1   Running head: PERCEIVED SUPPORT

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8   Perceived Social Support from Teammates: Direct and Stress-Buffering Effects on Self-

9   Confidence

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2   Abstract

3   In this study, we examined whether the perceived support available from teammates

4   predicted levels of self-confidence. Four dimensions of support were examined: emotional,

5   esteem, informational, and tangible. The sample consisted of 152 university athletes (74 females,

6   78 males) with a mean age of 20.1 years ($SD = 1.4$). Participants completed measures of

7   perceived support, stressors, and self-confidence at the training session before an important

8   match. Moderated hierarchical regression analyses revealed that all four dimensions of support

9   had direct effects on self-confidence ($\Delta R^2 = .13 - .17$, ps $< .01$), with support positively

10   predicting self-confidence. Perceived emotional ($\Delta R^2 = .05$, $p < .05$), esteem ($\Delta R^2 = .02$, $p < .05$),

11   and informational ($\Delta R^2 = .03$, $p < .05$) support also had stress-buffering effects on self-

12   confidence. The findings suggest that although university athletes perceived different levels of

13   emotional, esteem, informational, and tangible support to be available from their teammates, all

14   four dimensions of support positively predicted self-confidence.

15   Keywords: Social support, stress-buffering, self-confidence.

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1   Perceived Social Support from Teammates: Direct and Stress-Buffering Effects on Self-

2   Confidence

3   Previous research has implicated social support in relation to a range of important aspects

4   in sport, such as dealing with competitive stress (Crocker, 1992), slumps in performance

5   (Madden, Kirkby, & McDonald, 1989), burn-out (Gould, Tuffey, Udry, & Loehr, 1996), and

6   recovery from injury (Smith, Smoll, & Ptacek, 1990). Social support has also been associated

7   with processes underpinning performance (Rees & Hardy, 2004) and performance outcome

8   (Rees, Hardy & Freeman, 2007). Athletes have therefore been encouraged to use social support

9   (Richman, Hardy, Rosenfeld, & Callanan, 1989), and Rosenfeld and Richman (1997) argued that

10   support should be developed within the team-building process. However, Bianco (2001) noted

11   that many studies have reported on the cumulative impact of various support providers without

12   specifying the providers of support. There is therefore limited empirical evidence regarding the

13   levels of social support available from specific providers such as teammates and whether this

14   support is associated with beneficial outcomes including higher self-confidence.

15   Social support is a complex construct (Bianco & Eklund, 2001), encompassing structural

16   and functional aspects of interpersonal relationships (Cohen & Wills, 1985). Functional aspects

17   refer to the particular functions served by interpersonal relationships (Cohen, 1988). Functional

18   support may be divided into perceived availability of support (perceived support) or support

19   received (received support). Perceived and received support typically share only 12% common

20   variance (e.g., Haber, Cohen, Lucas, & Baltes, 2007) and may have different relationships with

21   outcomes including self-confidence (Barrera, 1986; Lakey & Cohen, 2000; Rees & Freeman,

22   2007). Researchers (e.g., Holt & Hoar, 2006) have therefore argued that authors need to be clear

23   in their conceptualisation and measurement of social support function. The present study focuses

1   on perceived support. Empirical evidence in social psychology has found that perceived support

2   is more consistently related to outcome variables than received support (e.g., Goodwin, Costa, &

3   Adonu, 2004; Helgeson, 1993; Wethington & Kessler, 1986). For example, in sport psychology,

4   perceived support has been positively associated with self-confidence (Rees & Freeman, 2007),

5   performance outcome (Freeman & Rees, 2008), and performance-related factors in tennis (e.g.,

6   Rees & Hardy, 2004).

7   Although different dimensions of perceived support have been proposed, Cutrona and

8   Russell (1990) noted that there appears to be fundamental agreement on emotional, esteem,

9   informational, and tangible dimensions of support. These four dimensions are congruent with

10   those found by Rees and Hardy (2000), who conducted interviews with high-level sportspeople

11   about their social support experiences. Although teammates, along with coaches, parents, and

12   friends, are key providers of support, these network members may vary in the dimensions of

13   support they provide (Rosenfeld, Richman, & Hardy, 1989). Whether a network member

14   provides specific dimensions of support may depend on various factors such as the provider's

15   relationship with the recipient and if network members possess the specific knowledge and

16   expertise that the support dimension requires (Rosenfeld & Richman, 1997; Rosenfeld et al.,

17   1989).

