^2	χ^2/df	Df	RNI	TLI	RMSEA	Invariant parameters
1	Total sample	10728.19	4.68	2290	0.96	0.96	0.058	None
2a	5^{th} and 6^{th} grade	5348.11	2.33	2290	0.95	0.95	0.060	None
2b	7^{th} and 8^{th} grade	5766.71	2.51	2290	0.95	0.95	0.059	None
2c	9^{th} and 10^{th} grade	4727.62	2.06	2290	0.95	0.95	0.062	None
2d	5^{th} – 10^{th} grade	14697.30	2.14	6870	0.97	0.97	0.056	None
2e	5^{th} – 10^{th} grade	15098.89	2.15	7010	0.97	0.97	0.056	FL
2f	5^{th} – 10^{th} grade	15446.12	2.17	7120	0.97	0.97	0.057	FL, Fcr
2g	5^{th} – 10^{th} grade	16020.47	2.21	7260	0.97	0.97	0.057	FL, Fcr, Uniq
3a	Girls	7345.74	3.21	2290	0.95	0.95	0.062	None
3b	Boys	7792.41	3.40	2290	0.97	0.96	0.068	None
3c	Girls and Boys	12099.01	2.60	4650	0.98	0.97	0.054	None
3d	Girls and Boys	11670.72	2.55	4580	0.98	0.97	0.053	FL
3e	Girls and Boys	12222.43	2.60	4705	0.97	0.97	0.054	FL, Fcr
3f	Girls and Boys	12622.97	2.64	4775	0.97	0.97	0.055	FL, Fcr, Uniq

Note. Model 1 = Baseline model; Model 2a = 5^{th} and 6^{th} grade; Model 2b = 7^{th} and 8^{th} grade; Model 2c = 9^{th} and 10^{th} grade; Model 2d, 2e, 2f, and 2g = 5^{th} – 10^{th} grade; Model 3a = Girls; Model 3b = Boys; Model 3c, 3d, 3e, and 3f = Girls and Boys. χ^2 = chi-square, χ^2/df = normed chi-square, df = degrees of freedom, RNI = relative noncentrality index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation; FL = factor loading; Fcr = factor correlation; Uniq = uniqueness. In Model 1, 2a, 2b, 2c, 3a, and 3b the a priori model is to fit to each group separately with no invariance constraints across groups.

The findings across age groups were quite satisfying in the Norwegian sample (Model 2a, 2b and 2c). An important finding was that the RMSEA demonstrated a reasonable fit not only among the oldest students, but also among students in 5^{th} and 6^{th} grade. The focus of the present study was further on comparing the factor structures based on responses from each of the three age groups. This was accomplished by comparing the goodness of fit in models that constrained some parameter estimates to be the same across the groups. Model 2d was the baseline model in which no such invariance constraints are imposed. The purpose of this model was to provide an overall evaluation of fit across the three age groups, and a basis of comparison for more demanding models that impose such constraints. The minimal condition for factorial

invariance was the invariance of the factor loadings. In Model 2e, factor loadings were constrained to be equal across all three age groups. In support of this factorial invariance test, the goodness of fit indexes for Model 2e was as good for the baseline model in which no such invariance constraints were imposed. Next, in Model 2f, the invariance of factor loadings and factor correlations were evaluated. Invariance constraints on factor loadings nor factor correlations had much effect to the goodness of fit. In the final model, the invariance of uniqueness was tested (Model 2g), the invariance of uniqueness was tested. When this invariance constraint was imposed across all three age groups the fit did not change much, supporting the structural properties of the model.

Testing the invariance of the PSDQ factor structure across gender: The a priori model provided a good fit to the data based on responses from 1098 boys and girls. When factor loadings were constrained to be equal across gender, the goodness of fit indexes was pretty good (Model 3d). Then, the invariance of factor loadings and factor correlations were tested, neither factor loadings nor factor correlations had much effect on the fit indexes (Model 3e). In the final model, when the invariance of uniqueness also was evaluated, the fit was still good (Model 3f).

As obvious from Table 1, the normed chi-square values for the majority of the models were between 2.0 and 3.0, which are quite high even though they are reasonable. The RNI's and TLI's in all models varied from 0.95 to 0.98 which are all acceptable levels of good fit. The RMSEA that was the focus of the present study showed that RMSEA for all models varied from 0.053 to 0.068, and thus indicate reasonable fit (Browne & Cudeck, 1993).

Testing the factor structure in the Norwegian sample: The factor analysis demonstrated 11 factors with an Eigenvalue > 1.0. Together they accounted for almost 65% of the total variance. Kaiser-Meyer-Olkin Measure of Sampling Adequacy = .968, and Bartlett's Test of Sphericity: Approx. Chi-Square = 49601,43; df = 2415; p = .000. The analysis demonstrated a pretty good factor structure suggesting six Body Fat items to load on factor 1 (values ranging from .683 - .870), five Global Physical items to load on factor 2 (values from .483 - .596), six Endurance items to load on Factor 3 (values from .662 - .759), six Strength items to load on Factor 4 (.576 - .776), six Flexibility items to load on Factor 5 (values from ..430 - .811), six Physical Activity items to load on Factor 6 (values from .572 - .742), four Appearance items to load on Factor 7 (values from .596 - .766), six Sports Competence items to load on Factor 8 (values from .474 - .622), six Global Self-Esteem to load on Factor 9 (values from .401 - .671), eight Health items to load on Factor 10 (values from .432 - .722) and three Coordination items to load on Factor 11 (values from .695 - .767). Seven items did not load on to their expected factor; I am ugly, Nobody thinks that I am good looking (Appearance); I feel good about who I am and what I can do physically (Global Physical); Most things I do I do well (Global Self-Esteem); I am graceful and coordinated when I do sports and activities, I can perform movements smoothly in most physical activities, I find my body handles coordinated movements with ease (Coordination). Although the seven items did not load on to their target factor the factor structure in the Norwegian sample provide strong support for the facets hypothesized in Marsh et al. (1994) 11 factor model.

When conducting factor analysis in the three age groups separately, the factor structure demonstrated to be quite good. In all three age groups the endurance, strength,

global physical, body fat, sports competence and flexibility items functioned very well. Some of the Global Self-Esteem loaded strongly to the same factor as did Appearance and Global Physical items, which is not surprisingly. The relationship between physical appearance and global self-esteem has been shown to be extremely robust (Harter, 1989). In group 1 some Coordination items loaded on different factors than expected. For example "I am graceful and coordinated when I do sports and activities" was included in the flexibility factor. The words coordinated and graceful can easily be connected to flexibility, especially for the younger children. "I can perform movements smoothly in most physical activities" was included in the Physical Activity factor. This can among other things be due to the translation process. Because there are cultural differences between Australia and Norway, small differences in wording might result in some items being perceived differently in the two countries. It is therefore of major importance that the translation process is carried out carefully.

The present study demonstrated a factor structure in the Norwegian population in support for Marsh et al. (1994) who suggested that physical self-concept is multidimensional and can be divided into 11 different factors. Furthermore, the results showed small differences in the pattern in both the three age groups and gender. Of great importance was the finding that the PSDQ in the present study proved that the pattern of fit indices also was consistent among the 5^{th} and 6^{th} grade students. Thus, the results provide support for the generalizability of the PSDQ factor structure not only for adolescents over 12 years of age, but also for 10 and 11 years' old students.

It is however relevant to discuss that the present study has some limitations. There are obvious difficult comparing mean values in the present study that has a five-point scale with previous research that used six-point scales. However, this represents

not a problem when relations between variables are compared. If the use of a six-point PSDQ scale among young children would not give valid information, it is regarded as more important to ensure that the instrument is reliable among this age group. A modified PSDQ scale as in the present study is also supported by the fact that Marsh (1990) successfully uses a five-point scale in the SDQ-I instrument.

One of the important aims with the present study was to develop a PSDQ scale especially designed for children down to 10 years of age. Based on the results of this study it is our advice to researchers around the world to consider the use of this five-point PSDQ scale when including children down to 10 years of age. Then these studies would be comparable with this Norwegian study. We can either choose to keep the six-point scale and thus exclude younger children from research, or choose to include children down to 10 years of age by the use of a five-point PSDQ scale. The latter seems reasonable considering the fact that also young children are believed to be concerned about their physical self.

Physical self-concept is increasingly used as an outcome or mediating variable in many research studies. The PSDQ, like many other self-concept instruments have been developed in English-speaking countries, and therefore as argued by Marsh et al. (2002), it is important to systematically evaluate the psychometric properties of responses of these instruments, when they are applied in different countries. This is of course very important when an English-language instrument is translated into a different language, like in the present study. The results indicated that the PSDQ is a valuable research tool for use in Scandinavian countries. Findings in the present study, which followed the CFA approach not only supported the psychometrics properties of the

PSDQ when translated from English to Norwegian, but also supported the CFA approach as a useful model about how to go about this undertaking.

In conclusion, the results from the present study were satisfying in two ways. First, they supported the idea of PSDQ as being a useful instrument for measuring multidimensional physical self-concept in a Norwegian sample. Second, the results indicated that the PSDQ when applied with a five-point scale in the same way as the SDQ-I can be a valuable research tool among students as young as 10 years of age. If a five-point scale will be used in future studies it will be possible to compare results among young and older children as well as compare results within different cultures and nations.

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Paper II

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Paper III

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Paper IV

Gender differences in perceptions of significant others' values: A study of boys and girls in organized sport.

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According to the expectancy-value model developed by Eccles et al. (1983) gender-stereotyping beliefs among adolescents are believed to be derived in part from interpretations of the attitudes of significant others such as peers, parents, coach and teacher. Thus, one aim of the present study was to explore whether boys and girls perceived significant others' values within a sporting context differently. Another aim was to identify how the stereotypic masculine and feminine values of significant others (as perceived by adolescents) were related to adolescents own values. As existing instruments of masculinity and femininity were found to be too general in nature for the present study, an instrument was developed specifically for this purpose. The results revealed gender differences in how boys and girls perceived significant others' values. This was especially true for the strength and appearance strength dimensions. Further, correlations between adolescents' own values and their interpretation of significant others' values showed a mixed pattern, with the most important finding that both boys and girls did discriminate between significant others.

