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# SELF-EFFICACY AND SOCIAL SUPPORT OF ACADEMY CRICKETERS

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***ABSTRACT***

*This article aims to provide an initial insight into the role that South African provincial cricket academies play in talent development of cricketers by reflecting on possible changes in academy cricketers' self-efficacy and perceived social support over an academy season, as well as indicating the relationship between self-efficacy and social support. A purposive sample of 65 male, university-age (18-25 years) provincial academy cricketers completed a self-efficacy questionnaire and a social support questionnaire, designed specifically for the purposes of the current study, at the culmination of their academy programme. A pre-experimental post-test-pre-test design was used. The results indicated significant positive changes in self-efficacy, esteem social support, informational social support and tangible social support over a cricket academy season. A significant correlation between self-efficacy and informational social support was found. Although this preliminary study provided evidence of increases in self-efficacy and perceived social support of South African provincial academy cricketers over an academy season, psychometrically tested scales need to be developed to measure these constructs, whilst larger, randomised sample sizes would make the results more generalisable.*

**Key words:** Self-efficacy; Social Support; Informational social support; Sport academy; Cricket.

## INTRODUCTION

Self-confidence is one of the most frequently cited psychological factors considered to influence athletic performance and the most critical cognitive factor in sport (Feltz, 1984; Gill & Williams, 2008). Self-confidence is one's belief that one can successfully perform a desired behaviour (Weinberg & Gould, 2011). Self-efficacy is a situation-specific form of self-confidence and refers to one's conviction that one can be successful at specific tasks and skills under specific conditions (Hall *et al.,* 1996).

Appropriate support and training are essential if talented individuals are to fulfil their potential (Abbott & Collins, 2004). Self-efficacy and social support are two of the strongest and most consistent correlates of physical activity participation across populations (Peterson *et al*., 2008). The distinct social nature of sport suggests that social support may be an important source of confidence (Wilson *et al*., 2004). In Rees and Freeman's (2009) study, participants improved levels of self-efficacy and performance when they perceived that someone was available to provide the relevant support when necessary. High achievement is

increasingly attributed to the interaction between unusual talent combined with high motivation (Heller & Viek, 2000; Ziegler & Raul, 2000). The goals of research in sport talent development are to understand the development of talent, to shorten the journey on the path to expertise and to extend the athlete's ability to perform at a peak level repeatedly (Starkes *et al*., 2001).

The purpose of provincial cricket academies in South Africa is to develop skills, mental toughness, cricket knowledge and etiquette of talented male school leaver cricketers (The Academy, n.d.). Provincial cricket academies select players when they achieve a certain level of cricket excellence and show potential in the sport. They also consider the commitment of a cricket player to the learning process. Academies typically provide a cricketer with a social support structure within a cricketing context by providing coaching staff, cricket administrative staff and teammates. This unique context further provides an aspiring cricketer with opportunities to boost his self-efficacy and improve his cricketing skill levels.

An important aspect of Bandura's (1977) self-efficacy theory is the differentiation between self-efficacy and outcome expectancy. Bandura describes self-efficacy as a person's belief in his or her ability to execute a particular behaviour successfully. He describes outcome expectancy as a person's expectation that a specific behaviour (e.g. selection for and attendance of a provincial cricket academy) will lead to a specific outcome (e.g. improved cricket performance). Efficacy expectations determine how much effort people expend on a task and how long they will persist in the face of adversity or setbacks (Bandura, 1977). One of the strategies for improving self-efficacy is verbal persuasion (Bandura, 1994). People are more likely to increase and sustain efforts when verbally persuaded that they have the potential to succeed in a given task. However, disappointing results following one's efforts quickly disconfirm unrealistic boosts in self-efficacy.