18   Bianco (2001) found that the teammates of injured skiers provided emotional,

19   informational, and tangible support. Corbillon, Crossman, and Jamieson (2008) found that

20   emotional support was the dimension most available from teammates and tangible support was

21   the least available. Rosenfeld et al. (1989) found that teammates were key providers of esteem

22   support (termed technical challenge in their study). Given the inconsistent findings in previous

23   studies, further research is needed to understand the support available from teammates. However,

1   in addition to understanding the dimensions of support available, it may be important to identify

2   the effects of the support available from specific providers; this may help to develop effective

3   support interventions by highlighting which dimensions of support are beneficial and from

4   whom. In the present study, we examined the relationships between the support available from

5   teammates and self-confidence. Social support has been noted as an important source of self-

6   confidence (Hays, Maynard, Thomas, & Bowden, 2007; Vealey, Hayashi, Garner-Holman, &

7   Giacobbi, 1998), and recently emotional and esteem support were found to be positively

8   associated with self-confidence (Rees & Freeman, 2007). The relationship between self-

9   confidence and both informational and tangible support has not been examined.

10   The stress and coping theoretical perspective has been the principal framework used in

11   social support research. Within this perspective, social support is hypothesised to moderate the

12   relationship between stressful life events and outcomes such as self-confidence (Lakey & Cohen,

13   2000; Rees & Freeman, 2007). Specifically, support is hypothesised to reduce (buffer) the

14   detrimental effect of stressful events (Cohen, Gottlieb, & Underwood, 2000; Cohen & Wills,

15   1985). The belief that support is available is hypothesised to help redefine the potential threat of

16   a situation, bolster an individual's perceived ability to cope, or alter the affective, physiological,

17   or behavioural response (Cohen et al., 2000). Perceived support may also have direct effects on

18   health and performance-related outcomes (Cohen et al., 2000; Cohen & Wills, 1985; Rees &

19   Freeman, 2007). Because evidence of direct effects is provided from the demonstration of a

20   statistical main effect of support on health and performance-related outcomes, direct effects are

21   also referred to as main effects (Cohen & Wills, 1985; Holt & Hoar, 2006). An examination of

22   direct and stress-buffering effects could help to identify the conditions under which the support

23   available from teammates may benefit athletes. Stress-buffering effects would imply that support

1   primarily predicts self-confidence only for individuals under high levels of stress. Direct effects

2   would imply that support predicts self-confidence, irrespective of levels of stress.

3   In light of the preceding discussion, the purpose of this study was to examine the levels

4   of perceived support available from teammates and whether this support predicted self-

5   confidence. In order to examine potential stress-buffering effects of perceived support from

6   teammates, four performance-related stressors were selected from the literature on sources of

7   stress in sport: high performance expectations from others, injury concerns, stamina/fitness

8   concerns, and doubts about current form (e.g., Gould, Jackson, & Finch, 1993; Noblet & Gifford,

9   2002; Scanlan, Stein, & Ravizza, 1991). These stressors were chosen for their relevance to

10   university athletes and their potential to apply to a range of team sports. Moderated hierarchical

11   regression analysis was used to determine if perceived support exerted direct effects and/or

12   stress-buffering effects on self-confidence. Stress-buffering was tested using a stressors x

13   perceived support interaction (Cohen & Wills, 1985). Significant increments in explained

14   variance due to this interaction, over and above the direct effects of the stressors and perceived

15   support would suggest that perceived support moderates the effect of stressors on self-confidence

16   (Baron & Kenny, 1986).

17   Previous research has found that perceived support may have both direct and stress-

18   buffering effects on self-confidence (Rees & Freeman, 2007) and other performance-related

19   factors in tennis (e.g., Rees & Hardy, 2004). We therefore hypothesised that perceived

20   emotional, esteem, informational, and tangible support would directly predict self-confidence;

21   specifically, higher levels of support would predict higher levels of self-confidence, irrespective

22   of levels of stressors. Further, we hypothesised that perceived emotional, esteem, informational,

23   and tangible support would also have stress-buffering effects on self-confidence; specifically, the

1   detrimental relationship between the performance-related stressors and self-confidence would be

2   reduced for those with high perceived support compared to those with low perceived support.