Although we have reached the 21th century girls do still not participate in organized sport to the same degree as boys and they also seem to differ from boys in how they rate the importance of values within sport (Fredericks & Eccles, 2002, 2005). Extensive research, predominantly American studies, has shown that doing well in sports is generally much more important to young boys than to young girls, and both genders think that it is more important for boys than for girls to have abilities in sports (Eccles & Harold, 1991; Eccles, Midgley, & Adler, 1984; Eccles, Wigfield, Harold, & Blumenfeld, 1993; Eccles, Adler, Futterman, Goff, Kaczala, Meece, & Midgley, 1983; Fredricks & Eccles, 2002, 2005; Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002; Lirgg, 1991; Wigfield, Eccles, Yoon, Harold, Arbreton, & Blumenfeld, 1997). These differences, however, appear to decrease with age as shown in longitudinal studies (Fredricks & Eccles, 2002; Jacobs et al., 2002). A recent study (Klomsten, Marsh, & Skaalvik, 2005) demonstrated that boys rated features such as appearance strength, sports competence, endurance, and strength significantly more important to them than girls, whereas girls valued characteristics such as appearance good looking face and appearance slender significantly as more important to them compared to boys. It is assumed that these gender differences in values and perceptions are influenced by environmental factors such as gender stereotyped attitudes.

Gender stereotypes are defined as "structured sets of beliefs about the differences between women and men" (Archer & Lloyd, 2000; Ashmore & Del Boca, 1979). Unfortunately, gender stereotypes are not value-free. Extensive evidence indicates that women are stereotyped by other people in the environment as being less competent than men in the athletic domain even when they perform equally as well. Furthermore, characteristics such as weak, helpless, graceful, non-athletic, emotional and passive have traditionally been tied to the female stereotype, whereas strong, forceful, dominating, athletic, brave and competitive are features connected to the male stereotype (Broverman, Vogel, Broverman, Clarkson, & Rosenkrantz, 1972; Chafetz, 1974; Deaux & Emswiller, 1974; Rosenkrantz, Vogel, Bee, Broverman, & Broverman, 1968; Smith & Midlarsky, 1985; Spence & Sawin, 1985; Ward, 1985; Williams & Best, 1982, 1990; Zammuner, 1987).

Although these references are somewhat old, more recent research (Fasting, Pfister, & Scraton, 2004; Krane, Choi, Baird, Aimar, & Kauer, 2004) has demonstrated that the traditional stereotypes continue to exist. Furthermore, cultural studies scholars who focus on how practices such as femininity and masculinity are socially constructed, suggest that although there are multiple types it exist hegemonic forms of both femininity (Choi, 2000; Krane, 2001; Lenskyj, 1994) and masculinity (Connell, 2005). The concept of 'hegemonic masculinity' has however come under challenge from several directions (Demetriov, 2001; Jefferson, 2002). An influential approach that has recently emerged treats masculinity as a discursive construction. Within this discursive theoretical approach it is suggested that men are not permanently commited to a particular pattern of masculinity, but that they rather make situationally choices from a cultural selection of masculine behavior (Wetherell & Edley, 1999). Despite this new perspectives in understanding masculinity, Connell (2005) continue to argue that the concept of hegemonic masculinity is still essential.

About 20 years ago femininity and masculinity were regarded as key concepts within gender stereotyping, referring to the degree which people see themselves as masculine or feminine give what it means to be a man or a woman in a certain society (Burke, Stets, & Pirog-Good, 1988; Spence, 1985). Masculinity was closely tied to being aggressive, dominant, athletic, competitive, or strong, whereas femininity was recognized through characteristics such as being weak, emotional, neat, gentle, sensitive to others, or caring. In psychology masculinity and feminity at that time were measured by the use of instruments such as the Bem Sex Role Inventory (BSRI) (Bem, 1974) that measured the extent to which men and women described themselves in terms of personality traits that made up the

stereotypes for their own and other sex. Although this measure has received considerable amount of critique (Cook, 1985; Hall, 1981), and was by many researchers replaced with alternative ways (i.e., qualitative approaches) to measure masculinity and femininity it has been used in recent research (Auster & Ohm, 2002; Lauriola, Zelli, Calcaterra, Cherubini, & Spinelli, 2001; Özkan & Lajunen, 2005). These studies have shown that the rigid gender stereotypes as suggested by Bem continue to exist, and thus highlights the continued centrality of traditional definitions of masculinity and femininity.

Neither gender-differentiated beliefs and self-perceptions, nor gender-role beliefs develop in a vacuum, instead social and developmental theorists suggest that children's self-perceptions are derived in part from their interpretations of the attitudes and behaviors of those around them (Bandura & Walters, 1963; Bem, 1989; Eccles, 1987; Eccles et al., 1983; Maccoby, 1988; Mischel, 1966; Sherif, 1972, 1976, 1982). A theoretical framework for explaining how socializers influence value beliefs in children and adolescents is provided by the expectancy-value model developed by Eccles and her colleagues (Eccles et al., 1983; see Eccles, Wigfield, & Schiefele, 1998, for a review). The model which is based on the theoretical work of Lewin (1938) and Atkinson (1964), is built on the assumption that an individuals' decisions to participate in activities are made in the context of a variety of choices, and that these decisions are influenced by the individual's perception of beliefs and behaviors of significant others. This model was initially developed to explain the socialization of gender differences in general, and we believe it provides an excellent framework for understanding parents, peers, coaches and teachers' influences on boys and girls feminine and masculine value beliefs in the sport domain specifically. According to this model, the two most important predictors of choice behaviors are children's expectations for success and task value (see Eccles et al., 1983). Expectations for success are influenced by one's self-concept of ability and one's perception of task difficulty. Task value comprises four components: (a) intrinsic value (enjoyment of the activity), (b) utility value (usefulness of the task in terms of future goals), (c) attainment value (personal importance of doing well in the task), and (d) costs (perceived negative aspects of engaging in the task). According to this expectancy-value model, socializers (parents, peers, coach and teachers) influence children's motivation through their beliefs and behaviors. This means that cultural norms and gender roles both are important factors influencing children's value beliefs. Eccles et al. (1983) emphasizes that the influence of experience on achievement beliefs, goals and outcomes is assumed to be mediated by one's interpretation of these experiences, by the input of primary socializers, by

one's needs and values, by one's self-schemata, and by one's perception of the various choices themselves. Finally, a very important aspect within the expectancy-value model is that this model is built on the assumption that it is one's interpretation of reality rather than reality itself that influences the individuals' values. Applying this model to the sport domain, gender stereotypes are believed to influence children's and youths development of values. This implies that incorporation of biased cultural gender-role stereotypes could explain why girls rate the value of being good in sport as less important to them compared to boys, and why girls and boys rate other values within a sport context differently.

Research documents the great impact that parents, peers, coaches and school teachers all have on the shaping of gender-role beliefs and self-perceptions within children and adolescence over time (Antshel & Anderman, 2000; Chase and Dummer, 1992; Eccles & Hoffman, 1984; Greendorfer, 1983, 1992, 2002; Harter, 1998; Horn, 1987; Jacobs & Eccles, 1992; Landers & Fine, 1996; Messner, 2000). These studies have in general shown that boys are believed to be better suited for sport and physical activity, whereas girls are thought of as weaker, frailer and perhaps less suited for sport. Furthermore, boys are given more sport opportunities than girls, and it has also been argued that athletic accomplishments are more important to boys than to girls because of status among peers. The majority of the research presented above was carried out in the United States and although we are aware that gender stereotyping certainly is influenced by differences in cultures, recent research has demonstrated that the same pattern is also found in Norwegian populations (Fasting, 2003; Klomsten, Skaalvik, & Espnes, 2004).

Although research has documented significant others (parents, coaches, teachers, and peers) to be stereotyped when it comes to competencies and attitudes about children and adolescents related to sport, few studies have focused on how boys and girls themselves perceive these attitudes and values. Even more important than direct behaviours of significant others are the way boys and girls conceive and understand their values and attitudes. It is likely that gender biased beliefs and attitudes of significant others influence the way boys and girls are treated, and this might further influence boy's and girl's perceptions of the significant others' values. One study, (Eccles & Harold, 1991) has shown that children's perceptions of how important it is to their parents that they do well in sport is related to their own perceptions of doing well in sport. In this study, however, sport was treated as a unitary concept. The term "sport", however, is very general and covers a wide variety of subtypes that may be further characterised by their respective task requirements such as for example strength, endurance,

flexibility etc. Earlier studies (Klomsten et al., 2004; Koivula, 1995) have shown that certain sports and task requirements are more associated with girls, while others are more associated with boys. Thus, when gender stereotyping in sport is the issue we believe it is important to study task in a context more specifically, for example whether there are gender differences in how boys and girls themselves rate values, as well as how they perceive significant others' values within a sport context. With that in mind, the present study seeks to explore and thereby reveal possible gender differences in how adolescents conceive significant others' values. If a causal relation between significant others value beliefs and those of the children exist, these are expected to be closely related. To that end, another aim of the study is to explore how the perceived values of significant others are related to adolescents' own values.

Several instruments already exist measuring masculinity and femininity in general such as, for example the well-known Bem Sex Role Inventory (BSRI) (Bem, 1974), and the Personality Attributes Questionnaire (PAQ) (Spence, Helmreich, & Stapp, 1974). However, since the aim of the present study is to reveal masculine and feminine values in young athletes specifically as related to specific physical traits (i.e., how boys and girls value the importance of strength, endurance, sports competence, appearance, flexibility), these earlier instruments are considered too general. Within the context of self-concept, the instrument Physical self-description questionnaire (PSDQ) (Marsh, Richards, Johnson, Roche, & Tremayne, 1994) has been used for measuring these traits. For the purpose of the present study, which is to explore how adolescent boys and girls, respectively, conceive significant others' values as well as identifying how significant others' values (as perceived by adolescents') are related to adolescents' own values the basic structure of the PSDQ will be used as basis for the development of a new instrument specifically designed for this purpose.

Method

Participants

Data were collected from 357 secondary school students in eight to tenth grade in four public schools in Trondheim, Norway. Because the aim was to study gender differentiated beliefs in a sporting context, sport participation in at least one sport served as a criterion for participation in the study. The 80 students, who did not participate in organized sport, and thus did not have a coach, were excluded from the study. The remaining 277 students, participated in one or more sport activity/is in their leisure time (147 girls, mean age = 14.27; sd = .727 and 130 boys, mean age = 14.42; sd = .735). Boys and girls participated in different kinds of

sports, and also in a variety of combinations of sports. The majority of boys (108 = 82%) participated in sports such as soccer, ice hockey, boxing, martial arts and motor cross, whereas girls (93 = 63%) to a greater extent attended sports such as dance, handball, gymnastics, horse riding, figure skating and aerobics.