Bandura's (1977) self-efficacy theory and Vealey's (2001) model of sport confidence have provided the foundation for most of the self-confidence studies in sport psychology literature (Hays *et al.*, 2009). Bandura's (1986) theory of self-efficacy states that self-efficacy is enhanced by performance accomplishments, vicarious experiences (modelling), verbal persuasion, imaginal experiences, physiological states and emotional states. According to Bandura (1994), the most influential of these six principle sources of information is performance accomplishments (successful performance). Vealey's (2001) model of sport confidence categorised three main sources of sport self-confidence, namely achievement, self-regulation and social climate. Within this model, social support is regarded as a source of sport confidence within the social climate domain (Vealey, 2001).

There appears to be a lack of research evidence on the relationship between social support and success in sport, although social support is generally considered to be an influencing factor (Rees & Freeman, 2009). Druckman (2004) reports that a number of research studies undertaken regard self-efficacy as a key variable for enhancing all aspects of human performance. However, South African and international research on self-efficacy and social support in the sports context is lacking. To the best of our knowledge, no research has been conducted on the value of South African cricket academies in developing talent or on developing self-efficacy and perceived social support of cricketers.

This article aims to provide an initial insight into the role that South African provincial cricket academies play in talent development of cricketers by reflecting on possible changes in self-efficacy and perceived social support over a six-month academy season, as well as by indicating the relationship between self-efficacy and social support of academy cricketers.

## METHODOLOGY

### Research design

A quantitative methodology, namely a pre-experimental design was used. According to Bless and Higson-Smith (1995), the purpose of this type of study is to gain insight into a situation, phenomenon, community or person. The specific design used was that of a one-group retrospective post-test-pre-test design. It is a variation of the one-group pre-test-post-test design in that the measures were administered post-intervention and the dependent variables were measured at one point in time. Self-efficacy and social support were the dependent variables and the cricket academy programme was the independent variable. In a one-group retrospective post-test-pre-test design, response shift bias is reduced and perceived changes made in knowledge, skills, attitudes or behaviours is more accurately assessed compared to the one-group pre-test-post-test design (Colosi & Dunifon, 2006).

This study varied from the traditional pre-test-post-test design in that the questionnaire was administered after the intervention. This type of design has become popular because it is applied at only one point in time, often on a single instrument that measures a variable 'then' (pre-test) and 'now' (post-test) (Colosi & Dunifon, 2006). By testing what participants believe about programme content once the programme has been completed, their frame of reference for assessing the changes in knowledge, skills, attitudes or behaviours is consistent. This reduces response shift bias (Davis, 2003), which was identified as the biggest weakness of the one-group pre-test-post-test design (Howard, 1980).

At the completion of the six-month academy programme, participants completed a self-efficacy questionnaire and a social support questionnaire developed specifically for this study. Participants provided two responses to each item according to how strongly they agreed or disagreed with each of the statements (e.g. "I have someone who listens to my concerns"). One response reflected their perception at the present time (present) and the other response reflected their perception at the start of the academy programme (before). Raidl *et al.* (2004) assert that this design reduces incomplete data sets because the data are collected on one occasion only. In addition to this, this design was convenient for both the administration and completion of the measures because of the economising of time. An added advantage of this design is the built-in strategy for simultaneously comparing pre-tests with post-tests (De Vos, 2002).

### Participants

The participants were selected using non-probability purposive convenient sampling. The total sample consisted of 65 male university-age (18-25 years) cricketers who participated in a South African Inter-provincial Cricket Academy Week. The mean age of the participants was 20.58 years, with a standard deviation of 1.95 years. The majority of the participants

(71%) fell within the age range of 18-21 years. The sample reflected the diversity of ethnicity in South Africa with 23 (36%) Black participants, 21 (32%) White participants, 17 (26%) Ccoloured participants and four (6%) Indian participants. With regard to specialised roles within their cricket teams, 18 (30%) were specialist batsmen, 18 (30%) were specialist bowlers, 21 (34%) were all-rounders (batsmen and bowlers) and 4 (6%) indicated that they were specialist wicket keepers.

**Measures**

The measures used for data collection for this study were an expanded version of Cox *et al.*'s (2003) Competitive State Anxiety Inventory-2R (CSAI-2R) and an adapted version of Rees and colleagues' (Rees & Hardy, 2000; Rees & Freeman, 2007) social support measure. As a result of a lack of valid measures in sport psychology, researchers have tended to write their own items (Rees, personal communication, 30 June 2008).

