Girls and Women, Sport, and Self-Confidence

Cathy D. Lirgg

This article explores research examining girls' and women's self-confidence in sport and physical activity. The article begins by addressing how self-confidence has been conceptualized and how researchers have measured it. A theoretical groundwork is presented by comparing three models that link confidence to achievement: Bandura's theory of self-efficacy, Harter's competence motivation theory, and Eccles (Parsons) et al.'s expectancy-value model. Next, research examining variables that have been hypothesized to influence female self-confidence, as well as a discussion of gender differences, is presented. Finally, enhancement strategies and future research directions are offered. It is suggested that researchers examine the impact of specific socializing influences when studying girls' and women's self-confidence and also that they undertake more model testing instead of examining variables in isolation.

Self-confidence is commonly thought to be an important mechanism underlying achievement. Although much research has been conducted on this topic, less research has been undertaken specifically on girls' and women's self-confidence in physical activity. Research that has been conducted was spurred by two happenings. The first was Title IX in 1972, which identified low sport-participation rates for girls as well as the lack of opportunities for girls as compared to boys. The second was Maccoby and Jacklin's (1974) book, The Psychology of Sex Differences, which suggested that females were less confident than males in achievement situations. The purpose of this article is to identify the avenues that research has taken and to present what we know, and what we still need to learn, about girls' and women's self-confidence in sport and physical activity.

The first section of this article briefly explores the various ways researchers have attempted to measure self-confidence, identifying the different terminology employed. Second, a discussion of three major theoretical models linking self-confidence to achievement is provided, examining the models' similarities and differences as to mediating variables and hypothesized pathways. The third section reviews studies that have examined variables believed to influence females' self-confidence in physical activity, including a discussion of research examining

Cathy D. Lirgg is with the Department of Health Science, Kinesiology, Recreation, and Dance at the University of Arkansas, Fayetteville, AR 72701.
gender differences. In the final section, enhancement strategies and future research directions are provided.

**Operational Definitions of Self-Confidence**

Researchers have investigated perceptions of ability using somewhat different conceptual definitions. For example, some researchers have asked subjects to express ability judgments in specific situations (e.g., Bandura, 1977); others have viewed confidence as multidimensional (e.g., Harter, 1982). A brief overview of some of the ways that confidence has been operationally defined in sport and physical activity follows. Because other terms are often confused with confidence, this section concludes by differentiating between self-confidence, self-concept, and self-esteem.

Perhaps the most widely used theory for studying self-confidence in the sport domain has been Bandura’s (1977) theory of self-efficacy (Feltz, 1988b). Self-efficacy is defined as a judgment about one’s capability to organize and execute courses of action to attain a specific outcome. Its measurement involves asking one to state the percentage of confidence one has in accomplishing a series of increasingly difficult or stressful tasks. This microanalytic method provides for specific and refined predictions of human action; that is, self-efficacy measures one’s confidence as it is related to specific tasks, not one’s global self-confidence (Bandura, 1986).

Vealey (1986) developed a conceptual model of confidence based on the unique context of sport. She conceptualized the construct of sport confidence as being sport-specific self-confidence, not general self-confidence. However, her measure allows for the identification of trait sport confidence (one’s perceived confidence in sport in general) and state sport confidence (perceived confidence specific to a particular sport situation). Unlike Bandura’s (1977) conceptualization of self-efficacy, however, sport confidence does not use a microanalytic approach in assessment, which limits its predictive power (Feltz, 1988b). Vealey’s scale asks subjects to judge their sport confidence in comparison to the most confident athlete they know.

Fox and Corbin (1989) developed a multidimensional scale in which perceived sport competence was one dimension. Their Physical Self-Perception Profile contains five subscales in all, the other four being perceived physical strength, muscular endurance, physical conditioning, bodily attractiveness, and general physical self-worth.

The Physical Self-Efficacy Scale (Ryckman, Robbins, Thornton, & Cantrell, 1982) measures two components of self-efficacy: perceived physical ability and physical self-presentation confidence. Of those two components, the Perceived Physical Ability subscale is the measure for which subjects provide a judgment of their own capabilities on such dimensions as strength, agility, and endurance. Self-efficacy as it is operationalized in this scale differs from Bandura’s (1977) conception in that it does not measure ability specific to a certain task.

One concept that has received considerable attention in the motor domain is Harter’s (1978, 1982) construct of perceived competence. Harter considered perceived competence to be multidimensional; hence, her measure includes cognitive, social, and physical domains. Questions in her scale are tailored to each of the specific domains. Although she used this multidimensional viewpoint,
researchers in sport have generally considered only results from the physical domain in measuring competence relevant to motivation regarding physical activity. Physical competence has been viewed as more global than Bandura’s (1977) concept of self-efficacy (Feltz, 1988b). An exception to using the Physical Competence subscale as a general measure are researchers who have adapted the original statements to refer to a specific sport (e.g., Feltz & Brown, 1984). Additionally, because Harter’s scale was conceived from a developmental standpoint, researchers using this scale have been limited to studying children’s perceptions of ability.