Procedure

After permission to perform the study was granted by the schools, the teachers forwarded information letters to parents. The letters briefly explained the purpose of the study, and informed about adolescent's right to opt out of the study at any time. Only students who agreed to participate in the study and who had parental consent completed questionnaires. The questionnaires were filled out during class, and information about the study and questionnaire was given prior to the administration of the questionnaires. Students were informed that they were to answer the questionnaires anonymously, and they were assured that their answers would be kept confidential. Students were also informed that the questionnaire was not a test, and that there were no right or wrong answers. They were not allowed to talk with anyone during the time it took to fill in the questionnaire, except for asking for help by the researcher if something in the questionnaire was unclear. Because of differences in reading and writing skills, students were allowed to complete the questionnaire at their own pace, and most students finished within 35-40 minutes.

Instrument

For the purpose of studying adolescents' *own*, as well as *their perception* of significant others' values in a sporting context, a new instrument, the Gender Value Scale (GVS) was developed specifically for the purpose. The GVS is based upon the Physical Self-Description Questionnaire (Marsh & Redmayne, 1994; Marsh et al., 1994) that was originally developed to measure physical self-concept in nine specific components: Appearance, Endurance, Strength, Flexibility, Health, Coordination, Physical Activity, Body Fat, Sport Competence, as well as Global physical self-concept and Global self-esteem. Examples of Items in the PSDQ are: "I have a nice looking face", "I am good at lifting heavy objects", "I can run a long way without stopping". The PSDQ has shown good reliability and validity as shown by several studies (Marsh, 1996a, 1996b, 1997; Marsh et al., 1994). However, since the purpose of the present study was to reveal values rather than self-concept, some changes from the wording in the PSDQ became necessary. In the GVS, the aim was to measure stereotypic masculine and

feminine values within a sporting context, and based upon previous literature (Broverman et al., 1972; Chafetz, 1974; Rosenkrantz et al., 1968) Appearance – strength, Strength, Endurance, Sports Competence and Masculine traits in general were labeled as stereotypic masculine values, whereas Appearance – slender, Appearance – good looking body, Appearance – good looking face, Flexibility and Feminine traits in general were considered as stereotypic feminine values.

Individuals were asked to think about a sporting or physical education context and rate the importance of different values (e.g., "how important is it to you that you have a nice looking face", "how important is it to you that you are good at lifting heavy objects", "how important is it to you that you can run a long way without stopping?). They answered according to a 5-point Likert scale, ratings were not at all important, not very important, sometimes important – other times not important, quite important, and very important.

Because we know that significant others' value system can be conceived quite differently depending on which of the significant other we are talking about, it became necessary to distinguish between different significant others. In addition the questionnaire also discriminated between mother and father, as well as between female- and male peers. Thus, they were asked about their perception of significant others' (female peers, male peers, mother, father, coach and teacher), values (e.g., "how important do you think it is for your mother that you are good at lifting heavy objects", how important do you think is for female peers that you have a nice looking face"?).

The GVS questionnaire consisted of 7 different parts: Part 1 measured how the individual him/herself rated values (i.e., how important is it for you to; have a body with visible muscles, have a slender body, be good at sport, have big muscles, etc.), Parts 2 to 7 measured the individual's perception of the different significant others' (female peers, male peers, mothers, fathers, coaches, and teachers, respectively) values (i.e., when female peers evaluate you, how important to them do you think it is that you; have a body with visible muscles, have a slender body, are good at sport, have big muscles, etc.).

Characteristics to be investigated in the present study were; Appearance -good looking body (e.g., to have a great body, to have a nice body); Appearance – good looking face (e.g., to be good looking, to have a nice looking face); Appearance – slender (e.g., to have a slender body, to have a thin body); Appearance - strength (e.g., to have a powerful body with well-defined muscles, to have big muscles); Strength (e.g., to be good at lifting heavy objects, to do well in a test of strength); Endurance (e.g., can run a long way without stopping, can run a

long way without getting tired); Flexibility (e.g., to have a flexible body, to be good at bending, twisting, and turning the body); Sports Competence (e.g., to be good at sports, to do well at sports competitions); Masculine traits in general (e.g., to be competition oriented, to be tough/hard); and Feminine traits in general (e.g., to be caring, to be good with children). The characteristics Masculine and Feminine traits in general were not part of the original PSDQ, but were included in the GVS for the purpose of the present study.

Each part of the GVS contained 30 items in which 3 items were used to assess each of the ten characteristics. For example the characteristic Strength was measured by the following items: it is important to; be good at lifting heavy objects, do well in a strength test, and to be good at doing push ups, squats and sit-ups. Each item was a simple declarative statement, and participants responded using a 5-point Likert type-scale (not important at all – very important). The initial step in developing the questionnaire was a pilot study, in which 20 secondary-school students responded to different trait questions. Students were also interviewed about the wording in the questions, and how they understood the meaning of the questions. Based upon their responses, minor changes were made to the questionnaire.

Results

Because the GVS is a new instrument, one important aim in the present study was to reveal reliability and validity of the Gender Value Scale. The questionnaire based on responses of 277 sporting students demonstrated an acceptable internal consistency (coefficient Cronbach's alpha) for the majority of scales as shown in Table 1.

Table I. Internal Consistency (Cronbach's Alpha) for Ten Factors across Seven Dimensions.

	Self	Female peers	Male peers	Mother	Father	Coach	Teacher
Appearance good looking face	.91	.92	.95	.89	.90	.85	.61
Appearance good looking body	.86	.91	.92	.88	.87	.84	.69
Appearance slender	.86	.90	.90	.88	.88	.85	.57
Appearance strength	.89	.94	.93	.86	.90	.84	.72
Strength	.86	.86	.86	.78	.83	.75	.73
Endurance	.88	.90	.90	.87	.91	.92	.54
Flexibility	.71	.84	.86	.85	.83	.73	.76
Sport competence	.79	.86	.89	.86	.90	.85	.84
Femininity	.60	.64	.74	.74	.71	.60	.77
Masculinity	.74	.66	.74	.68	.74	.72	.66

The internal consistency coefficients for the seven dimensions: Self, Female Peers, Male Peers, Mother, Father and Coach functioned quite well, in that they were higher than .70. However, for some of the factors; Masculinity (Female peers and Mother), Femininity (Self, Female peers, and Coach) the alphas were below .70. For Teacher, the internal consistency was quite good for some of the factors, whereas it was below .70 for others (Appearance good looking face, Appearance good looking body, Appearance Slender, Endurance, and Masculinity). Confirmatory Factor Analysis (CFAs) was conducted to test the factor structure in the questionnaire using LISREL, version 8.54 (Jöreskog & Sörbom, 1993, 1999) (see Table II).

Table II. Goodness of Fit Indexes for Confirmatory Factor Analysis'

Factors	χ^2	χ^2/df	Df	RNI	TLI	RMSEA
1 Appearance good looking face	470.45	2.80	168	0.98	0.97	0.062
2 Appearance good looking body	475.32	2.83	168	0.97	0.97	0.065
3 Appearance strength	476.29	2.84	168	0.97	0.96	0.066
4 Appearance slender	473.56	2.82	168	0.98	0.98	0.063
5 Strength	469.20	2.79	168	0.98	0.98	0.059
6 Endurance	468.44	2.79	168	0.97	0.97	0.060
7 Flexibility	486.32	2.89	168	0.97	0.97	0.061
8 Sports competence	488.52	2.91	168	0.97	0.97	0.063
9 Femininity	489.63	2.91	168	0.96	0.95	0.067
10 Masculinity	490.77	2.92	168	0.96	0.95	0.068

Note. χ^2 = chi square, χ^2/df = normed chi square, df = degrees of freedom, RNI = relative noncentrality index; TLI = Tucker-Lewis index; RMSEA = root mean square error of approximation.

For the purpose of the present study, 10 different factors (Good looking face, Good looking body, Appearance Strength, Appearance Slender, Strength, Endurance, Flexibility, Sports Competence, Femininity, and Masculinity, listed in Table II) were specified for testing (see Figure 1 for an example model how each factor was measured). In this model the assumption was that the 21 items of how each factor described 7 latent dimensions: Self, Female peers, Male peers, Mother, Father, Coach, and Teacher. A similar model was postulated for the 21 items in each of the ten factors. Analyses were based on covariance matrices constructed from responses by 277 students who had reasonably completed data in that they had missing value

for no more than 5 of the 210 items. Covariance matrices were constructed using full information maximum likelihood (FIML) replacement for missing values.

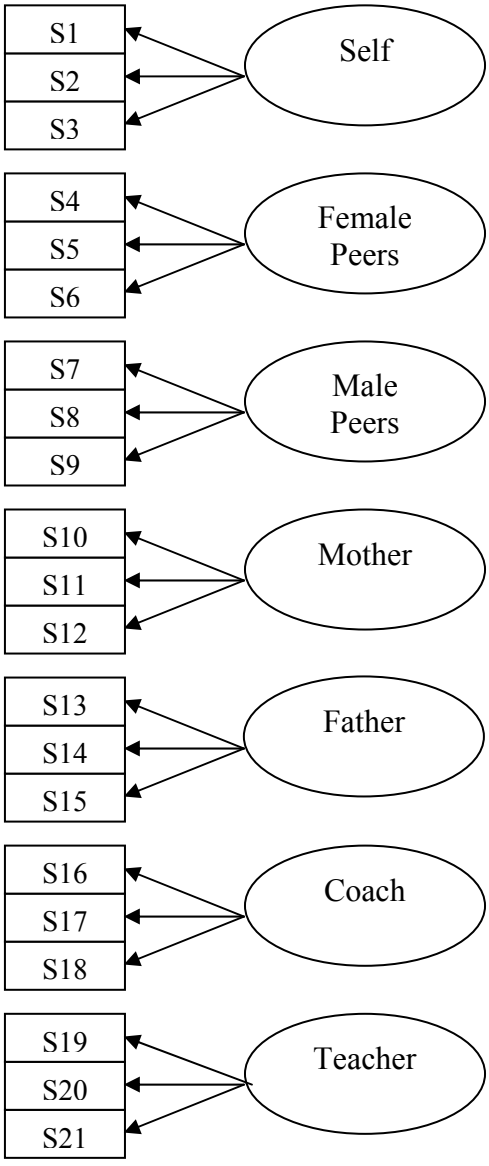

Figure 1. Model showing how each factor (e.g. Strength) is measured on seven dimensions.