***Self-efficacy measure***

The Competitive State Anxiety Inventory-2 (CSAI-2) (Martens *et al*., 1990) has been used extensively in research and is possibly one of the most well-known anxiety instruments used in sport psychology research. However, studies examining the psychometric properties of the CSAI-2 raised questions about its factor structure (Cox *et al.*, 2003). As a result, Cox *et al.* (2003) revised the Competitive State Anxiety Inventory – 2 and concluded that the CSAI-2R has stronger psychometric properties in terms of its factor structure than the original CSAI-2 (Martens *et al*., 1990). The CSAI-2R has an internal reliability of 0.81 (Cox *et al.*, 2003). Self-efficacy was measured by expanding on the self-confidence scale of the revised Competitive State Anxiety Inventory-2 (CSAI-2R: Cox *et al*., 2003).

The items used in this study were the 5 items of the self-confidence scale of the CSAI-2R combined with 5 items that were adapted from the Sport Self-Efficacy Scale (Ryckman *et al.*, 1982). A 5-point Likert scale anchored each item with descriptors ranging from 'Strongly disagree' [1] to 'Strongly agree' [5]. Bandura (1986) and Hu *et al.* (2005) made suggestions and recommendations with regard to making measures situation-specific, and when developing the self-efficacy measure used in this study, these were considered. Adaptations were made by creating items that were specific to cricket, as well as changing the subject of each item, e.g. "I find that I am not accident prone" was changed to "I am confident that I can cope with injury" in order for it to measure self-efficacy rather than self-esteem (Hu *et al*., 2005). By making these changes, the measure identified the extent to which the cricket player believed that he could accomplish the task at hand, based on Bandura's (1977) definition of self-efficacy.

The average inter-item correlation of the 10 items on the adapted self-efficacy measure was 0.33 for the 'present' (post-academy) items and 0.32 for the 'before' (pre-academy) items. Cronbach's alpha internal reliability coefficients were measured at 0.82 ('present') and 0.80 ('before'). The relatively low inter-item correlations indicate that the measure needs to undergo standardisation, specifically for the diverse South African population.

***Social support measure***

Rees and Freeman (2007) created a measure for their study, involving perceived and received social support and self-confidence in university-age athletes. Their 2007 study made use of 2 of the 4 social support dimensions, that is emotional support and esteem support. Correlations between their two subscales of perceived support were strong ($r=0.76$, $p<0.05$). Cronbach's alpha internal reliability coefficients were 0.78 and 0.81 for the emotional and esteem subscales respectively, with the total for both scales being 0.88. In the received support scale, Cronbach's alpha internal reliability coefficients were 0.72 and 0.84 respectively, with the total for both scales being 0.87.

The items used for the measure created for this study were selected from the 37 items derived by Rees and colleagues (Rees & Hardy, 2000; Rees & Freeman, 2007) in their research on social support experiences of high-level sportspeople. The items were chosen according to their suitability to the study sample. In line with recommendations made by Rees and Hardy (2000), 4 dimensions of sport-relevant social support were assessed, namely emotional social support (items 1, 5, 9, 13), esteem social support (items 2, 6, 10, 14), informational social support (items 3, 7, 11, 15) and tangible social support (items 4, 8, 12, 16). With regard to the tangible social support items, the items suggested by Rees (personal communication, 30 June 2008) relating to transport and accommodation, were included. This was done to make the measure more relevant to a South African context, as also recommended by Rees. A 5-point Likert scale anchored each item with descriptors ranging from 'Strongly disagree' [1] to 'Strongly agree' [5].

Statistical reliability for the summated scores of each of the 4 domains was determined by using Cronbach's alpha. The reliability coefficient and the inter-item correlation values of each item are presented in Table 1.