A scale that similarly measures one’s ability perceptions is Sonstroem’s (1978) Physical Estimation and Attraction to Physical Activity Scale. The Physical Estimation subscale, like the Perceived Physical Ability subscale (Ryckman et al., 1982), measures perceptions of physical endowments such as fitness and strength but also includes perceptions of sport leadership qualities as well as evaluative comparisons with peers. Sonstroem, however, believed that the estimation of one’s physical ability directly influenced one’s self-esteem.

Another way confidence has been measured has been simply to ask subjects to state performance expectations. Using this method, subjects either identify whether they believe they will win or how well they think they will perform (e.g., Gill, Gross, Huddleston, & Shifflett, 1984).

As can easily be seen, the term self-confidence is a broad concept encompassing various operational definitions. Self-efficacy, sport confidence (state), and performance expectations are situation-specific measures of how confident one feels in performing. Perceived competence, physical estimation, and perceived ability are more general and are multidimensional in nature. Although the meanings associated with each measurement technique are somewhat different, all are concerned with perceptions of physical ability. Therefore, in this article, the terms self-confidence, self-efficacy, perceived ability, and perceived competence will be synonymous.

Two terms that are frequently used in conjunction with discussions of self-confidence are self-concept and self-esteem. Self-concept refers to the description or label one gives oneself concerning one’s attributes, characteristics, or emotional qualities. It is basically our perception of ourselves. Self-esteem is the evaluative component of self-concept; that is, it is the value that we attach to ourselves (Weiss, 1987). Although both may influence or be influenced by self-confidence, a discussion of these terms is beyond the scope of this article. The reader is referred to Sonstroem (1982) and Weiss (1987) for in-depth reviews of self-concept and self-esteem.

**Theoretical Bases of Self-Confidence**

Self-confidence is an important cognitive mediator of performance and, as such, has been included in many models of achievement. This section describes three of those models: Bandura’s (1977) theory of self-efficacy, Harter’s (1978) model of competence motivation, and Eccles (Parsons) et al.’s (1983) expectancy-value model. After a brief introduction to each each model, similarities and differences between the models are discussed.

**Self-Efficacy Theory**

Perhaps the most widely used theory for studying self-confidence in the sport domain has been Bandura’s (1977) theory of self-efficacy, derived from
social cognitive theory. Social cognitive theory posits that people are not driven by inner forces or controlled by external stimuli but are shaped by a model of reciprocal interplay in which behavior, cognitive factors, and the environment interact (Bandura, 1986). Self-efficacy, then, is influenced by a combination of these three forces.

Self-efficacy is defined as a judgment about one’s capability to organize and execute courses of action to attain a specific outcome (Bandura, 1986). In other words, self-efficacy is concerned with judgments of what one can do with one’s ability, not simply one’s level of ability. Self-efficacy operates partially independently of underlying abilities. Bandura (1977) recognized four sources of efficacy information: (a) performance accomplishments, (b) vicarious experience, (c) verbal persuasion, and (d) physiological states. Efficacy expectations derived from these four sources influence one’s behavior, thought patterns, and emotional reactions. Therefore, a girl’s or woman’s belief in her own abilities strongly influences her choice of activities, how much effort she chooses to put into them, and how long she will persist in the face of failure. Clearly, self-efficacy theory has strong implications for achievement strivings.

Perceived Competence

A theory that is very specific about the paths of developing competence is Harter’s (1978) competence motivation theory, an extension of White’s (1959) effectance motivation theory. According to Harter, mastery attempts will result in either positive or negative outcomes in the form of reinforcement or nonreinforcement and the modeling of approval or disapproval. Young children rely almost exclusively upon these external outcomes to help shape their perceived competence and control. If outcomes are positive, internalization of a self-reward system should develop and the need for external approval diminishes. However, if mastery attempts result continually in negative outcomes, the child continues to be dependent upon external approval, which persists as the child grows.

Internalization of a self-reward system results in heightened feelings of perceived competence and control, which in turn lead to feelings of intrinsic pleasure. Dependence on external approval results in an external perception of control and decreased perceived competence, which lead to feelings of anxiety in mastery situations. Consistent perceived or actual failure also leads to decreased competence and greater anxiety, even in the absence of negative evaluations by others. Likewise, consistent success on tasks that are optimally challenging leads to increased competence, pleasure, and more mastery attempts.

Expectancy-Value Model

A third model that attempts to explain motivational factors underlying decisions about achievement-related choices is Eccles (Parsons) et al.’s (1983) expectancy-value model. This model links activity choice to performance expectations and the value attached to the available options. Eccles (Parsons) et al. believed that one’s interpretation of reality, not reality itself, directly influences activity choice. This interpretation of reality includes not only one’s own perceived ability, attributions, locus of control, and gender roles/stereotypes but also perceptions of a socializer’s beliefs and the cultural milieu. Strengths of this model are the dual focus—the individual’s perceptions and the socializing influences—and the explicit pathways that are hypothesized.
Model Similarities and Differences

The relationship between self-confidence and performance in the motor domain has been well established (e.g., Feltz, 1982; Feltz, Landers, & Raeder, 1979; McAuley, 1985). A more theoretically important issue, however, is the mechanism through which self-confidence operates in order to influence performance. Figure 1 is a simplification of the three models, depicting self-confidence as the main focus. It compares the pathways of similar variables hypothesized in the models to influence, or be influenced by, self-confidence (e.g., past performance/experience, social influences, and attributions).