3   Method

4   *Participants*

5   Participants were 152 university athletes (74 females, 78 males), mean age 20.1 years

6   ($SD = 1.4$). All participants were involved in the knockout stages of the British Universities

7   Sports Association (BUSA) competition and competed in football ($n = 37$), hockey ($n = 44$),

8   netball ($n = 31$), or rugby ($n = 40$).

9   *Procedures*

10   The study was approved by an institutional ethics review committee, and participants

11   provided informed consent. Recruitment of participants was opportunistic (convenience sample)

12   at the final training session prior to the first round of the knockout stages of the BUSA

13   competition. Participants completed measures of perceived support, stressors, and self-

14   confidence in relation to the upcoming match. The presentation of measures was systematically

15   rotated to minimise order effects.

16   *Measures*

17   *Perceived support.* Perceived support was assessed using a 16-item self-report

18   questionnaire, which was adapted from a questionnaire used by Freeman and Rees (2008). As

19   Freeman and Rees examined social support in golfers, some of the items were replaced in the

20   present study. This followed two recommendations from the social support literature: a) social

21   support measures should be relevant to the situational context in which they are being used; and

22   b) social support researchers should write new items to capture specific aspects of the support

23   needs of the target population (Bianco & Eklund, 2001; House & Kahn, 1985; Wills & Shinar,

1   2000). All the items were derived from statements made by high-level sportspeople about their

2   social support experiences (Rees & Hardy, 2000), and represented dimensions of emotional,

3   esteem, informational, and tangible support. Prior to data collection, both authors scrutinised the

4   items making up each scale for their relevance to university athletes across a range of team

5   sports. All the items (and all other items in this study) were also scrutinised for relevance and

6   representativeness by two hockey players, two footballers, one rugby player, and one netballer.

7   All the items were deemed relevant and appropriate for athletes in team sports. The items were

8   preceded by a generic stem that asked, "To what extent do you have someone within your team .

9   . .," with participants responding on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*a lot*).

10   Sample items included "who helps take your mind off things" (emotional), "who encourages

11   you" (esteem), "who gives you advice about coping with competitive situations" (informational),

12   and "who helps you organise and plan your training" (tangible). The factor structure of the

13   perceived support measure was examined using confirmatory factor analysis with maximum

14   likelihood estimation (Jöreskog & Sörbom, 1996). The sequential model testing approach

15   recommended by Jöreskog (1993) was used. All the single-factor and two-factor models revealed

16   acceptable fits. The four-factor model also revealed a good fit ($\chi^2(98) = 150.89$, $p = .00$; RMSEA

17    $= .06$; SRMR $= .06$; CFI $= .95$; NNFI $= .93$). Cronbach's alpha internal reliability coefficients for

18   the four subscales ranged from .72 to .85.

19   *Stressors.* Stressors were measured by way of four examples drawn from the literature on

20   sources of stress in sport: high performance expectations from others, injury concerns,

21   stamina/fitness concerns, and doubts about current form (e.g., Gould et al., 1993; Noblet &

22   Gifford, 2002; Scanlan et al., 1991). These stressors were chosen for their relevance to university

23   athletes and their potential to apply to a range of team sports. The measure asked, "Please

1   indicate to what extent you have encountered these situations over the past two weeks . . . ," with

2   participants responding on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*a lot*). The four

3   items were summed to create a total score. This served to reduce the number of models to be

4   tested and aided clarity.

5   *Self-Confidence.* Self-confidence was assessed using the scale from the revised version of

6   the Competitive State Anxiety Inventory-2 (CSAI-2R) (Cox, Martens, & Russell, 2003). Cox et

7   al. recommended researchers use the CSAI-2R instead of the CSAI-2 (Martens, Burton, Vealey,

8   Bump, & Smith, 1990), and the self-confidence scale of the CSAI-2R has been used in previous

9   research into social support and self-confidence (Rees & Freeman, 2007). The self-confidence

10   scale in the CSAI-2R has five items, with participants responding on a 4-point Likert scale

11   ranging from 1 (*not at all*) to 4 (*very much so*) to statements about how confident they felt about

12   their upcoming match. Sample items included "I'm confident I can meet the challenge" and "I'm

13   confident about performing well." Confirmatory factor analysis of the one-factor model using the

14   data in this study revealed a good fit ($\chi^2(5) = 5.64$, $p = .34$; RMSEA = .03; SRMR = .02; CFI =

15   1.00; NNFI = 1.00). Cronbach's alpha internal reliability coefficient for the scale in this study

16   was .87.