Goodness of Fit. Following the recommendations of Hu & Bentler (1995), several fit indices were used to test the factor structure; the chi-square ($\chi 2$ statistic), normed chi-square (χ^2/df), degrees of freedom (df), Root Mean Square of Error Approximation (RMSEA), the Tucker-Lewis index (TLI) and the relative noncentrality index (RNI). The $\chi 2$ is regarded as an absolute fit statistic. However, the $\chi 2$ is sensitive to sample size and the larger the sample size, the more likely we are to reject the specified model. Another problem with χ^2 is that the more

complex the model the bigger the χ^2 will be and the more likely it is that the specified model will be rejected. For this reason, a "normed" χ^2 is sometimes used. Because the normed χ^2 takes model complexity into account it can also be referred to as an index of model parsimony. Acceptable level of the normed χ^2 is between 1.0 – 2.0, although values between 2.0 and 3.0 indicate reasonable good fit. For RMSEAs, values less than .05 and .08 are taken to reflect a close fit and a reasonable fit, respectively (Browne & Cudeck, 1993). The TLI and RNI vary along a 0-1 continuum in which values greater than .90 and .95 are typically taken to reflect acceptable and excellent fits to the data respectively (Bentler, 1992; Bentler & Bonnett, 1980). Although a number of goodness of fit indexes is available, primary emphasis was placed on the RMSEA in evaluating the goodness of fit in the present study. The goodness-of-fit for the factors presented in Table II, showed that the indices for the factors in general, fit the data in an acceptable manner. The RMSEA for all factors were below .08 as suggested as an upper criterion for reasonable fit (Browne & Cudeck, 1993), and RNI's as well as TLI's were high, 0.95 or higher in the majority of the models.

A one-way multivariate analyse of variance (MANOVA) was performed to test gender differences on the importance ratings in Self, Female Peers, Male Peers, Mother, Father, Coach, and Teacher.

Table III. Gender Differences in Sporting Student's Importance Ratings across Seven dimensions.

Dimension	Pillai's Trace	η^2
Self	$F_{10,266}$= 26.173	.496
Female peers	$F_{10,266}$ = 25.223	.487
Male peers	$F_{10,266}$ = 43.284	.619
Mother	$F_{10,266}$ = 7.954	.230
Father	$F_{10,266}$ = 7.954	.230
Coach	$F_{10,266}$ = 8.135	.234
Teacher	$F_{10,266}$ = 8.135	.234

Note: p<.001

As seen in Table III gender differences were evident on all seven dimensions, with the most obvious differences on the peers' and self dimensions. After finding a significant overall multivariate effect, *F* values were examined. These analyses were conducted to reveal gender differences more specifically among ten factors within each of the seven dimensions (see Table IV for *F* values, and Table V for mean values).

Table IV. Univariate Analysis of Gender Differences in Adolescents' Perceptions of Significant Others' Values. We report here the F-values for the Univariate Comparison between sexes.

	Self	Female Peers	Male Peers	Mother	Father	Coach	Teacher
Appearance – good looking face	2.73	58.41	140.76	3.93	2.31	0.04	18.19
Appearance – good looking body	.10	86.05	106.08	5.52	12.73	2.65	8.78
Appearance – slender	9.36	28.99	69.83	6.43	14.71	10.41	23.68
Flexibility	.26	42.55	11.71	3.12	8.81	1.72	6.29
Femininity	2.35	36.24	1.35	.02	10.06	.00	15.23
Strength	78.51	99.70	36.34	14.80	28.25	22.73	10.79
Appearance – strength	167.53	197.46	53.35	42.59	73.22	46.12	4.13
Endurance	28.77	33.60	21.72	6.31	15.99	14.94	10.48
Sports Competence	16.76	42.37	9.96	.06	3.48	4.35	26.95
Masculinity	43.18	15.07	13.72	7.80	9.31	5.46	16.39

Note. With 1.275 *degrees of freedom*, the F value for $p< 0.05$ should be larger than 3.87, the F value for $p< 0.01$ should be larger than 6.73, and the F value for $p< 0.001$ should be larger than 11.06.

Table V. Means and Standard Deviations (in parenthesis) for the Sporting Students Masculine and Feminine Values and their Perception of Significant Others' Masculine and Feminine Values

	Boys (n = 130)							Girls (n = 147)						
Scale	Self	Female Peers	Male Peers	Mother	Father	Coach	Teacher	Self	Female peers	Male peers	Mother	Father	Coach	Teacher
Good looking	10.59	**12.18**	7.52	6.30	5.79	4.60	5.69	11.16	9.49	**12.85**	5.71	5.38	4.64	5.69
Face	(2.73)	(2.59)	(3.68)	(2.79)	(2.59)	(2.08)	(2.49)	(2.98)	(3.45)	(2.26)	(2.92)	(2.88)	(2.24)	(1.92)
Good looking	10.65	**11.79**	7.96	**6.49**	**6.59**	6.40	**10.17**	10.54	8.55	**12.55**	5.76	5.32	5.83	9.45
body	(2.84)	(2.53)	(3.61)	(2.89)	(2.93)	(2.91)	(2.75)	(2.82)	(3.37)	(2.24)	(2.94)	(2.59)	(2.82)	(2.15)
Endurance	**11.27**	**8.68**	**9.97**	**6.88**	**8.98**	**11.75**	9.48	9.44	6.67	8.15	6.12	7.34	10.17	8.80
	(2.78)	(3.09)	(3.38)	(2.92)	(3.39)	(2.75)	(2.20)	(2.90)	(2.83)	(2.96)	(2.79)	(3.22)	(3.72)	(2.01)
Flexibility	10.09	**9.49**	7.78	6.80	**7.62**	10.52	11.31	9.94	7.27	**9.49**	6.32	6.56	10.08	10.67
	(2.48)	(2.71)	(3.22)	(2.80)	(3.05)	(2.76)	(2.84)	(2.48)	(3.10)	(2.83)	(2.85)	(2.83)	(2.93)	(2.37)
Sports	**11.87**	**10.18**	**10.79**	7.85	9.70	**11.76**	**8.19**	10.62	8.00	9.68	7.89	9.01	11.03	6.47
Competence	(2.41)	(2.68)	(3.22)	(3.11)	(3.35)	(2.77)	(3.28)	(2.74)	(2.99)	(2.96)	(3.29)	(3.48)	(3.04)	(2.58)
Appearance	**10.10**	**9.79**	**9.15**	**5.96**	**8.04**	**8.88**	10.27	5.98	4.96	5.90	4.21	4.74	6.34	9.77
Strength	(2.97)	(3.47)	(3.74)	(2.77)	(3.23)	(2.96)	(3.01)	(2.32)	(2.13)	(3.07)	(1.64)	(2.21)	(2.73)	(2.32)
Appearance	9.39	**10.91**	8.07	**6.71**	**7.01**	7.94	**7.88**	**10.52**	8.93	**11.83**	5.91	5.63	6.70	6.67
Slender	(2.85)	(2.76)	(3.36)	(3.00)	(2.94)	(2.97)	(2.40)	(3.22)	(3.52)	(2.58)	(2.98)	(2.62)	(3.05)	(2.08)
Strength	**11.05**	**9.33**	**9.94**	**6.98**	**8.82**	**10.00**	8.23	8.46	6.01	7.48	5.81	6.69	8.28	7.38
	(2.45)	(3.05)	(3.38)	(2.86)	(3.33)	(2.79)	(2.72)	(2.42)	(2.50)	(3.01)	(2.57)	(2.88)	(2.85)	(2.34)
Femininity	10.49	**11.05**	7.55	11.98	10.25	6.42	**11.01**	10.90	9.40	**8.26**	12.05	**11.48**	6.49	9.97
	(2.49)	(2.53)	(2.96)	(2.64)	(2.73)	(2.55)	(2.76)	(1.90)	(2.41)	(2.45)	(2.29)	(2.33)	(2.33)	(2.49)
Masculinity	**10.72**	**9.55**	**10.23**	**8.08**	**9.15**	**10.99**	**9.52**	8.83	8.01	8.94	7.29	8.06	10.08	8.35
	(2.38)	(2.58)	(3.12)	(2.71)	(2.96)	(2.81)	(3.02)	(2.39)	(2.32)	(2.69)	(2.61)	(3.00)	(3.12)	(2.45)

Note: Data written in bold correspond to the parameters where the sexes significantly differ according to the univariate analysis presented in the table IV. When the boy's values are in bold character, mean for boys > mean for girls; when girl's values are in bold character, mean for girls > mean for boys.

The mean scores and standard deviations for sporting students own as well as their perceptions of significant others' value system are presented in Table V. To reveal how boys' and girls' own importance ratings of masculine and feminine values were related to their perception of significant other's value beliefs correlations through confirmatory factor analyses (CFA) were computed. As shown in Table VI boys and girls own values were associated with perceived values of significant others, although there was a mixed pattern in responses.

Table VI. Confirmatory Factor Analysis (CFA) Correlations between Adolescents' Masculine and Feminine Values and Significant Others' Masculine and Feminine Values (as perpetuated by adolescents).

	Female peers	Male peers	Mother	Father	Coach	Teacher
Appearance good looking face						
Boys	0.61	0.33	0.35	0.32	0.10	0.17
Girls	0.44	0.55	0.30	0.35	0.19	0.10
Appearance good looking body						
Boys	0.46	0.27	0.14	0.33	0.22	0.24
Girls	0.34	0.54	0.37	0.37	0.30	0.49
Endurance						
Boys	0.32	0.48	0.16	0.38	0.46	0.40
Girls	0.34	0.28	0.28	0.33	0.44	0.36
Flexibility						
Boys	0.33	0.21	0.20	0.16	0.24	0.15
Girls	0.29	0.27	0.42	0.51	0.73	0.28
Sports Competence						
Boys	0.49	0.55	0.35	0.58	0.43	0.48
Girls	0.41	0.45	0.43	0.45	0.62	0.21
Appearance strength						
Boys	0.48	0.31	0.27	0.35	0.31	0.31
Girls	0.58	0.39	0.49	0.44	0.50	0.17
Appearance slender						
Boys	0.52	0.35	0.25	0.36	0.35	0.26
Girls	0.31	0.45	0.35	0.34	0.34	0.15
Strength						
Boys	0.59	0.28	0.32	0.34	0.39	0.37
Girls	0.45	0.42	0.49	0.47	0.60	0.32
Femininity						
Boys	0.58	0.41	0.56	0.57	0.08	0.23
Girls	0.47	0.43	0.33	0.45	0.31	0.11
Masculinity						
Boys	0.58	0.56	0.54	0.55	0.66	0.64
Girls	0.51	0.48	0.62	0.57	0.52	0.41

In order to assess the relative contribution of significant others' values upon adolescents' own values, multiple regression procedure (stepwise method) separately for boys and girls was used. Those variables which significantly ($p<.01$) explained the variance in adolescents' own values are presented in Table VII.