All three models acknowledge the role of confidence or perceived ability in achievement strivings, although each has different nomenclature and outcomes for self-confidence. Harter (1978) posited that high perceived competence is a motivational factor that leads to intrinsic pleasure and increased effectance motivation. More mastery attempts should follow as a result of this increased motivation. Bandura (1977) hypothesized that strong perceived self-efficacy will
lead to increased effort and persistence and will influence task choice. Eccles (Parsons) et al. (1983) also linked perceived ability to subsequent achievement-related choices.

As can be seen in the simplified models, both Bandura's (1977) model of self-efficacy and Eccles (Parsons) et al.'s (1983) expectancy-value model clearly link confidence with activity choice. Both models also imply that one's choice of activities will influence achievement because pursuing an activity will allow one to work toward mastery in that area. In other words, you cannot achieve if you do not try. The importance of self-confidence for both males and females is obvious. What may be less obvious, however, is that in sport, self-confidence may be more important for females as a factor leading to achievement than it is for males. In today's society, boys are virtually expected to be involved in sport (Eccles & Harold, 1991). Girls, however, need to rely on other sources to encourage them to choose sport as an activity. One source could be their own self-confidence in their abilities. Although it is true that confidence is influenced by socialization factors, once confidence has been instilled, that confidence can carry through into times and places where she may not be given encouragement for her sporting choices.

All three models acknowledge the influence of socializing agents and past experiences on confidence. However, Bandura (1977) and Harter (1978) posited that socializing agents influence confidence directly whereas Eccles (Parsons) et al. (1983) believed that social influences first impact a person's past experiences. Harter hypothesized that past experiences in the form of mastery attempts first influence the reinforcement given by socializers. The models also vary by what they consider to be a social influence (see Figure 1 for these differences).

Bandura (1977), Harter (1978), and Eccles (Parsons) et al. (1983) also included perceptions of control, or attributions, in their models. Bandura predicted that self-efficacy influenced thought patterns (i.e., attributions). Harter, however, viewed perceptions of competence and perceptions of control as being simultaneously influenced, not necessarily as influencing each other. Eccles (Parsons) et al. held a view opposite Bandura by hypothesizing that locus of control and attributions directly influence perceptions of ability.

Clearly, although these models identify many similar mediating variables and outcomes, they disagree about the exact paths these variables take. Which model is correct? Does it really matter, as they are arguably similar? The first question remains unanswered. The answer to the second should be a resounding yes. If we really hope to enhance the self-confidence of girls and women in sport, we need to know the exact mechanisms involved. The research provided in the following section examines several of these hypothesized variables. Although research on separate, independent variables is important, we need to broaden our focus to include whole-model testing.

**Girls' and Women's Self-Confidence in Sport—What the Research Says**

Research investigating self-confidence in sport has been undertaken for several purposes. First, researchers have attempted to determine the exact role that self-confidence plays in motor performance. Second, self-confidence has been examined as to its influence on sport participation. The third purpose has
been to determine what variables might influence one’s perception of confidence. These first three research approaches have been somewhat gender-neutral in nature; that is, researchers have generally not examined these areas as they specifically impact girls and women, although girls and women have comprised the entire subject pool in many studies. The fourth purpose, gender differences in self-confidence, involves specifically examining the self-confidence of girls and women, albeit in relation to men. The review that follows is drawn solely from research in which women and girls have been used as subjects. Unfortunately, as noted, the focus of most of this research has not been directly on females’ self-confidence. Nevertheless, a sketchy picture can be painted concerning girls, women, and self-confidence in sport.

Role of Self-Confidence in Motor Performance and Sport Participation

Research in self-confidence began with researchers attempting to determine whether self-confidence actually played a key role in performance. The overwhelming answer to that question was positive; self-confidence and performance have been found in many studies to be significantly related (e.g., Dishman, 1978; Feltz et al., 1979; Feltz & Riessinger, 1990; Fox, Corbin, &ouldry, 1985; Gould & Weiss, 1981; Kavanaugh & Hausfeld, 1986; Lee, 1982; McAuley & Gill, 1983; Rudisill, 1989; Ulrich, 1987). Going one step further, findings from studies using causal modeling techniques have pointed to the importance of self-confidence as a mechanism directly influencing women’s motor performance (Feltz, 1982; 1988a; Feltz & Mugno, 1983; McAuley, 1985; Ozer & Bandura, 1990).