17   *Analyses*

18   The direct and stress-buffering effects of perceived support on self-confidence were

19   tested using moderated hierarchical regression analyses (Baron & Kenny, 1986; Cohen & Wills,

20   1985; Jaccard, Turrisi, & Wan, 1990). The independent variables were entered in a three step

21   process. The stressors score was entered at step 1, perceived support was entered at step 2, and

22   the product term (stressors*perceived support) was entered at step 3. The significance of

23   increments in explained variance in self-confidence at each step, as well as the sign of the

1   regression coefficients, was assessed. In all the models the independent variables were

2   standardised before the product term was created (Jaccard et al., 1990). The unstandardised

3   solution was then examined. Significant interactions were plotted following the guidelines of

4   Aiken and West (1991). Values for perceived support of -1, 0, and +1 were substituted into the

5   regression equations. The subsequent regression lines were plotted to depict the relationship

6   between stressors and self-confidence at low (1 *SD* below mean), moderate (mean), and high (1

7   *SD* above mean) levels of perceived support. Following the recommendation of Aiken and West

8   (1991), the slopes of the regression lines were examined to determine at which levels of

9   perceived support the relationships between stressors and self-confidence significantly differed

10   from zero. This examination of the slopes involved calculating the standard errors of the slopes

11   of the regression lines using values from the variance-covariance matrix of the regression

12   coefficients. The significance of the slopes was assessed by their *t* values, which were calculated

13   by dividing the value of the slope by its standard error. An alpha level of 0.05 ($t = 1.96$) was used

14   for all tests.

15   Results

16   Means and standard deviations for all variables are displayed in Table 1. The means

17   suggest that participants perceived esteem support ($M = 3.37, SD = 0.90$) to be the most available

18   dimension from their teammates. Informational ($M = 3.10, SD = 0.79$) and tangible support ($M =$

19   $3.10, SD = 0.82$) were perceived to be the least available dimensions. Results from the

20   moderated hierarchical regression analyses are shown in Table 2.

21   *Moderated Hierarchical Regression Analyses*

22   *Stressors and perceived emotional support upon self-confidence.* There was a significant

23   direct effect for stressors upon self-confidence ($R^2 = .09, b = -.12, p < .05$), with higher levels of

1   stressors predicting lower levels of self-confidence. Over and above the effect of stressors, there

2   was a significant direct effect for perceived emotional support upon self-confidence ($\Delta R^2 = .17$, b

3    $= .28$, $p < .01$), with higher levels of perceived emotional support predicting higher levels of self-

4   confidence. There was a significant interaction of stressors and perceived emotional support

5   upon self-confidence ($\Delta R^2 = .05$, $b = .13$, $p < .05$). The plot of the stressors and perceived

6   emotional support interaction is displayed in Figure 1. The relationship between stressors and

7   self-confidence was significantly different from zero at low ($t = -4.60$, $p < .01$) and moderate ($t =$

8   -2.64, $p < .01$) levels of perceived emotional support, but not at high levels ($t = 0.16$, $p > .05$).

9   Specifically, the relationship between stressors and self-confidence significantly differed from

10   zero at levels of perceived emotional support less than .22 standard deviations above the mean.

11   The analyses provide evidence that the interaction was consistent with a stress-buffering

12   explanation: The negative relationship between stressors and self-confidence was smaller for

13   those with high levels of perceived emotional support compared to those with low levels of

14   perceived emotional support.