Table VII. Standardized Beta Values for Gender Value Sscale Dimensions in Predicting Masculine and Feminine Values for Boys and Girls.

	B Values						
	Female Peers	Male Peers	Mother	Father	Coach	Teacher	R^2
Appearance Good looking face							
Boys	.55						.30
Girls	.21	.38		.16			.33
Appearance Good looking body							
Boys	.46						.21
Girls		.34		.15		.24	.31
Endurance							
Boys	.20				.28		.15
Girls	.19				.35		.20
Flexibility							
Boys	.24				.21		.14
Girls	.21				.46		.30
Sports Competence							
Boys	.29			.20	.21		.26
Girls		.23	.16		.32		.31
Appearance Strength							
Boys	.43	.20					.22
Girls	.40				.33		.34
Appearance Slender							
Boys	.43						.19
Girls		.33	.21		.17		.25
Strength							
Boys	.48			.16			.30
Girls	.19		.17		.28		.21
Femininity							
Boys	.37			.23			.26
Girls	.37			.25			.27
Masculinity							
Boys	.23		.22		.34		.38
Girls			.35		.29		.31

Note: Only significant values are shown in the table. $p < .01$

Discussion

With the expectancy-value model developed by Eccles et al. (1983) as a departure point, the main aim of the present study was to explore whether adolescent boys and girls perceived significant others' masculine and feminine values differently, as well as identifying how masculine and feminine values of significant others' (as perceived by adolescents) were related to adolescents' own values. As existing instruments were not found sufficient for this purpose, a second aim was to develop and validate a suitable instrument. Thus, the Gender Value Scale (GVS), based on the well known Physical Self-Description Questionnaire (PSDQ), was developed specifically for the present study. The GVS was found to be a reliable instrument and the results were in accordance with the expectancy-value model, showing that girls and boys differed in their perceptions of significant others' masculine and feminine values within sport. Also they differed in how their own sport related values were associated with their perception of different significant others' values. Boys' values were most closely related to their perceived values of opposite sex peers, then coach and father. Girls' values, on the other hand, seemed to be more related to their perceived values of their coach, male- and female peers, and father.

Regarding the development of the instrument several methodological considerations require further comments. Results from the present study showed that the major scales demonstrated a good internal consistency with alpha values above .70. However, for some of the factors the alphas were below .70, which is suggested as a lower acceptable limit by Tabachnick and Fidell (1996). All RMSEA's varied between .059 - .068, and thus represent a reasonable fit (Browne & Cudeck, 1993). Considering the complexity of the models a close fit was not expected. Statistical significance alone does not make a sound measurement instrument, importantly, the items must make sense. In this regard, face validity or the subjective evaluation of the relevance of the items in the questionnaire becomes important, and we believe that based upon the interviews with the adolescents prior to the administration of the questionnaire about how they interpreted the meaning in the questions, we have a reason to think that the GVS functioned quite well for the purpose of the present study. Future research, however, would assist in clarifying this point, and would be further enhanced by including different samples, for example, adolescents with different cultural backgrounds and in other age spans, to further evaluate this instrument.

As in the study by Klomsten et al. (2004), the majority of boys in the present study participated in sports such as soccer, ice-hockey, boxing, martial arts, and motor cross, whereas most girls participated in sports such as dance, gymnastics, horse riding, figure skating, and aerobics. These are traditionally regarded as masculine and feminine stereotypic sports respectively (Klomsten et al., 2004; Koivula, 1995). If girls had been chosen from traditional masculine sports and boys from traditional feminine sports, this might have influenced the results in a different manner. Thus, future research should examine whether the GVS is a suitable measure for other samples (i.e. individuals in other sports) as well.

The questionnaire has given some important understanding of feminine and masculine belief in the sports world. By using the new GVS instrument, we have revealed gender differences in how sporting boys and girls conceive different significant others' masculine and feminine values, and also how the perceived values of the different significant others were related to adolescents own values in a Norwegian sample. Overall, sporting boys and girls rated the importance of masculine and feminine characteristics differently. Furthermore, boys and girls also differed in how they perceived the different significant others' values. In general, boys rated the importance higher than girls on most of the characteristics, both masculine and feminine. However, a closer examination showed some quite interesting differences in how boys and girls themselves rated the importance of different characteristics, as well as in their perception of significant others' values. Boys rated endurance, sports competence, appearance strength, strength and masculinity as more important than did girls, whereas girls valued appearance slender as significantly more important than boys. This is in accordance with previous research that has demonstrated boys to value being good in sport as more important than do girls (Eccles & Harold, 1991; Eccles et al., 1983; Eccles et al., 1984; Eccles et al., 1993; Fredricks & Eccles, 2002, 2005; Jacobs et al., 2002; Klomsten et al., 2004; Lirgg, 1991, Wigfield et al., 1997). We also know from earlier research that adolescent girls place a great deal of emphasis on conforming to conventional standards of physical attractiveness, which also includes an unrealistically thin featured ideal (Low, Charanasomboon, Brown, Hiltunen, Long, & Reinhalter, 2003; Sands & Wardle, 2003). Girls in the present study are still growing and developing as individuals who exercise regularly, and thus need to be energic enough to manage the activity. Despite this fact, they value a slender body as important. Also, to keep the body slender and fit might just be one of the reasons for many girls to participate in sport.

Boys in the present study thought that female peers valued all characteristics as more important when evaluating them compared to girls. Not only did they believe female peers valued being strong, having visible muscles and being good at sport as important about themselves, they also believed that female peers rated the importance of having a good looking face and good looking body as important. This may be explained due to an increasing focus on good looking men in advertising and other media (Agliata & Tantleff-Dunn, 2004; Ward, 2003). Boys also believed that male peers valued being good at sport, to have visible muscles, to be strong and to be masculine as important characteristics about them. This makes sense because physical presence is said to be crucial to the development of men's identity, and that it is part of learning to be a man as suggested by Connell (1995, 2002). For many boys in Western societies, popularity is associated with strength and athletic skills (Clarke & Clarke, 1961; Evans & Roberts, 1987; Lee, Coburn., & Partridge, 1981; Miller, 1989; Richardson, 1981). A study by McCabe, Ricciardelli and Finemore (2002) showed that boys were exercising in order to increase their body bulk so that they can conform to the sociocultural ideal for males.

Girl's perceived male peers to rate appearance good looking face, appearance good looking body, appearance slender, flexibility, and femininity as important. These findings seem to support previous research (Adler, Kless., & Adler, 1992; Buchanan, Blankenbaker., & Cotton, 1976; Chase & Dummer, 1992; Feltz, 1978; Nikitaras & Ntoumanis, 2003; Williams & White, 1983) that has shown appearance to be important dimensions in girls' popularity among peers. A slim body became an ideal for women from the 1960s (Garner, Garfinkel, Schwartz, & Thompson, 1980; Gordon 2000; Grogan, 1999), and a study among English adolescents has demonstrated that thinness still is an important feature of the female body ideal (Dittmar, Lloyd, Dugan, Halliwell, Jacobs, & Cramer, 2000). Recent research among female athletes in different sports demonstrated that their increased body weight was traumatic. They didn't like getting bigger because it detracted from femininity and contradicted the cultural ideal body (Krane et al. 2004). Despite the increasing focus on strength training among women, girls still do not tend to perceive strength and visible muscles as important to male peers when they rate females. Thus, the stereotyped values that females should not have big bulky muscles (Choi, 2003; Tucker, 1990) still seem to be strong in Norway as well.

For the other dimensions: Mother, Father, Coach and Teacher, boys believed to a greater extent than girls that significant others rated different characteristics as more important when evaluating them. This was especially true for appearance strength, endurance, strength, appearance slender and masculinity. The only characteristic girls believed was more important to significant others, was that they perceived fathers to rate femininity to be significantly more important compared to boys.

It is interesting that boys rated the majority of dimensions, and especially the appearance factors as more important than girls. Some researchers (Eccles et al., 1984; Stake, 1992) have suggested that girls appear more modest than boys in self-reports. It could also be that boys receive more direct expressions about appearance and physical presence compared to girls. For example, one might compliment a male for his strength, well-defined muscles and physical prowess, whereas a female is not complimented directly for her strength and physical abilities even though she may be strong and good at sports.

Boys themselves rated appearance strength and strength as significantly more important than girls, and they also perceived significant others to rate appearance strength and strength as significantly more important compared to girls. These findings were not surprising in that physical size, strength and visible muscles are essential symbols and may be the most important symbols of male power. The emphasis on muscularity has been increasing the last 30 years (Labre, 2002), and is communicated to even the youngest males for example with toy action figures becoming significantly more muscular (Pope, Olivardia, Gruber, & Borowecki, 1999). There is a growing amount of research demonstrating the importance of being muscular in adolescent males (e.g., Jones, 2001; McCreary & Sasse, 2000, 2002). Among adolescent boys in England, muscularity was emphasized in the male ideal (Dittmar et al., 2000). A recent study (Carlson Jones, 2004) suggests that internalized commitment to muscularity ideals is a singular pathway to change in body dissatisfaction for boys.

Because sport ultimately is about physical activity, sports offer a perfect arena for male physicality, muscularity and thus superiority. Such attitudes may have their origin far back in history. Medical authorities in Norway at the end of 19th century and even in the beginning of the 20th century arguing that visible muscles were "men's birthright", whereas females were advised to avoid strength training (von der Lippe, 2000).

Even after World War II, women's bodies, as a rule, were described to be less capable than men's, and it was also argued that women's nerve impulses reacted more slowly than

men's from the brain to the muscles (von der Lippe, 2000). Although such pessimistic attitudes about women in sport are not common today, the opinion about visible muscles and strength as male characteristics seem to persist. An example of this is evidenced in popular magazines, music videos and advertisements of today are saturated with images of thin, tight and sexy female models without bulky muscles, whereas male models often appear with a muscular and fit body. These attitudes might also explain why parents still believe girls are weaker and frailer than boys.