Additionally, researchers have generally found a positive relationship between females’ self-confidence and participation in physical activity. Positive relationships have been found in samples of girls and women from fourth grade through adulthood in both sport (Eccles & Harold, 1991; Feltz & Petlichkoff, 1983; Guyot, Fairchild, & Hill, 1981; Harter, 1982; Lewko & Ewing, 1980; Roberts, Kleiber, & Duda, 1981) and exercise classes (McAuley, 1990; McAuley & Jacobson, 1981; McAuley & Rowney, 1990; Poag & McAuley, 1991). Nonsignificant relationships have been found primarily when samples of girls younger than fourth grade have been studied (Maul & Thomas, 1975; Ulrich, 1987). Ulrich, however, suggested that these nonsignificant results may have been due to the developmental nature of the perceived competence–participant motivation relationship. She noted that as subjects in her study increased in grade level from first through fourth grade, mean difference scores between participants and nonparticipants increased. As children get older, they become more aware of their own abilities. It is possible that confidence differences stemming from sport participation do not become apparent until children reach the later elementary years when they are able to make more realistic appraisals of their competencies.

Variables Influencing Self-Confidence

Most of the studies mentioned earlier have been correlational in nature. However, researchers were also interested in examining the resiliency of self-confidence; that is, could it be easily influenced by extraneous variables? Variables that might influence girls’ and women’s self-confidence have been drawn
mainly from Bandura (1977), Harter (1978), and Lenney (1977). These variables include feedback and verbal persuasion, competition, gender-type of task, modeling, cognitive and emotive strategies, and past performance.

Feedback and Verbal Persuasion. Although all three theoretical models acknowledge the role of others in the development of one’s self-confidence, Lenney (1977) specifically suggested that precise, unambiguous feedback from others is an important variable in the development of girls’ and women’s self-confidence. Most of the work testing Lenney’s hypothesis has been undertaken by Corbin and his colleagues (Corbin, Stewart, & Blair, 1981; Petruzzello & Corbin, 1988; Stewart & Corbin, 1988). These studies have shown that feedback may indeed be important for increasing self-confidence. One finding is that age of the subject appears to be important. Nonsignificant findings have been found with girls 10 years old or younger (Corbin et al., 1981); significant findings have been reported for samples of upper elementary students and college women (Petruzzello & Corbin, 1988; Stewart & Corbin, 1988). Although, intuitively, younger subjects should benefit from feedback, research has shown that as females get older, feedback from peers and coaches becomes more important (Horn & Hasbrook, 1986). Nevertheless, feedback has not been shown to decrease the confidence of young girls; therefore, the availability of unambiguous feedback should be used at all ages.

Although Bandura (1977) hypothesized that verbal persuasion is one source of efficacy beliefs, few studies have specifically examined this premise in sport and physical activity (Feltz & Riessinger, 1990). However, it is possible that females may be influenced by indirect communication, which may not result from conscious persuasive effort. For example, a television announcer who conveys the image of a female as highly trained should instill in the viewer the idea that females are capable of training for success in sport. However, if an announcer views a sport (e.g., basketball) as masculine, the notion that basketball is acceptable for females may not be promoted. In either case, the message the reporter conveys to female viewers may raise or lower their confidence beliefs, influencing them to believe that they may or may not be successful if they attempt the same sport.

The information contained in a message will usually only be as strong as the recipient’s confidence in the person delivering the message (Bandura, 1986). Although people in the news media could be considered prominent sources of information, significant others have a greater opportunity to provide powerful persuasory opinions. These opinions can be either positive or negative, but negative opinions may be the more enduring (Bandura, 1986). Coaches or parents who do not assume that their female athletes or daughters are able to attain a certain level of skill will not convey the fact that effort will improve skill level. In essence, girls may not get the same verbal encouragement or prodding in sport that boys may get. As a consequence, girls’ self-confidence and future achievement levels may suffer.

What one tells oneself can also be a form of verbal persuasion (Bandura, 1986). Research has shown that females frequently perceive themselves as being lucky in their successes, an unstable attribution, whereas males regard their successes as the result of skill, a stable attribution (McHugh, Duquin, & Frieze, 1978). Research has also identified a relationship between stable attributions for success and high self-efficacy (McAuley, Duncan, & McElroy, 1989) and between
unstable attributions for failure and high performance expectations (Duquin, 1977). Therefore, females who persuade themselves that they are merely lucky if they succeed, an unstable attribution, will most likely display lower confidence than those who attribute success to skill.

Furthermore, research has found that observers frequently make gender-biased attributions toward others (Deaux & Emswiller, 1974). Boys who fail are often blamed for not trying hard enough (unstable attribution) whereas girls in similar situations are often believed to be lacking in skill (stable attribution). Therefore, if observers (e.g., coaches, parents) attribute female athletes’ failures to stable factors and their successes to unstable factors, they will do little to promote efficaciousness in those females.

Feedback and verbal persuasion by others are two factors that allow girls and women the opportunity to assess their skills. If this feedback is positive and clearly stated, and if attributions for success are viewed as stable and those for failure as unstable, self-confidence should be enhanced.