15   *Stressors and perceived esteem support upon self-confidence.* There was a significant

16   direct effect for stressors upon self-confidence ($R^2 = .09$, $b = -.09$, $p < .05$), with higher levels of

17   stressors predicting lower levels of self-confidence. There was a significant direct effect for

18   perceived esteem support upon self-confidence ($\Delta R^2 = .26$, $b = .34$, $p < .01$), with higher levels of

19   perceived esteem support predicting higher levels of self-confidence. There was a significant

20   interaction of stressors and perceived esteem support upon self-confidence ($\Delta R^2 = .02$, $b = .08$, p

21   $< .05$). The plot of the stressors and perceived esteem support interaction is displayed in Figure

22   2. The relationship between stressors and self-confidence was significantly different from zero at

23   low ($t = -3.05$, $p < .01$) and moderate ($t = -2.06$, $p < .05$) levels of perceived esteem support, but

1   not at high levels ($t = -0.31$, $p > .05$). Specifically, the relationship between stressors and self-

2   confidence significantly differed from zero at levels of perceived esteem support less than .05

3   standard deviations above the mean. The analyses provide evidence that the interaction was

4   consistent with a stress-buffering explanation: The negative relationship between stressors and

5   self-confidence was smaller for those with high levels of perceived esteem support compared to

6   those with low levels of perceived esteem support.

7   *Stressors and perceived informational support upon self-confidence.* The direct effect for

8   stressors upon self-confidence was significant ($R^2 = .09$, $b = -.15$, $p < .01$). The direct effect for

9   perceived informational support upon self-confidence was also significant ($\Delta R^2 = .17$, $b = .29$, p

10   $< .01$), with higher levels of perceived informational support predicting higher levels of self-

11   confidence. There was a significant interaction of stressors and perceived informational support

12   upon self-confidence ($\Delta R^2 = .03$, $b = .09$, $p < .05$). The plot of the stressors and perceived

13   informational support interaction is displayed in Figure 3. The relationship between stressors and

14   self-confidence was significantly different from zero at low ($t = -3.75$, $p < .01$) and moderate ($t =$

15   -3.24, $p < .05$) levels of perceived informational support, but not at high levels ($t = -.84$, $p > .05$).

16   Specifically, the relationship between stressors and self-confidence significantly differed from

17   zero at levels of perceived informational support less than .50 standard deviations above the

18   mean. The analyses provide evidence that the interaction was consistent with a stress-buffering

19   explanation: The negative relationship between stressors and self-confidence was smaller for

20   those with high levels of perceived informational support compared to those with low levels of

21   perceived informational support.

22   *Stressors and perceived tangible support upon self-confidence.* The direct effect for

23   stressors upon self-confidence was significant ($R^2 = .09$, $b = -.14$, $p < .01$). The direct effect for

1   perceived tangible support upon self-confidence was also significant ($\Delta R^2 = .13$, $b = .25$, $p <$

2   .01). The effect of the interaction of stressors and perceived tangible support upon self-

3   confidence was not significant ($\Delta R^2 = .00$, $b = .04$, $p > .05$). The non-significant interaction

4   suggests that perceived tangible support did not buffer the detrimental effect of stressors on self-

5   confidence.

6   Discussion

7   In this study, esteem support was the dimension of support perceived to be most available

8   from teammates followed by emotional support. Previous research has also found that teammates

9   are valuable sources of esteem (Rosenfeld et al., 1989) and emotional (Corbillon et al., 2008)

10 support. Whether a network member provides specific dimensions of support may depend on

11 various factors such as the provider's relationship with the recipient and if the dimension of

12 support requires specific knowledge and expertise that network members may not possess

13 (Rosenfeld & Richman, 1997; Rosenfeld et al., 1989). Emotional and esteem support may be

14 most likely to come from those people to whom one feels closest (Dakof & Taylor, 1990). The

15 close bonds that may facilitate the availability of emotional and esteem support from teammates

16 were evident in a study by Udry, Gould, Bridges, and Tuffey (1997), with skiers describing their

17 teammates as "like family to me" (p. 379). It has been argued that informational support and

18 practical assistance may require the provider to possess specific knowledge and expertise

19 (Gottlieb, 2000; Hardy & Crace, 1993; Martin, Davis, Baron, Suls, & Blanchard, 1994). The

20 lower levels of informational and tangible support found in the present study might be due to

21 teammates lacking the knowledge and expertise required to be considered providers of these

22 dimensions of support. Further, informational and tangible support might be perceived to be

23 available from other providers, such as coaches and medical personnel (Bianco, 2001).