The media coverage within sport may also have contributed to boys' tendency to evaluate physical ability, strength, endurance and masculinity as more important compared to girls. Investigations of television, newspaper, and popular magazines coverage of female and male athletes reveal a clear gender bias (Buysse & Embser-Herbert, 2004; Choi, 2000; Duncan & Messner, 1998; Huffman, Tuggle, & Rosengard, 2004; Kane & Parks, 1992; Koivula, 1999; Messner, Duncan, & Cooky, 2003; Messner, Duncan, & Jensen, 1993). Whereas males are being rated according to their physical abilities and strength, females are described according to their physical look rather than their physical abilities. The absence of strong women with muscles from the public eye is an explicit reminder that big muscles and strength are male characteristics. Additionally, the sports media often seem to emit a message that female sexuality is of greater importance than athletic ability. For example, photographs of the famous tennis player Anna Kournikova modelling for summer clothing was presented in the English newspaper, The Sun. The images featured Kournikova in seductive poses, focusing upon her smile, legs, stomach and chest (Harris & Clayton, 2002), rather than her physical strength. It seems that the messages presented are so common that people, women and men, girls and boys do not react critically about them.

In accordance with predictions based on the expectancy-value model (Eccles et al., 1983), the results in the present study demonstrated a relation between adolescent own values and their perceived values of significant others. However, bearing in mind the inferential limitations of cross-sectional design further studies are necessary before inferences about causal relations can be made. To further test the expectancy-value model, longitudinal studies might add some important perspectives.

As evidenced in the results, however, associations between adolescents own values and the different significant other's values showed a varied pattern, indicating that adolescents discriminate between the diverse significant others' in how they perpetuate their masculine

and feminine values. Thus, also in future studies it will be very important to differentiate between significant others.

When the relation between the perceived values of significant others upon boys' and girls' own values respectively were assessed, some of the significant others seemed to be more related to their own values than others. For example on the appearance dimensions (Good looking body, Good looking face, Slender) the opposite sex demonstrated the highest beta value, indicating there is a close link between adolescents own values and their perceived values of opposite sex peers. This is of course not surprising, in that we know physical appearance become increasingly important for adolescents' perception of popularity (Chase & Dummer, 1992). Furthermore, the results showing their perceived values of parents', coaches', and teachers' are less associated to their own values compared to those of peers on the appearance dimensions are in agreement with previous research (Brown, 1985; Higginson, 1985; Mcpherson & Brown, 1988; Patrikkson, 1981) that suggest peers are increasingly more important to the individual as the child enters adolescence.

For other factors the relations between perceived values of significant others and adolescent's own values showed a somehow different pattern for boys and girls. For boys, the perceived values of the opposite sex' perceived values were closely associated to their own values for the majority of factors, while their perceived values of the coach and father showed a somewhat weaker association to their own values. For girls, their perceived values of the coach, female peers, mother and father were most closely associated to their own values.

Previous research (Eccles & Harold, 1991; Fredricks & Eccles, 2002, 2005) has documented a relationship between children's own value beliefs and their perception of parents' value beliefs about doing well in sports. Results in the present study were not very clear but seem to support these findings in that boys' perceived values of father were associated to their own values on the sports competence dimension, whereas for girls, their perceived values of mother were closest related to their own values on the same dimension.

In the present study, we have measured adolescents' own perception of significant others' value system. This may have influenced the results in a different manner than by for example surveying significant others' value system directly. However, as far as we consider the expectancy-value model (Eccles et al. 1983), one of the major strength of this model is the assumption that it is the *interpretation of reality rather than reality itself* that influences the individual.

In conclusion, the present study has revealed some interesting gender differences in how adolescents perceived significant others' masculine and feminine values and the major differences between boys and girls were evident on the strength and appearance strength dimensions. Additionally, interesting associations between adolescents' own values and different significant others' values (as perceived by adolescents) were identified. The most important finding was that adolescents clearly discriminated between different significant others. This suggests that discrimination between boys and girls as well as between different significant others may be important in future studies. The questionnaire in the present study which was quantitative in nature yielded some important knowledge of the masculine/feminine sports world. Research, however, would be further benefited by more longitudinal studies, and perhaps more qualitative studies to tease out some of the influences impacting on gender differentiation held beliefs within sport.

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Appendices

Spørreskjema - PSDQ

Slik gjør du:
På de fleste spørsmålene blir du spurt om å sette et x i den ruten som passer best for deg:
Eks:
Liker du å svømme? Sett bare et x Ja [x] Nei [ ]

Her starter du:

1 Er du jente eller gutt? Sett bare et x Jente [ ] Gutt [ ]

2 Hvor gammel er du? Jeg er …….. år Fødselsmåned……..

3 Deltar du i organisert idrett (fotball, håndball, dans e.l? Ja [ ] Nei [ ]

4 Hvilken idrett/er driver du med?

……

5 Når trives du best på trening? Sett et kryss i den ruten som passer best med hvordan du vanligvis har det. Jeg trives best når det er:

Lite konkurranse på trening [ ]

Middels konkurranse på trening [ ]

Mye konkurranse på trening [ ]

6 Hvis du har sluttet med organisert trening, hva var den viktigste årsaken til at du sluttet?

……

7 Vis hvor enig eller uenig du er i påstanden under. *Sett bare ett x for hver linje.*

	helt enig	*litt enig*	*litt enig litt uenig*	*litt uenig*	*helt uenig*
Jeg er fornøyd med kroppen min	☐	☐	☐	☐	☐
Jeg er for tykk	☐	☐	☐	☐	☐
Andre mennesker synes jeg er god i idrett	☐	☐	☐	☐	☐
Jeg er pen å se på	☐	☐	☐	☐	☐
Jeg er en sterk person (med sterke muskler)	☐	☐	☐	☐	☐
Jeg er ganske god til å bøye og tøye kroppen min	☐	☐	☐	☐	☐
Jeg kan løpe langt uten å stoppe opp	☐	☐	☐	☐	☐
Når jeg blir syk, klarer jeg ikke engang å komme meg ut av sengen	☐	☐	☐	☐	☐
Jeg føler meg ok når jeg gjør øvelser som f.eks hoderulle, ta salto, eller lignende	☐	☐	☐	☐	☐
Flere ganger pr. uke trener jeg så hardt at jeg puster og peser (blir andpusten)	☐	☐	☐	☐	☐

	helt enig	*litt enig*	*litt enig litt uenig*	*litt uenig*	*helt uenig*
Jeg er stort sett fornøyd med sånn som jeg er	☐	☐	☐	☐	☐
Jeg pleier å bli syk (forkjølet) når andre omkring meg er syke	☐	☐	☐	☐	☐
Det er lett for meg å bevege kroppen min som jeg vil	☐	☐	☐	☐	☐
Det er vanlig at jeg trener eller gjør andre ting som gjør meg andpusten	☐	☐	☐	☐	☐
Jeg er for tykk rundt midjen	☐	☐	☐	☐	☐
Jeg er flink i de fleste idretter	☐	☐	☐	☐	☐
Jeg liker kroppen min	☐	☐	☐	☐	☐
Jeg har et pent ansikt	☐	☐	☐	☐	☐
Jeg er sterk i kroppen (med sterke muskler)	☐	☐	☐	☐	☐
Kroppen min er myk og tøyelig	☐	☐	☐	☐	☐

	helt enig	*litt enig*	*litt enig litt uenig*	*litt uenig*	*helt uenig*
Jeg vil klare meg bra i en test i utholdenhet f.eks løpe langt uten å stoppe	☐	☐	☐	☐	☐
Jeg har ikke så mye å være stolt av	☐	☐	☐	☐	☐
Jeg er så mye syk, at jeg ikke får gjort alt jeg vil	☐	☐	☐	☐	☐
Jeg er flink til å ta hoderulle, slå hjul osv.	☐	☐	☐	☐	☐
Jeg trener ca. 30 minutter, 3-4 ganger hver uke, så hardt at jeg blir andpusten	☐	☐	☐	☐	☐
Jeg har mye fett på kroppen	☐	☐	☐	☐	☐
De fleste idretter er lette for meg	☐	☐	☐	☐	☐
Jeg er fornøyd med hvordan jeg ser ut, og hvordan kroppen min fungerer	☐	☐	☐	☐	☐
Jeg er penere enn de fleste av mine venner	☐	☐	☐	☐	☐
Jeg er sterkere enn de fleste på min alder	☐	☐	☐	☐	☐

	helt enig	*litt enig*	*litt enig litt uenig*	*litt uenig*	*helt uenig*
Kroppen min er stiv	☐	☐	☐	☐	☐
Jeg kan småjogge/småløpe 5 km uten å stoppe	☐	☐	☐	☐	☐
Jeg føler at livet mitt ikke er til nytte for noen	☐	☐	☐	☐	☐
Jeg blir nesten aldri syk	☐	☐	☐	☐	☐
Jeg får til de fleste idrettsøvelser	☐	☐	☐	☐	☐
Jeg deltar i fysisk aktivitet; løping, dans, turn, fotball e.l minst tre ganger pr. uke	☐	☐	☐	☐	☐
Jeg veier for mange kilo	☐	☐	☐	☐	☐
Jeg er god i idrett	☐	☐	☐	☐	☐
Jeg føler at jeg har en bra kropp	☐	☐	☐	☐	☐
Noen ganger føler jeg meg stygg	☐	☐	☐	☐	☐

	helt enig	*litt enig*	*litt enig litt uenig*	*litt uenig*	*helt uenig*
Jeg er svak (svake muskler)	☐	☐	☐	☐	☐
Jeg kan bevege hendene og føttene mine bra i ulike retninger	☐	☐	☐	☐	☐
Jeg tror jeg kan løpe langt uten å bli sliten	☐	☐	☐	☐	☐
Stort sett, er jeg ikke spesielt flink	☐	☐	☐	☐	☐
Jeg blir mye syk	☐	☐	☐	☐	☐
Jeg synes det er lett å ta hoderulle, ta salto e.l	☐	☐	☐	☐	☐
Jeg deltar i mange idretter; dans, fotball, ski e.l	☐	☐	☐	☐	☐
Magen min er altfor stor	☐	☐	☐	☐	☐
Jeg er bedre i idrett enn i de fleste av mine venner	☐	☐	☐	☐	☐
Jeg føler meg ok med det jeg kan gjøre med kroppen min	☐	☐	☐	☐	☐