**Competition.** Lenney (1977) also speculated that self-confidence would be affected if girls and women were put into competitive, or comparative, situations. Unfortunately, no studies have been conducted examining self-confidence differences of females performing in competitive situations and those in noncompetitive situations. However, within studies employing competition, several findings have emerged. First, a successful outcome increases confidence ratings on subsequent trials (Corbin & Nix, 1979; Rudisill, 1988). This finding supports Bandura’s (1986) contention that success raises efficacy expectations and failure lowers them. Second, competition against a competitor perceived to be good tends to decrease confidence beliefs whereas competition against weaker opponents strengthens confidence beliefs (Corbin, 1981; Weinberg, 1985; Weinberg, Gould, & Jackson, 1979; Weinberg, Gould, Yukelson, & Jackson, 1981; Weinberg, Yukelson, & Jackson, 1980). Third, cross-sex competition has not been found to have a detrimental effect on the confidence beliefs of females (Corbin, 1981; Gill et al., 1984). However, the effect of social comparison needs to be researched more completely to determine the exact effect of competition on girls’ and women’s self-confidence.

**Gender-Type of Task.** Perhaps one of the most consistent variables shown to influence girls’ and women’s self-confidence has been gender-type of task. This factor was first proposed by Lenney (1977) and is also an important contributing factor to self-concept of ability in Eccles (Parsons) et al.’s (1983) model. Results of several studies using females from different age groups generally support the hypothesis that females are less confident in tasks that are perceived as masculine and more confident in tasks perceived as gender-neutral or feminine (Corbin & Nix, 1979; Lirgg, 1991a, 1991b; Sanguinetti, Lee, & Nelson, 1985). Clearly, the important point here is to discourage girls and women, as well as their teachers and coaches, from labeling tasks as masculine or as more appropriate for males. Significant others, coaches, and the media all play roles in shaping the attitudes of young girls concerning the appropriateness of various sports or sport itself. The bottom line is that providing opportunities for girls and women to compete in sport is not likely to be effective if attitudes toward certain sports and physical activity do not change. Attitudes and beliefs are learned over time; therefore, we continually need to convey the belief that sport is for all, that it is not the domain of one gender or more proper for one gender. Only then will we
be able to discard the label masculine for sport. One way to accomplish this is to expose young girls to a wide range of female athletes who can then serve as role models.

Modeling. One factor that has received considerable attention by researchers is Bandura’s (1977) hypothesis that vicarious experience (watching another) will increase the confidence of the observer. However, the type of model is important in determining whether confidence will be enhanced or lowered. Several modeling studies have shown that models can have a powerful positive effect on females’ self-confidence, especially when participant modeling is used (Feltz, 1982; Feltz et al., 1979; McAuley, 1985; Ozer & Bandura, 1990) and when models are perceived as similar to the subject (Corbin, Laurie, Gruger, & Smiley, 1984; George, Feltz, & Chase, in press; Gould & Weiss, 1981) or are skillful (Lirgg & Feltz, 1991).

The findings may suggest that the availability of successful female role models could play an important part in increasing not only confidence but also participation. One arena where female role models can be illuminated is the media. Matteo (1986), however, warned that the invisibility of female athletes in local and national media perpetuates the belief that few females actually participate in sport. Similarly, Theberge (1991), reporting on several daily newspapers and a women’s magazine, noted that the media provided little support for the promotion of women’s physical activity and did little to challenge gender stereotypes.

Although some magazines have taken steps to increase their coverage of women’s sporting events, a great proportion of this coverage has been devoted to sports that are deemed gender-appropriate, such as tennis or gymnastics (Kane & Parks, 1990). Therefore, it is not surprising that girls and women have less confidence in tasks that they consider to be male-oriented; they see more males than females actively engaging in these sports. Furthermore, when “masculine” sports such as women’s marathon running and women’s basketball were reported on television, the media frequently used references that trivialized women’s efforts (Duncan & Hasbrook, 1988). Taken together, and with the previous discussion concerning the influence of gender-typing of task on females’ self-confidence, these examples show how girls’ and women’s self-confidence in their own physical abilities can be undermined by the media. Unfortunately, research has not specifically investigated this particular link. Nevertheless, although role models may be important, they should be presented frequently and in a positive light to enhance the self-confidence of the girls and women watching. More research examining the effects of female role models on girls’ and women’s self-confidence is needed.

Cognitive and Emotive Strategies. Given coaches’ interest in psychological skills training programs, a few researchers have attempted to discern what, if any, cognitive or emotive strategies would be useful in increasing self-confidence. However, research in this area has produced equivocal results. For example, although positive self-talk has been espoused as a confidence enhancer, research on females has not supported that hypothesis (Gould & Weiss, 1981; Weinberg, 1985). The strategy of reinterpreting arousal as beneficial to performance has also not been successful (Yan Lan & Gill, 1984). In addition, manipulating mood (happy or sad) has produced inconsistent results (Kavanaugh & Hausfeld, 1986). In contrast, both mastery imagery and relaxation imagery have been shown to be effective in increasing efficacy beliefs (Feltz & Riessinger, 1990).
The problem with studies examining cognitive and emotive strategies has been twofold. First, few studies have examined the same strategy, thereby limiting our information. Second, methodologically, it is difficult to ascertain whether subjects are really employing the strategies being tested. In some situations, training may be required before positive results will occur. Given the interest in psychological skills training, though, more research needs to be undertaken in this area also.