*TABLE 1*: **INTERNAL RELIABILITY AND INTER-ITEM CORRELATION OF SOCIAL SUPPORT QUESTIONNAIRE**

| FACTOR | Number of items | Alpha ('after') | Alpha ('before') | Mean inter-item correlation ('after') | Mean inter-item correlation ('before') |
|---|---|---|---|---|---|
| Emotional | 4 | 0.74 | 0.70 | 0.42 | 0.38 |
| Esteem | 4 | 0.69 | 0.77 | 0.36 | 0.45 |
| Informational | 4 | 0.66 | 0.75 | 0.33 | 0.43 |
| Tangible | 4 | 0.61 | 0.66 | 0.28 | 0.33 |

**Procedures**

Potential participants, namely members of the 5 South African provincial cricket academies, were identified and approached via the manager of each of the academies. Testing sessions were scheduled prior to the start of the South African Interprovincial Academy Cricket Week. Informed consent was obtained from all participants prior to the completion of the questionnaires. The measures were group-administered at a time convenient for each team.

The first author was present during all of the testing sessions to assist where necessary.

### Data analysis

Statistical techniques employed to investigate the relationship between self-efficacy and the various types of social support were a one sample post- and pre-test t-test, the Pearson product-moment correlation coefficient and an analysis of variance (ANOVA). Cronbach's alpha was used to assess the internal reliability of the questionnaires used. Cronbach's alpha internal reliability coefficients for the adapted self-efficacy measure were measured at 0.82 ('after') and 0.80 ('before'). Cronbach's alpha internal reliability coefficients for the 4 factors of the adapted social support measure ranged from 0.61 to 0.74 (post-academy) and 0.66 to 0.77 (pre-academy). The alpha coefficients for both of the adapted measures used in this study were acceptable. Nunnaly (1978) indicated 0.7 to be an acceptable reliability coefficient and 0.6 to be acceptable for an exploratory study.

A between-subjects t-test was used to determine whether there were any differences in social support data between participants who attended their current 6-month academy programme for the first time and those who attended for the second time. No significant differences were found, and as a result, data from first-year and second-year participants were combined in subsequent data analyses.

## RESULTS AND DISCUSSION

The results reflecting possible changes in self-efficacy and perceived social support over a 6-month academy season, as well as the relationship between self-efficacy and social support of academy cricketers are presented and discussed in this section.

### Change in self-efficacy over duration of academy attendance

A within-subjects t-test was done to determine the differences between the mean performance scores on the pre- (before) and post- (after) items on the self-efficacy measure. The pre-academy (before) items referred to self-efficacy at the start of the academy. The post-academy (after) items referred to self-efficacy after completing their current 6-month academy season. Considering that the self-efficacy measure's Likert scale ranged from 'Strongly disagree' [1] to 'Strongly agree' [5], the mean scores reported on both the pre- and post-items on the self-efficacy measure were relatively high. The mean scores reported ranged from 3.74 to 4.31 (pre) and 4.06 to 4.59 (post). All of the items, except for item 9, reflected significant ($p \leq 0.05$) changes over the duration of the academy. Item 9 was "I am confident that I can bounce back from disappointment". Although changes on item 9 were not significant, the mean scores were high. Figure 1 depicts the significant and non-significant differences for each item.

Bandura (1997) stated that the most effective manner in which to strengthen self-efficacy is to provide opportunities for people to have mastery experiences by succeeding at a task. A cricket academy programme grants an individual cricketer numerous opportunities for success and improvement throughout the academy season, thereby providing information about past performances, which is a primary source of self-efficacy information.

The mean scores of the self-efficacy items were relatively high before the start of the provincial cricket academy programmes (pre-academy), which supports the notion that individuals who are high in self-efficacy are likely to progress to a higher level in sport. Individuals high in self-efficacy believe in their abilities and have positive thoughts surrounding what they do. They have a greater pro-social orientation and may, therefore, be predisposed to view any social support they receive positively (Bandura *et al*., 1996; Bandura *et al*., 1999).