	helt enig	*litt enig*	*litt enig litt uenig*	*litt uenig*	*helt uenig*
Jeg ser bra ut	☐	☐	☐	☐	☐
Jeg kommer til å gjøre det bra i en styrkeøvelse/ styrketest	☐	☐	☐	☐	☐
Jeg er myk nok til de fleste idretter	☐	☐	☐	☐	☐
Jeg kan være fysisk aktiv (løpe,hoppe) i lang tid før jeg blir sliten	☐	☐	☐	☐	☐
Det meste av det jeg gjør, klarer jeg bra	☐	☐	☐	☐	☐
Når jeg blir syk, tar det lang tid før jeg blir frisk	☐	☐	☐	☐	☐
Jeg beveger meg pent når jeg deltar i idrett, og i andre aktiviteter	☐	☐	☐	☐	☐
Jeg deltar i idrett, fotball, dans, turn, eller andre aktiviteter nesten hver dag	☐	☐	☐	☐	☐
Andre mennesker synes jeg er tykk	☐	☐	☐	☐	☐
Jeg er god i idrett	☐	☐	☐	☐	☐

	helt enig	*litt enig*	*litt enig litt uenig*	*litt uenig*	*helt uenig*
Jeg føler meg vel med kroppen min	☐	☐	☐	☐	☐
Det er ingen som synes at jeg er pen	☐	☐	☐	☐	☐
Jeg er god til løfte tunge ting	☐	☐	☐	☐	☐
Jeg vil gjøre det i en test om å være myk og bevegelig	☐	☐	☐	☐	☐
Jeg har god utholdenhet (klarer å holde på lenge uten stopp i: løping, sykling e.l)	☐	☐	☐	☐	☐
Stort sett har jeg mye å være stolt av	☐	☐	☐	☐	☐
Jeg må gå til legen pga sykdom – oftere enn de fleste	☐	☐	☐	☐	☐
Stort sett har jeg ikke mye å være stolt av	☐	☐	☐	☐	☐
Jeg er vanligvis frisk, selv når vennene mine er syke	☐	☐	☐	☐	☐
Ingen ting av det jeg gjør går så veldig bra	☐	☐	☐	☐	☐

Tusen takk for at du svarte på spørreskjemaet ☺

Spørreskjema – GVS
For elever som deltar i organisert idrett

1 Er du jente eller gutt? *Sett bare et x* Jente ☐ Gutt ☐

2 Hvor gammel er du? Jeg er …….. år Fødselsmåned……..

3a Hvilke/n idrett/er driver du med?

……

3b Hva er din hovedidrett? (Den idretten du bruker mest tid på?)

……

3c Omtrent hvor mange timer pr.uke trener du eller er du i fysisk aktivitet? Ca……timer

4 Trener dine foreldre?

Mamma ☐ Hvilke/n idrett/er?.....

Pappa ☐ Hvilke/n idrett/er?.....

Ingen ☐

5 Hvorfor driver du med idrett? *Sett så mange kryss som nødvendig.*

For å holde meg i form	☐	Å være sammen med venner	☐
Det er arti, morsomt	☐	Godt miljø	☐
Jeg liker å vinne	☐	Jeg liker idretten min	☐
Jeg liker å konkurrere	☐	Flinke ledere	☐
Holde meg slank	☐	Jeg ønsker å bli best	☐

6 Har du kvinnelig eller mannlig trener i din hovedidrett? Kvinne ☐ Mann ☐

7 Har du kvinnelig eller mannlig kroppsøvingslærer? Kvinne ☐ Mann ☐

HVA ER VIKTIG FOR DEG SELV?

Hvor **viktig** er det for **deg** at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en deilig/sexy kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskokurranser					
Har en veltrent og slank kropp					
Er flink til å vise omsorg					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Kan løpe/sykle langt uten å bli sliten					
Er flink til å lage mat til familien					
Er god til å løfte tunge ting					
Har et pent utseende					
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe/sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initativ					
Har en smidig/elegant kropp					
Har en flott kropp					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har sterke muskler	☐	☐	☐	☐	☐
Har en tynn kropp	☐	☐	☐	☐	☐
Er god til å ta armhevinger, knebøy, sit-ups	☐	☐	☐	☐	☐
Har et pent ansikt	☐	☐	☐	☐	☐
Er like god i idrett som andre på min alder	☐	☐	☐	☐	☐

HVA TROR DU ANDRE JENTER SYNS ER VIKTIG?

Når andre jenter (dine venninder/jenter i klassen/jenter på skolen) **vurderer deg**, hvor viktig er det for **dem** at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på	☐	☐	☐	☐	☐
Har en deilig/sexy kropp	☐	☐	☐	☐	☐
Kan løpe langt ute å stoppe	☐	☐	☐	☐	☐
Har en kropp som er myk og tøyelig	☐	☐	☐	☐	☐
Er god i idrett/kroppsøving	☐	☐	☐	☐	☐
Har store muskler	☐	☐	☐	☐	☐
Har en slank kropp	☐	☐	☐	☐	☐
Har en kraftig kropp med synlige muskler	☐	☐	☐	☐	☐
Har en kropp med god bevegelighet	☐	☐	☐	☐	☐
Gjør det bra i en styrkeøvelse/test	☐	☐	☐	☐	☐
Har en kropp som ser bra ut	☐	☐	☐	☐	☐
Gjør det bra i idrettskonkurranser	☐	☐	☐	☐	☐
Har en veltrent og slank kropp	☐	☐	☐	☐	☐
Er flink til å vise omsorg	☐	☐	☐	☐	☐
Kan løpe/sykle langt uten å bli sliten	☐	☐	☐	☐	☐
Er flink til å lage mat til familien	☐	☐	☐	☐	☐
Er god til å løfte ting	☐	☐	☐	☐	☐
Har et pent utseende	☐	☐	☐	☐	☐
Er flink med barn	☐	☐	☐	☐	☐

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR DU ANDRE GUTTER SYNS ER VIKTIG?

Når andre gutter (dine venner/gutter i klassen/gutter på skolen) **vurderer deg**, hvor viktig er det for **dem** at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en deilig/sexy kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskokurranser					
Har en veltrent og slank kropp					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å bli sliten					
Er flink til å lage mat til familien					
Er god til å løfte ting					
Har et pent utseende					
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR DU ER VIKTIG FOR MAMMA?

Hvor viktig er det for **mamma** at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en fin kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskonkurranser					
Har en veltrent og slank kropp					
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å stoppe					
Er flink til å lage mat til familien					
Er god til å løfte tunge ting					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har et pent utseende					
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR DU ER VIKTIG FOR PAPPA?

Hvor viktig er det for **pappa** at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på	☐	☐	☐	☐	☐
Har en fin kropp	☐	☐	☐	☐	☐
Kan løpe langt ute å stoppe	☐	☐	☐	☐	☐
Har en kropp som er myk og tøyelig	☐	☐	☐	☐	☐
Er god i idrett/kroppsøving	☐	☐	☐	☐	☐
Har store muskler	☐	☐	☐	☐	☐
Har en slank kropp	☐	☐	☐	☐	☐
Har en kraftig kropp med synlige muskler	☐	☐	☐	☐	☐
Har en kropp med god bevegelighet	☐	☐	☐	☐	☐
Gjør det bra i en styrkeøvelse/test	☐	☐	☐	☐	☐
Har en kropp som ser bra ut	☐	☐	☐	☐	☐
Gjør det bra i idrettskonkurranser	☐	☐	☐	☐	☐
Har en veltrent og slank kropp	☐	☐	☐	☐	☐
Er flink til å vise omsorg	☐	☐	☐	☐	☐
Kan løpe/sykle langt uten å stoppe	☐	☐	☐	☐	☐
Er flink til å lage mat til familien	☐	☐	☐	☐	☐
	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er god til å løfte ting	☐	☐	☐	☐	☐
Har et pent utseende	☐	☐	☐	☐	☐
Er flink med barn	☐	☐	☐	☐	☐
Er konkurranseorientert	☐	☐	☐	☐	☐
Er god til å løpe, sykle langt	☐	☐	☐	☐	☐
Er tøff/hard	☐	☐	☐	☐	☐
Er offensiv, frampå, tar initiativ	☐	☐	☐	☐	☐
Har en smidig/elegant kropp	☐	☐	☐	☐	☐

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR DU ER VIKTIG FOR DIN TRENER?

Når din trener (i din hovedidrett) **vurderer deg**, hvor viktig er det for hun/han at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en fin kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskonkurranser					
Har en veltrent og slank kropp					
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å stoppe					
Er flink til å lage mat til familien					
Er god til å løfte tunge ting					
Har et pent utseende					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR DU ER VIKTIG FOR DIN KROPPSØVINGSLÆRER?

Når din kroppsøvingslærer **vurderer deg**, hvor viktig er det for hun/han at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en fin kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskonkurranser					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har en veltrent og slank kropp					
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å stoppe					
Er flink til å lage mat til familien					
Er god til å løfte tunge ting					
Har et pent utseende					
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

Finns det idretter, **du synes** er typiske jenteidretter?

……

Hvorfor passer disse idrettene best for jenter?

…….

Finns det idretter, **du synes** er typiske gutteidretter?

……

Hvorfor passer disse idrettene best for gutter?

……

Hvordan **mener du** at en ideal jentekropp ser ut? Du kan gjerne tegne på baksiden.

……

Hvordan **mener du** at en ideal guttekropp ser ut? Du kan gjerne tegne på baksiden.

……

Hvilke ord **bruker du** når du skal beskrive en **jente som du ser bra/fin ut?**

……

Hvilke ord **bruker du** når du skal beskrive en **gutt som du ser bra/fin ut?**

……

HVORDAN VIL DU BESKRIVE DEG SELV?