**Gender Differences in Self-Confidence**

A fourth focus in self-confidence research that has received considerable attention is gender differences (Corbin, 1981; Corbin, Landers, Feltz, & Senior, 1983; Corbin & Nix, 1979; Corbin et al., 1981; Eccles & Harold, 1991; Feltz, 1988a; Gill et al., 1984; Jones, Swain, & Cale, 1991; Lirgg, 1991b; Rudisill, 1988; Rudisill & Pemberton, 1990; Sanguinetti et al., 1985; Vealey, 1988). Two research avenues most frequently taken in relation to gender differences have been to find out if males really are more confident than females, as Maccoby and Jacklin (1974) suggested, and in what situations this gap might appear. However, before undertaking a discussion of this research, theoretical underpinnings for the occurrence of gender differences in self-confidence in physical activity are presented.

**Theoretical Bases.** All three models presented earlier provide a groundwork for the evolution of gender differences. The term *evolution* is particularly poignant because, according to the models, gender differences in confidence develop over time. In addition, the models point strongly toward the role of socializing agents in the development of gender differences.

Bandura (1986) offered two explanations for females frequently being less efficacious than males. The first is the pervasive cultural modeling of gender-role stereotypes. According to Bandura, vicarious experience, a social influence, is an important source of efficacy beliefs. If women are depicted through the media in nonachieving roles, girls may adopt this stereotypic view and develop mistrust in their own competence. The second explanation concerns evaluations of significant others. To the extent that parents and teachers have different expectations for boys and girls, and attribute successes and failures as internal or external depending on the child's gender, girls may develop lower self-efficacy than boys. These and other developmental influences may combine to cause a girl to underestimate her capabilities (Bandura, 1986).

Harter (1978) briefly discussed gender differences in motivation. She found that boys demonstrated more intrinsic mastery motivation than did girls and that girls exhibited more need for adult approval, especially in tasks that were gender-typed as masculine. Using Harter's framework and sport as an example, one can readily see how gender differences in perceived competence might occur. A young girl relies upon her parents for approval or disapproval of her actions. If she likes to climb trees or engage in play that emphasizes physical skill, one of two things could happen. One, she may be given approval for that behavior, for example, by being told that she is very good at climbing trees or by being joined in her play by one of her parents without any verbal feedback. Or two, she may be told that little girls don't climb trees or simply be scolded for getting dirty. Because a young child's competence is not shaped primarily by success or failure
but by others’ approval, perceived competence will be developed based on these positive or negative outcomes. To the extent that girls are given negative reinforcement for their physical skills, girls will have lower perceived physical competence than boys and will be more dependent on adult approval.

Eccles and Harold (1991) used Eccles (Parsons) et al.’s (1983) model to specifically examine gender differences in sport among children. Their results provided support for the influence of gender-role socialization in fostering gender differences in perceived ability. The extent to which a girl views a sport as appropriate for her gender will predict perceived competence. They believed that parents are among the strongest socializing agents for young children. In particular, they cited evidence that “parents’ views of their children’s sport competence and . . . the importance of sport competence for their children have significant longitudinal influence on the development of children’s interest in sport and of their view of their own sport competence” (Eccles & Harold, 1991, p. 30). They concluded that gender differences were more the consequences of gender-role socialization and less aptitudinal differences.

Research in Gender Differences in Sport. Although this groundwork could provide a springboard for research endeavors concerning the effects of various aspects of socialization on gender differences, much of the actual research in gender differences has been based on the work of Lenney (1977). She was primarily concerned with when a gender difference in self-confidence might be more likely to occur. She hypothesized that females would be less confident than males only when (a) the task was considered to be male-oriented, (b) the situation was competitive or comparative, or (c) feedback was ambiguous. Each of Lenney’s points has been investigated with contradictory results. For example, Petruzello and Corbin (1988) found that females were less confident than males on a gender-neutral task, but Corbin et al. (1981) found opposite results.

A recently conducted meta-analysis examined some of these inconsistencies, primarily those dealing with gender-type of task and competitive situation (Lirgg, 1991b). Briefly, results from this integrative study showed that females displayed, on the average, less confidence than males. This difference, however, was less than one half of one standard deviation (effect size=0.40). Support was found for Lenney’s (1977) contention that females would show less confidence on masculine-oriented tasks than on gender-neutral or feminine tasks. Conversely, no evidence was found to support the hypothesis that placing females in a competitive situation would increase the self-confidence gap between males and females.

Lirgg (1991b) also examined age of subject and method of measurement; however, results from both analyses were inconclusive. Although they were higher for college subjects than for elementary subjects, effect sizes were not homogeneous, which suggests that age alone does not appear to be a mediating factor influencing gender differences in self-confidence. Likewise, analyses using Harter’s (1982) Perceived Competence Scale produced the smallest effect size among the various confidence measures, but effect sizes for most measures, including Harter’s scale, were extremely variable.

Nevertheless, from this meta-analysis (Lirgg, 1991b), five things were clear. First, effect sizes for all task categories except feminine task showed males to be more confident than females. Second, the effect sizes of most categories produced only moderate differences (effect sizes of approximately 0.50). Third, the strong-
est moderator of self-confidence appeared to be gender-type of task. Fourth, placing females in competitive situations contributed to no greater gender differences than placing them in noncompetitive situations. Fifth, the difficulty in obtaining homogeneity for several categories suggested that the moderators of gender differences in self-confidence in physical activity are most likely complex.