1   Although the individuals in this study reported perceiving different levels of emotional,

2   esteem, informational, and tangible support to be available from teammates, all four dimensions

3   of support predicted self-confidence. The findings suggest that high levels of perceived

4   emotional, esteem, and informational support from teammates may have buffered the detrimental

5   effect of performance-related stressors on self-confidence. At low and moderate levels of

6   support, stressors negatively predicted self-confidence. However, at high levels of support,

7   stressors did not significantly predict self-confidence. The findings add to previous literature on

8   the buffering effects of perceived support (e.g., Rees & Freeman, 2007; Rees & Hardy, 2004),

9   but enhance understanding of the effects of support in different contexts and on a different

10   outcome variable. Rees and Hardy (2004) found that perceived emotional, esteem, informational,

11   and tangible support buffered the detrimental effects of stressors on flow and feeling flat in a

12   sample of high-level tennis players. Rees and Freeman (2007) found that perceived emotional

13   and esteem support buffered the detrimental effect of stressors on self-confidence in athletes

14   from a range of sports. However, these previous studies assessed the cumulative impact of

15   various support providers and failed to specify the providers of support. The present study

16   focused on the support available from teammates. Identifying the effects of support available

17   from specific providers may help in the development of effective support interventions by

18   highlighting which dimensions of support are beneficial and from whom. It has been argued that

19   the effectiveness of social support may depend on similarities between the provider and recipient

20   (Suitor, Pillemar, & Keeton, 1995). As teammates may encounter similar demands and

21   situations, they may be able to offer empathy and understand which dimension of support may be

22   helpful (Suitor et al., 1995; Thoits, 1986).

1   In addition to the stress-buffering effects, all four dimensions of support were found to

2   have direct effects on self-confidence. That is, high levels of emotional, esteem, informational,

3   and tangible support predicted higher levels of self-confidence. The findings are consistent with

4   previous literature that has found perceived support can exert both stress-buffering and direct

5   effects on outcomes, including performance-related factors (e.g., Rees & Hardy, 2004),

6   performance outcome (e.g., Freeman & Rees, 2008), and self-confidence (Rees & Freeman,

7   2007). The significant direct effects for perceived support suggest that support may have a direct

8   effect on self-confidence, irrespective of the stressors that individuals encounter. However,

9   future research is required to identify why perceived support is associated with beneficial effects

10   on self-confidence, because the specific mechanisms through which perceived support operates

11   remain poorly understood (Lakey & Cohen, 2000; Saltzman & Holahan, 2002). Research into the

12   relationship between social support and another confidence-related construct might offer an

13   indication of potential mediators of the perceived support and self-confidence relationship.

14   Schwarzer and Knoll (2007) proposed various mediators that may explain the relationship

15   between social support and self-efficacy, which has been defined as "beliefs in one's capabilities

16   to organise and execute the courses of action required to produce given attainments" (Bandura,

17   1997, p. 3). These potential mediators were linked to sources of efficacy expectations, such as

18   vicarious experiences and verbal persuasion. Although self-efficacy represents a more situation-

19   specific view of confidence than was adopted in the present study, future research could examine

20   if the relationship between perceived support and self-confidence is mediated by sources of self-

21   confidence. For example, the availability of tangible support in the form of material assistance,

22   practical help, and the setting of training sessions might increase self-confidence via influencing

23   athletes' preparation or helping them to feel more comfortable in a competitive environment.

1   Both physical/mental preparation and environmental comfort have been noted as important

2   sources of self-confidence (Vealey et al., 1998).

3   The findings of this study have important applied implications. Overall, the positive

4   relationship between all four dimensions of support and self-confidence suggests that teams

5   should be encouraged to develop perceived social support. Rosenfeld and Richman (1997)

6   provided a number of suggestions that may help teams to recognise the importance of support

7   and develop a supportive environment. For example, educating teams on the benefits of support,

8   encouraging individuals to be proactive in seeking and developing support, and providing

9   communication training and opportunities for support may all be useful strategies. The stress-

10   buffering effects imply that perceived emotional, esteem, and informational support may be

11   particularly important for individuals encountering high levels of performance-related stressors.

12   The simple slopes analyses provide an indication of the level of support that may be necessary

13   for stress-buffering effects. Individuals with levels of perceived emotional support greater than

14   .22 standard deviations above the mean were protected against the negative relationship between

15   stressors and self-confidence. Similarly, individuals with levels of esteem support and

16   informational support greater than .05 and .50 standard deviations above the mean respectively

17   were protected against the negative relationship between stressors and self-confidence.