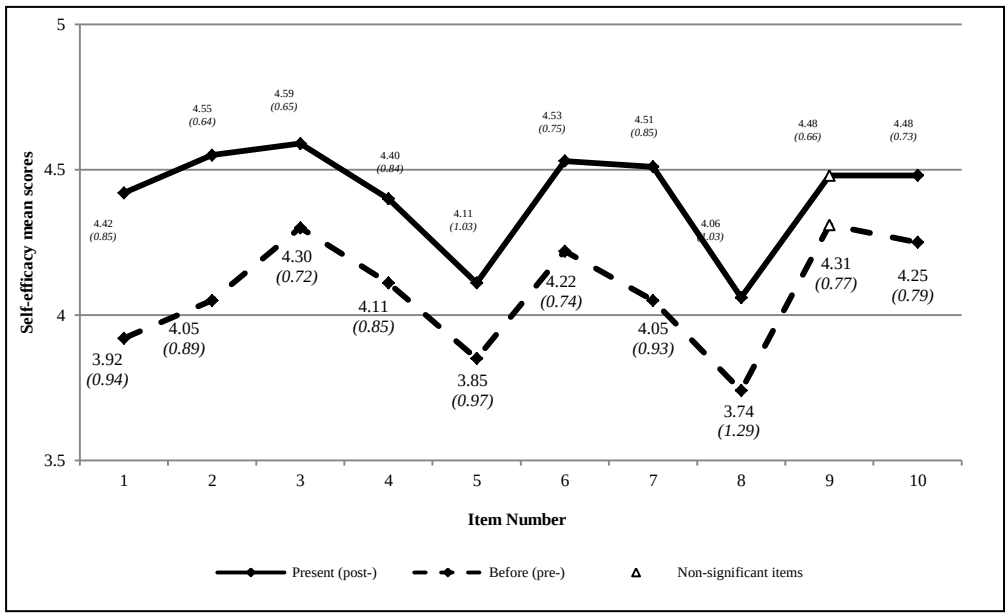


*FIGURE 1*: **MEAN AND STANDARD DEVIATION SCORES OF SELF-EFFICACY FACTORS (pre- and post-test)**

**Change in social support factors over duration of academy attendance**

A within-subjects t-test was used to determine the difference in the pre-test and post-test mean scores of social support. The social support measure's Likert scale ranged from 'Strongly disagree' [1] to 'Strongly agree' [5]. The mean scores ranged from 3.70 to 4.09 (pre) and 3.96 to 4.37 (post), which are relatively high mean scores. Significant ($p \leq 0.05$) changes were reflected in emotional social support (item 13), esteem social support (items 6, 10, 14), informational social support (items 3, 7, 11, 15) and tangible social support (item 12).

When the relevant items were combined so that each social support factor could be compared (post-test-pre-test), a significant ($p \leq 0.05$) change over the duration of the academy occurred in the esteem social support, informational social support and tangible social support factors. The only factor in which a significant change did not occur was emotional social support. Figure 2 shows the pre-test and post-test mean scores and standard deviation scores (in brackets) of the social support factors reported by the participants.