In a recent investigation, Jones et al. (1991) examined gender differences in self-confidence patterns before competition. They found that at all stages of their investigation (from 1 week to 30 min before competition), males were higher in self-confidence, which supports previous research. They also found that although all subjects became less confident as the competition neared, females decreased in confidence earlier than males did. There were also differences in cognitive factors that predicted self-confidence, with perceived readiness a significant predictor across all testing stages for females and thinking “win” the primary predictor of confidence for males. This finding suggests that cognitive strategies utilized by sport psychologists to enhance self-confidence may need to be different for women and men.

Relevance of the Study of Gender Differences. What do these gender differences mean? They could mean that males overestimate their self-confidence or that females underestimate theirs. Corbin et al. (1983) found no evidence that males were boastful but suggested that female modesty when stating confidence beliefs might have contributed to the gender difference in their study. They also suggested that the lower confidence beliefs of females in their study might have been due to realistic beliefs that they would not be able to perform the task (a leg endurance task) as well as males. Other studies would seem to contradict this suggestion (e.g., Gill et al., 1984). In contrast, Feltz (1988a) and Rudisill (1988) found that lesser skilled or losing male subjects had inappropriately high expectations.

Little research has been conducted to determine the occurrence of over- or underestimating one’s abilities although much of the existing research could be reexamined using z scores to determine its extent. However, one study that looked at the consequences of underestimation was conducted by Weiss and Horn (1990). They concluded that children who seriously underestimate their perceived competence may be those who only participate in physical activity at low levels. Clearly, more research needs to be undertaken with different age groups to determine, first, the prevalence of girls and women who underestimate their ability and, second, the seriousness of the consequences of underestimating.

Does the finding that males may be about one half of a standard deviation higher in self-confidence really matter? Bredemeier (1984) pointed out that the study of gender differences in reality reinforces those differences, that both the conceptualization and the study of gender differences are potentially destructive. Although there certainly is truth to this warning, an understanding of the factors involved in differences can be worthwhile. If females have sufficient self-confidence to pursue any activity or role, it makes little difference how much more confidence males have. If females’ level of self-confidence hinders their participation or prohibits them from attaining their potential (both in skill attainment and in leadership roles), then the study of gender differences is not only worthwhile but necessary. The research appears to indicate that there is a gender difference in self-confidence, albeit moderate. Researchers should now begin to determine the causes and consequences of this difference. In doing so, researchers should
 delve more deeply into socialization factors influencing gender differences in self-confidence.

**Enhancement Strategies and Future Research Directions**

The factors influencing self-confidence reviewed here provide several suggestions for enhancement strategies. Many of these have been proposed already (Bunker, 1991; Corbin, 1984; Feltz & Doyle, 1981; Feltz & Weiss, 1982; Lirgg & Feltz, 1989; Stewart & Corbin, 1989). This section offers some of the potentially most powerful enhancement strategies as well as suggestions for future research.

**Enhancement Strategies**

Because a primary source of one’s confidence beliefs is one’s own performance, creating situations in which success can be attained is critical to coaches of female performers. Therefore, girls and women need to be taught skills that will ensure, or at least increase, the chances for success. For example, Holloway, Beuter, and Duda (1988) found that a strength training program, in which adolescent girls increased their strength by 40%, improved weight training efficacy as well as confrontation efficacy, an area independent of the task. However, because young children primarily use outside sources to determine their self-confidence (Harter, 1978), this strategy may not be as important for young girls as for older girls and women.

One important strategy for all females involves models. Because viewing similar and skillful models supplies information about the viewer’s possible capabilities, providing girls and women with appropriate role models (other successful females) may also serve to increase confidence. Access to these role models could come from increasing the amount of media time given to girls’ and women’s sporting events, frequently taking young girls to these sporting events, encouraging competent women to coach both male and female teams, and providing more options to girls and women so that they may become involved in sporting activities in the community. The more visible girls and women in sport become, the more sport will be seen as gender-appropriate for females. This attitude is highly desirable because research has shown that girls and women who believe that sport is less appropriate for females than for males tend to be less confident in sport. Encouraging the elimination of gender-typing of sport is an extremely important endeavor that needs to occur at all levels of sport and for all ages.

Another important strategy is making positive, unambiguous feedback readily available. Feedback that encourages a girl to view her success as resulting from skill may be crucial to enhancing her confidence. When possible, failures should be blamed on lack of effort instead of lack of skill. So, although actual performance provides information as to a girl’s or woman’s abilities, how she perceives the performance and how others perceive her performance provide equally important information about that ability.

Finally, Eccles and Harold (1991) have suggested that we need to provide interventions to girls that will not only increase confidence levels but also raise the value and reduce the psychological cost of participation. They suggested attributional retraining for females, skill training in a positive affective environment, and education regarding the value of sport and physical activity for physical and social health.
Future Research Directions

Although some preliminary work has been done to unravel the complex issue of gender differences in self-confidence, more remains to be investigated. First, the contribution of socialization factors needs to be researched more carefully. It is not enough to simply say that socialization is the main contributor of gender differences in self-confidence in sport. We need to know what factors are the most important and how they are being manifested throughout society. We need strategies for disseminating the results of this research so that both the parent of a newborn baby and the high school athlete are aware. And we need proven strategies for overcoming the low self-confidence that girls and women today might be experiencing.