Når du tenker på **deg selv**, hvor enig er **du** i følgende:

	svært uenig	*nokså uenig*	*litt enig litt uenig*	*nokså enig*	*svært enig*
Jeg er pen å se på					
Jeg er stort sett fornøyd sånn som jeg er					
Jeg kan løpe fort uten å stoppe					
Jeg har en kropp som er myk og tøyelig					
Jeg er god i idrett/kroppsøving					
Jeg har store muskler					
Jeg har en slank kropp					
Jeg har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Jeg gjør det bra i en styrkeøvelse/test					
	svært uenig	*nokså uenig*	*litt enig litt uenig*	*nokså enig*	*svært enig*
Jeg har en kropp som ser bra ut					
Jeg gjør det bra i idrettskonkurranser					
Jeg har en veltrent og slank kropp					
Jeg er flink til å vise omsorg					
Jeg kan løpe/sykle langt uten å stoppe					
Jeg er flink til å lage mat til familien					
Jeg er god til å løfte tunge ting					
Jeg har et pent utseende					
Jeg er flink med barn					
Jeg er konkurranseorientert					
Jeg er god til å løpe/sykle langt					
Stort sett har jeg mye å være stolt av					
Jeg er offensiv, frampå, tar iniativ					
Jeg har en smidig/elegant kropp					
Jeg har en flott kropp					

	svært uenig	*nokså uenig*	*litt enig litt uenig*	*nokså enig*	*svært enig*
Jeg har sterke muskler	☐	☐	☐	☐	☐
Jeg har en tynn kropp	☐	☐	☐	☐	☐
Jeg er god til å ta armhevinger, knebøy, sit-ups	☐	☐	☐	☐	☐
Jeg har et pent ansikt	☐	☐	☐	☐	☐
Jeg er like god i idrett som andre på min alder	☐	☐	☐	☐	☐
Jeg har en deilig/sexy kropp	☐	☐	☐	☐	☐
Det meste av det jeg gjør, klarer jeg bra	☐	☐	☐	☐	☐
Jeg er tøff/hard	☐	☐	☐	☐	☐

Hva gjør deg glad?

……

……

Tusen takk for at du svarte på spørreskjemaet ☺

Spørreskjema – GVS
For elever som ikke deltar i organisert idrett

1 Er du jente eller gutt? Sett bare et x Jente Gutt

2 Hvor gammel er du? Jeg er …….. år Fødselsmåned……..

……

3a Har du drevet med idrett tidligere? Ja Nei
Hvis nei, gå til spørsmål 6

3b Hva var din hovedidrett? (Den idretten du brukte mest tid på?)

……

4 Hvorfor drev du med idrett? *Sett så mange kryss som nødvendig.*

For å holde meg i form	☐	Å være sammen med venner	☐
Det var arti, morsomt	☐	Godt miljø	☐
Jeg likte å vinne	☐	Jeg likte idretten min	☐
Jeg likte å konkurrere	☐	Flinke ledere	☐
Holde meg slank	☐	Jeg ønsket å bli best	☐

5 Hadde du kvinnelig eller mannlig trener i din hovedidrett? Kvinne ☐ Mann ☐

6 Trener dine foreldre?

Mamma ☐ Hvilke/n idrett/er?.....

Pappa ☐ Hvilke/n idrett/er?.....

Ingen ☐

7 Har du kvinnelig eller mannlig kroppsøvingslærer? Kvinne ☐ Mann ☐

8 Omtrent hvor mange timer pr. uke er du fysisk aktiv/i bevegelse? Ca……..timer

HVA ER VIKTIG FOR DEG SELV?

Hvor **viktig** er det for **deg** at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på	☐	☐	☐	☐	☐
Har en deilig/sexy kropp	☐	☐	☐	☐	☐
Kan løpe langt ute å stoppe	☐	☐	☐	☐	☐
Har en kropp som er myk og tøyelig	☐	☐	☐	☐	☐
Er god i idrett/kroppsøving	☐	☐	☐	☐	☐
Har store muskler	☐	☐	☐	☐	☐
Har en slank kropp	☐	☐	☐	☐	☐
Har en kraftig kropp med synlige muskler	☐	☐	☐	☐	☐
Har en kropp med god bevegelighet	☐	☐	☐	☐	☐
Gjør det bra i en styrkeøvelse/test	☐	☐	☐	☐	☐
Har en kropp som ser bra ut	☐	☐	☐	☐	☐
Gjør det bra i idrettskokurranser	☐	☐	☐	☐	☐
Har en veltrent og slank kropp	☐	☐	☐	☐	☐
Er flink til å vise omsorg	☐	☐	☐	☐	☐

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Kan løpe/sykle langt uten å bli sliten	☐	☐	☐	☐	☐
Er flink til å lage mat til familien	☐	☐	☐	☐	☐
Er god til å løfte tunge ting	☐	☐	☐	☐	☐
Har et pent utseende	☐	☐	☐	☐	☐
Er flink med barn	☐	☐	☐	☐	☐
Er konkurranseorientert	☐	☐	☐	☐	☐
Er god til å løpe/sykle langt	☐	☐	☐	☐	☐
Er tøff/hard	☐	☐	☐	☐	☐
Er offensiv, frampå, tar initativ	☐	☐	☐	☐	☐
Har en smidig/elegant kropp	☐	☐	☐	☐	☐
Har en flott kropp	☐	☐	☐	☐	☐

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR DU ANDRE JENTER SYNS ER VIKTIG?

Når andre jenter (dine venninder/jenter i klassen/jenter på skolen) **vurderer deg**, hvor viktig er det for **dem** at **du**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en deilig/sexy kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskonkurranser					
Har en veltrent og slank kropp					
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å bli sliten					
Er flink til å lage mat til familien					
Er god til å løfte ting					
Har et pent utseende					
Er flink med barn					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR <u>DU</u> ANDRE GUTTER SYNS ER VIKTIG?

Når andre gutter (dine venner/gutter i klassen/gutter på skolen) **<u>vurderer deg</u>**, hvor viktig er det for **<u>dem</u>** at **<u>du</u>**:

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en deilig/sexy kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskokurranser					
Har en veltrent og slank kropp					

	ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å bli sliten					
Er flink til å lage mat til familien					
Er god til å løfte ting					
Har et pent utseende					
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR DU ER VIKTIG FOR MAMMA?

Hvor viktig er det for **mamma** at **du**:

	Ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en fin kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					

	Ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskonkurranser					
Har en veltrent og slank kropp					
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å stoppe					
Er flink til å lage mat til familien					
Er god til å løfte tunge ting					

	Ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har et pent utseende					
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR DU ER VIKTIG FOR PAPPA?

Hvor viktig er det for **pappa** at **du**:

	Ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en fin kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskonkurranser					
Har en veltrent og slank kropp					
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å stoppe					
Er flink til å lage mat til familien					

	Ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er god til å løfte ting					
Har et pent utseende					
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					

	Ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

HVA TROR <u>DU</u> ER VIKTIG FOR DIN KROPPSØVINGSLÆRER?

Når din kroppsøvingslærer **<u>vurderer deg</u>**, hvor viktig er det for hun/han at **<u>du</u>**:

	Ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Er pen å se på					
Har en fin kropp					
Kan løpe langt ute å stoppe					
Har en kropp som er myk og tøyelig					
Er god i idrett/kroppsøving					
Har store muskler					
Har en slank kropp					
Har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Gjør det bra i en styrkeøvelse/test					
Har en kropp som ser bra ut					
Gjør det bra i idrettskonkurranser					

	Ikke viktig i det hele tatt	*ikke så veldig viktig*	*noen ganger viktig, andre ganger ikke viktig*	*nokså viktig*	*svært viktig*
Har en veltrent og slank kropp					
Er flink til å vise omsorg					
Kan løpe/sykle langt uten å stoppe					
Er flink til å lage mat til familien					
Er god til å løfte tunge ting					
Har et pent utseende					
Er flink med barn					
Er konkurranseorientert					
Er god til å løpe, sykle langt					
Er tøff/hard					
Er offensiv, frampå, tar initiativ					
Har en smidig/elegant kropp					
Har en flott kropp					
Har sterke muskler					
Har en tynn kropp					
Er god til å ta armhevinger, knebøy, sit-ups					
Har et pent ansikt					
Er like god i idrett som andre på min alder					

Finns det idretter, **du synes** er typiske jenteidretter?

……

Hvorfor passer disse idrettene best for jenter?

…….

Finns det idretter, **du synes** er typiske gutteidretter?

……

Hvorfor passer disse idrettene best for gutter?

……

Hvordan **mener du** at en ideal jentekropp ser ut? Du kan gjerne tegne på baksiden.

……

Hvordan **mener du** at en ideal guttekropp ser ut? Du kan gjerne tegne på baksiden.

……

Hvilke ord **bruker du** når du skal beskrive en **jente som du ser bra/fin ut?**

……

Hvilke ord **bruker du** når du skal beskrive en **gutt som du ser bra/fin ut?**

……

HVORDAN VIL DU BESKRIVE DEG SELV?

Når du tenker på **deg selv**, hvor enig er **du** i følgende:

	svært uenig	*nokså uenig*	*litt enig litt uenig*	*nokså enig*	*svært enig*
Jeg er pen å se på					
Jeg er stort sett fornøyd sånn som jeg er					
Jeg kan løpe fort uten å stoppe					
Jeg har en kropp som er myk og tøyelig					
Jeg er god i idrett/kroppsøving					
Jeg har store muskler					
Jeg har en slank kropp					
Jeg har en kraftig kropp med synlige muskler					
Har en kropp med god bevegelighet					
Jeg gjør det bra i en styrkeøvelse/test					
	svært uenig	*nokså uenig*	*litt enig litt uenig*	*nokså enig*	*svært enig*
Jeg har en kropp som ser bra ut					
Jeg gjør det bra i idrettskonkurranser					
Jeg har en veltrent og slank kropp					
Jeg er flink til å vise omsorg					
Jeg kan løpe/sykle langt uten å stoppe					
Jeg er flink til å lage mat til familien					
Jeg er god til å løfte tunge ting					
Jeg har et pent utseende					
Jeg er flink med barn					
Jeg er konkurranseorientert					
Jeg er god til å løpe/sykle langt					
Stort sett har jeg mye å være stolt av					
Jeg er offensiv, frampå, tar iniativ					
Jeg har en smidig/elegant kropp					
Jeg har en flott kropp					

	svært uenig	*nokså uenig*	*litt enig litt uenig*	*nokså enig*	*svært enig*
Jeg har sterke muskler	☐	☐	☐	☐	☐
Jeg har en tynn kropp	☐	☐	☐	☐	☐
Jeg er god til å ta armhevinger, knebøy, sit-ups	☐	☐	☐	☐	☐
Jeg har et pent ansikt	☐	☐	☐	☐	☐
Jeg er like god i idrett som andre på min alder	☐	☐	☐	☐	☐
Jeg har en deilig/sexy kropp	☐	☐	☐	☐	☐
Det meste av det jeg gjør, klarer jeg bra	☐	☐	☐	☐	☐
Jeg er tøff/hard	☐	☐	☐	☐	☐

Tusen takk for at du svarte på spørreskjemaet ☺