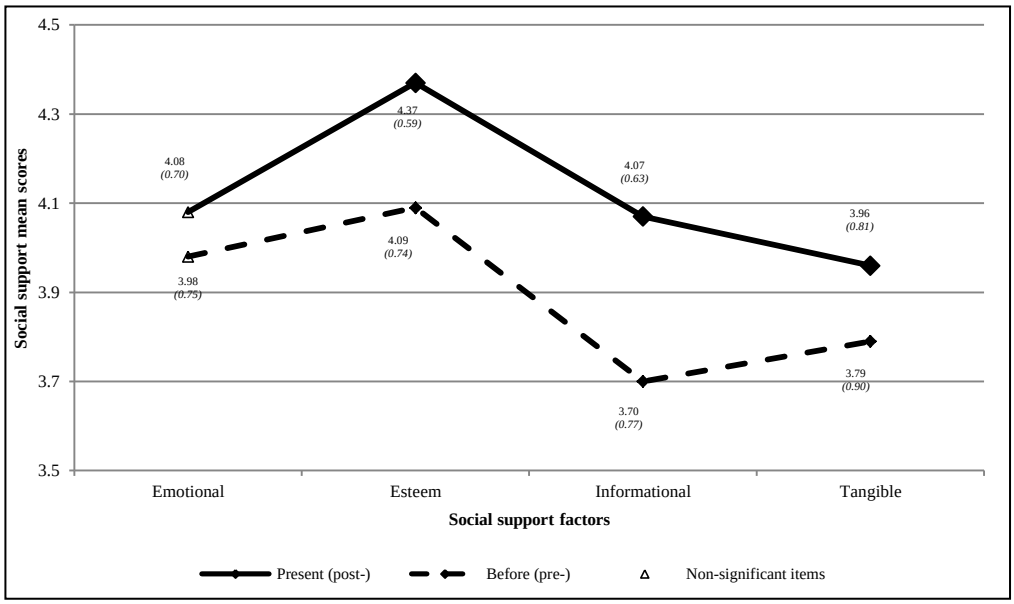


*FIGURE 2*: **MEAN AND STANDARD DEVIATION SCORES OF SOCIAL SUPPORT FACTORS (pre- and post-test)**

Of the 4 social support factors, only the change in emotional social support (e.g. having someone there for them) was not significant. There was a significant change in the esteem social support (e.g. having someone who could encourage them and boost their confidence), informational social support (e.g. having someone to give constructive criticism and technical advice) and tangible support (e.g. having someone to set up sessions in practice) over their current 6-month academy period. The services provided at a provincial cricket academy, as mentioned above, lend themselves to an improvement in esteem social support, informational social support and tangible social support. The non-significant change in emotional social support may have been the result of an academy cricketer relying on previous providers of social support, such as parents or a former coach, throughout the duration of the provincial cricket academy. The non-significant change in emotional social support may also indicate the lack of and the need for sport psychology consultants as part of an academy programme.

**Correlations between self-efficacy and the four social support factors**

The Pearson product-moment correlation coefficient was calculated in order to determine the strength and direction of the correlation between the dependent and independent variables (Coolican, 1999). The level of significance was set at a 5% level ($p \leq 0.05$) as convention dictates (Coolican, 1999).

Table 2 shows the correlations between the reported change in the pre- and post-academy mean scores on self-efficacy and the reported change in the pre-test and post-test mean scores on the 4 social support factors. The only significant correlation was that of the change in self-efficacy and the change in informational social support. The correlation was of moderate

strength and positive in direction.

Individuals possess a self-system that enables them to exercise a measure of control over their thoughts, feelings, motivations and actions (Bandura, 1986). This is done by perceiving, regulating and evaluating behaviour, which results from the interplay between the self and the environmental sources of influence. If an academy cricket player believes that he is in control and that he has the power to produce specific results, he will be motivated to compete successfully (Cox, 2007). The process of creating and using these self-beliefs is an intuitive one: cricket players engage in a particular behaviour, interpret the results of their actions, use these interpretations to create and develop beliefs to engage in subsequent behaviours in similar domains and behave in accordance with the beliefs created (Bandura, 1986). The social nature of sport suggests that social support may be an important source of confidence (Babkes & Partridge, 2004).

*TABLE* 2: **CORRELATIONS BETWEEN CHANGE IN PRE- AND POST-TEST ACADEMY MEAN SCORES ON SELF-EFFICACY AND FOUR SOCIAL SUPPORT FACTORS**

| Variable | Self-Efficacy Difference |
|---|---|
| Emotional Social Support difference | 0.05 |
| Esteem Social Support difference | 0.11 |
| Informational Social Support difference | 0.38* |
| Tangible Social Support difference | -0.08 |

*Note*. Diff = Difference over duration of academy. * $p \leq 0.05$

Sport confidence is a construct measuring self-efficacy in sport-specific situations (Callow *et al*., 2001). Vealey *et al*. (1998) identified and discriminated between different sources of confidence underlying and affecting the level of sport confidence. Nine sources of sport confidence were established, which were categorised into domains of achievement (mastery, demonstration of ability), self-regulation (physical and mental preparation, physical presentation) and social climate (social support, coaches' leadership, vicarious experience, environmental comfort, situational favourableness). Social support is a source of sport confidence contributing to the domain of social climate and therefore contributes to sport confidence.