If females’ physical self-confidence is shaped early in life, intervention techniques should be developed that specifically target girls in sport at a young age. For example, we may need to identify the best environment in which girls compete. Should this environment be coeducational so that girls will be able to favorably compare their skills with boys, or should this environment be same-sex, with girls being responsible for every aspect of the game? A recent experiment found that middle and high school girls were less confident than boys when they participated in a coeducational basketball class but not when they were in a same-sex class (Lirgg, 1991a). This finding supports Lenney, Gold, and Browning’s (1983) contention that gender differences are moderated by social comparison variables. Because we know very little about this area, research with all age levels is needed to determine the proper learning and competing environments for females, particularly in relation to their perceptions of self-confidence.

The majority of research examining self-confidence in sport and physical activity has mainly attempted to uncover factors that affect confidence. This approach has been fruitful and has increased our knowledge greatly. However, much of this work has not been undertaken as it specifically relates to girls and women. Many studies in self-confidence have employed females as subjects, but not for the purpose of identifying moderating variables of females’ self-confidence. In particular, as Lenney (1977) suggested, more research is needed to examine how these variables uniquely affect girls and women. For example, research could be undertaken to examine the effectiveness of known cognitive strategies in influencing women’s self-confidence, or there may be other cognitive strategies that haven’t been investigated that may boost women’s, but not necessarily men’s, self-confidence. A further suggestion would be to examine which strategies are most effective with females of differing age groups or in different situations. One example would be to examine psychological skills training for girls and women from a developmental perspective, such as the suggestions proposed by Weiss (1991).

A new direction that needs to be followed concerns the ramifications of some results that have already been uncovered. Some studies have suggested that females underestimate their abilities. Future research should determine if this suggestion is true by analyzing under- and overestimation in the design. Also, the prevalence of this occurrence may be different among various age groups or in differing situations. But the most important question should be, What are the consequences of this purported underestimation for females? For example, if males are more confident than females in certain situations, will comparisons with males result in negative consequences (e.g., decreased participation or effort) for females?
Although some research has been conducted examining the type of enhancement strategies that coaches now use to increase self-confidence in athletes (e.g., Gould, Hodge, Peterson, & Giannini, 1989), research pertaining to the implementation of enhancement strategies needs to continue. Teachers and coaches should continually be provided with methods to help increase the confidence levels of their female students and athletes. For example, attribution education or retraining methods, such as that offered by Dweck (1975), should be researched and promoted in the area of sport and physical activity. In addition, more research investigating communication techniques between a coach and a female athlete should be conducted to provide a much-needed awareness of how messages given during interactions may differentially affect self-confidence.

Finally, our research attention should focus on a broader picture. Although the three models discussed earlier hold many similarities, they are obviously not identical. Although it is true that each model was developed for specific purposes, the fact that confidence (however it is conceptualized) has different proposed paths of mediating variables and different outcomes is somewhat surprising. Will females and males differ in the paths hypothesized in these models? Is confidence always necessary for achievement? Under what circumstances do individuals choose tasks in which they are not confident? If we are concerned about the exact mediating variables and their correct paths, we need to direct our research attention to broader foci than studying variables independently.

**Conclusion**

The purpose here has been to examine self-confidence in physical activity as it impacts girls and women. Researchers have examined the role of self-confidence in performance, the role of self-confidence in sport participation (choice), and variables that affect self-confidence in physical activity. These variables include feedback and verbal persuasion, competition, gender-type of task, cognitive and emotive strategies, modeling, and past performance. Research has also focused on gender differences in self-confidence. What is missing is research on the causes and consequences of the differences. Specifically, research needs to focus on the socialization process, not only when studying gender differences but also when examining how girls' confidence is initially developed. More work examining the mediating effects of various factors on self-confidence still needs to be done; however, researchers need to keep the big picture in mind and recognize a possible complex array of interactions among the variables. This recognition can be accomplished by testing whole models for different age groups and for both females and males. Finally, the effectiveness of specific enhancement strategies should be investigated.

Research has shown that self-confidence can be somewhat fragile and can be influenced by different situations as well as by outside individuals. Self-confidence, especially in sport and physical activity, is greatly influenced by the socialization process. Therefore, individuals who work with young girls should consciously strive to increase their skill level, especially that of girls who may need to overcome negative social influences affecting their confidence in their ability in sport. Skill development is one very important strategy, but other strategies, such as teaching proper attributions, offering proper role models, and providing appropriate feedback, are equally important. These strategies will
benefit not only young girls but females of all ages. By increasing their self-confidence, girls and women should be more able to pursue a wide range of activities and lead physically active, healthy, and confident lives.

References


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**Notes**

1Participant modeling involves showing a model performing the task and then physically assisting the learner when he or she attempts that task.

2An effect size is a mean difference expressed in standard deviation units. In this meta-analysis, a positive effect size meant that males were more confident than females.