18   Some potential limitations of the present study should be noted. First, due to the

19   correlational nature of the study, it is important to note that no causal relationships can be

20   inferred from the data. For example, rather than perceived support leading to self-confidence, it

21   may be that confident individuals take the initiative to cultivate supportive relationships

22   (Schwarzer & Knoll, 2007). Second, Gardner, Cummings, Dunham, and Pierce (1998) noted that

23   a major concern with self-report research is that any empirical demonstration of a relationship

1   between two variables can be attributed, at least in part, to shared method variance. Future

2   research could consider manipulating social support under experimental conditions to help

3   overcome both of these concerns. Third, the present study examined the relationship between

4   perceived support and self-confidence within the context of specific performance-related

5   stressors. Future research is required to identify if the perceived support available from

6   teammates buffers the detrimental effect of other types of stressors on self-confidence and/or

7   other outcomes. Finally, all the participants were competing in university teams. The similarity

8   between teammates in this study may have influenced the level of support that was available.

9   Indeed, perceived similarity has been noted as an important factor in determining recipients'

10   support perceptions (Neely et al., 2006). Future research could examine the levels of support

11   available from teammates in non-university based teams to identify if the present findings

12   generalise to other contexts.

13   In summary, although previous research has reported teammates as key support providers

14   (Bianco, 2001; Corbillon et al., 2008; Rosenfeld et al., 1989), little empirical evidence has

15   demonstrated that the support available from teammates predicted favourable outcomes. Overall

16   the findings of this study demonstrate that the support available from teammates positively

17   predicted self-confidence. It has been argued that support may be more effective from

18   individuals with experience of similar situations (Suitor et al., 1995; Thoits, 1986), which might

19   explain why the support available from teammates is associated with beneficial effects. As a

20   result of their own experiences, teammates may be adept at recognising support needs and

21   offering appropriate help and support to enhance self-confidence.

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20

1   Table 1

2   *Means and Standard Deviation of Stressors, Perceived Support, and Self-Confidence*

3

	Mean	SD
1. Stressors	12.06	2.89
2. Perceived Emotional Support	3.28	.80
3. Perceived Esteem Support	3.37	.90
4. Perceived Informational Support	3.10	.79
5. Perceived Tangible Support	3.10	.82
6. Self-Confidence	3.00	.65

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Table 2

Moderated Hierarchical Regression Analyses: Effects of Stressors, Perceived Support, and Products upon Self-Confidence

Step	Independent Variable	R^2	ΔR^{2a}	$P(F)^b$	b^c	$p(t)^d$
	Stressors	.09	.09	.00	-.12	.01
	Perceived Emotional Support	.26	.17	.00	.28	.00
	Product	.31	.05	.00	.13	.00
	Stressors	.09	.09	.00	-.09	.04
	Perceived Esteem Support	.35	.26	.00	.34	.00
	Product	.37	.02	.04	.08	.04
	Stressors	.09	.09	.00	-.15	.00
	Perceived Informational Support	.26	.17	.00	.29	.00
	Product	.29	.03	.02	.09	.02
	Stressors	.09	.09	.00	-.14	.01
	Perceived Tangible Support	.22	.13	.00	.25	.00
	Product	.23	.00	.40	.04	.40

Note. $n = 152$. All variables standardised except for Product. Product formed from the two preceding (standardised) variables.
[a]Stepwise change in R^2. [b]Probability of F for ΔR^2. [c]Unstandardised regression coefficient in final equation. [d]Probability of t for b.

Figure Captions

Figure 1. Interaction of stressors and perceived emotional support upon self-confidence. Th

relationship between stressors and self-confidence at low (1 standard deviation below mean

moderate (mean), and high (1 standard deviation above mean) levels of perceived emotiona

support.

Figure 2. Interaction of stressors and perceived esteem support upon self-confidence. The

relationship between stressors and self-confidence at low (1 standard deviation below mean

moderate (mean), and high (1 standard deviation above mean) levels of perceived esteem

support.

Figure 3. Interaction of stressors and perceived informational support upon self-confidence

relationship between stressors and self-confidence at low (1 standard deviation below mean

moderate (mean), and high (1 standard deviation above mean) levels of perceived informati

support.