There is evidence that social support links to elements of motivation (Reinboth *et al*., 2004). Motivation regulates the expectation that a given course of behaviour will produce certain outcomes. Self-efficacy thus governs the motivating influence of outcome expectancy. Bandura (1977) defines outcome expectancy as a person's expectations that a specific behaviour will lead to a certain outcome. The difference between outcome expectancy and self-efficacy is explained by the fact that a cricket player can believe that what he does will lead to specific outcomes (outcome expectancy), but he may doubt his ability to execute a particular behaviour (self-efficacy). Unless people believe that their actions can produce the desired outcomes, there will be little incentive to act or persevere when faced with difficulties

(Bandura, 1997). By providing informational support (e.g. advice and role clarification), cricket players' belief in their ability to execute a particular behaviour may improve because their outcome expectancies have become more realistic.

Only 1 of the 4 types of social support, namely informational social support, showed a correlation with self-efficacy over the duration of the academy season. This supports research using Chellandurai's (1993) model and Smith and Smoll's (1997) work on coaching success, which showed that athletes seem to be satisfied with coaches who emphasise training and instruction and provide positive feedback based on good performance. Thus, academies may improve cricket players' self-efficacy by providing information about aspects such as goal setting, technique and match situations. Additionally, those participants who were higher in self-efficacy may have been more receptive to informational support due to having a higher performance orientation (Vealey, 1988).

## CONCLUSION

This article has provided an initial insight into self-efficacy and perceived social support in talented provincial academy cricketers by reflecting on changes in self-efficacy and perceived social support over a six-month academy season, specifically within a South African context. It has also indicated possible relationships between self-efficacy and social support of academy cricketers during an academy season.

Significant changes in self-efficacy, esteem social support, informational social support and tangible social support over the duration of an academy season were found. The results revealed that the provincial academy cricketers began their current six-month academy season with a relatively high level of self-efficacy and that this level of self-efficacy improved during the academy programme. Additionally, a significant correlation was found between self-efficacy and informational social support during their current academy season. This result confirms the notion that social support may influence self-efficacy through the channel of honest feedback on performance accomplishments.

Informational social support may influence self-efficacy by providing the cricket player with information that allows him to form more realistic and achievable outcome expectancies, thus influencing self-efficacy. Results support the value of informational support in influencing self-efficacy. It may be important then to encourage and re-iterate the value of past performances, both positive and negative, in integrating positive reinforcement and lessons learnt from these experiences.

As mentioned previously, South African provincial cricket academies aim to develop natural talent, skill, mental attitude, general cricket knowledge, as well as cricket etiquette of players. This research provides support for the value of such academies in their quest to develop talent, build self-efficacy and provide social support through the services provided as part of the programme of academies.

The questionnaires used in this study were not standardised measures. As is the case with most sport psychology measures, further validation work needs to be conducted on both questionnaires before the results can be viewed with greater confidence. The cultural

diversity within South African needs to be considered in future studies when standardising the questionnaires for use with South African cricketers. Although the sample was relatively small, it was unique and representative of South African provincial academy cricketers. In future studies, the classical pre-test-post-test design is preferred. The use of a control group would offset the response-shift bias concerns of the one-group pre-test-post-test design and the risk of inaccurate recall of the one-group retrospective pre-test-post-test design. A control group could consist of cricketers who are on the waiting lists to attend the provincial cricket academies.

Future studies should consider prospective longitudinal studies in order to clarify the causal chain linking social support and self-efficacy and ultimately performance more clearly. Although self-efficacy and social support were assessed in relation to the academy season, performance was not assessed. In social psychology, self-efficacy mediates the relationship between social support and adaptive outcomes such as performance. Future research could therefore examine whether self-confidence or other psychological states mediate the social support–performance relationship.

This is the first South African study of its kind, and it extends the limited national and international research, particularly on the combination of self-efficacy and social support in a sport-performance context.

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