The Effects of Perceived and Received Support on Self-Confidence

Tim Rees
University of Exeter, UK

Paul Freeman
University of Exeter, UK

Submitted: 24th November, 2005
Resubmitted: 2nd May, 2006
Final revision submitted: 29th June, 2006
First Published: 21st February 2007
Abstract

A sample of 222 university athletes, mean age 19.84 years (s=1.97 years), ranging in standard from university 2nd team to international level, completed a measure of perceived support two weeks prior to an important competition/match. On the day before the competition/match, the athletes completed measures of stressors, stress, received support, and self-confidence. Moderated hierarchical regression analyses revealed the following key findings: a) main effects for both perceived ($\Delta R^2=0.11$) and received support ($\Delta R^2=0.14$) upon self-confidence; b) stress-buffering effects for both perceived ($\Delta R^2=0.02$) and received ($\Delta R^2=0.07$) support upon self-confidence; c) when both aspects of support were considered simultaneously, stress-buffering effects were primarily attributable to the influence of received support. These results demonstrate the beneficial impact of social support on self-confidence, both directly and by reducing the negative effect of stress on self-confidence. The findings emphasise the need to recognise the distinction between perceived and received support, both in terms of theory and the design of social support interventions with athletes.
The Effects of Perceived and Received Support on Self-Confidence

Athletes have been encouraged to harness social support as a useful resource (Richman et al., 1989) and there is now increasing research interest into the beneficial effects of social support in sport. Sarason et al. (1990) proposed that social support might affect various aspects of sports performance, and recently researchers have demonstrated links with Olympic performance (e.g., Gould et al., 2002) and performance-related factors in tennis (e.g., Rees and Hardy, 2004). The purpose of the present study was to extend previous research into the effects of social support in a performance context and to address the recommendation (Rees and Hardy, 2004) that research be undertaken in various contexts using different outcome measures. This study therefore examined the effects of different aspects of social support upon self-confidence in a sample of high-level athletes from a range of sports. Self-confidence is a key variable in relation to sports performance (Woodman and Hardy, 2003), for which social support has been highlighted as an important source (Vealey et al., 1998). For example, according to Vealey et al. (1998) encouragement and positive feedback from significant others are sources beneficial for self-confidence, although there is little empirical evidence to support this link.

The present study also addresses the recommendation of Bianco and Eklund (2001) to incorporate measures of perceived and received support in the same study. Perceived and received support are distinct constructs, typically sharing as little as 20% common variance (e.g., Cohen and Hoberman, 1983; Komproe et al., 1997; Goodwin et al., 2004). The distinction between perceived and received support may be an important consideration for sport psychologists and coaches working with athletes. For example,
for an athlete in a performance slump, the knowledge that someone is available to provide help if it is needed may be enough to pull the athlete out of the slump without actually receiving support (Sarason et al., 1990). Research should, therefore, examine the differential impact of both perceived and received support, in order to see whether one type of support exerts a greater influence upon outcomes.

Lakey and Cohen (2000) outlined three key theoretical perspectives in research on social support: the stress and coping perspective, the social constructionist perspective and the relationship perspective. Within each perspective, different types of support and operational mechanisms are emphasised. There is, therefore, no definitive understanding of how different types of support operate. There are, however, two principal models that explain how social support affects outcomes (for reviews, see Cohen and Wills, 1985; Cohen et al., 2000): the stress-buffering model and the main effect model. In its basic form, the stress-buffering model suggests that support protects people from the harmful effects of stress upon outcomes. The main effect model suggests that social support has a beneficial effect upon outcomes irrespective of levels of stress.

Bianco and Eklund (2001) suggested that perceived support is primarily associated with the main effect model and that received support is primarily associated with the stress-buffering model. This suggestion is congruent with the views of some researchers in general social psychology (e.g., Dunkel-Schetter and Bennett, 1990). Perceived support may operate through a psychological or cognitive pathway, whereby individuals with high perceived support are less likely to view events as stressful compared to individuals with low perceived support. Received support may operate
through a transactional process as a coping resource that reduces the negative effect of stress.

The empirical evidence provides a contrary view. Stress-buffering effects have been consistently observed with perceived support, whereas there has been only limited evidence for stress-buffering effects of received support (for a review, see Cohen and Wills, 1985). Furthermore, perceived support is more consistently related to outcome variables than received support (Cohen and Hoberman, 1983; Wethington and Kessler, 1986; Helgeson, 1993). Dunkel-Schetter and Bennett (1990) offered two potential explanations for this lack of effects for received support. First, the context of received support has often been ignored. In other words, measures of support are seldom relevant to the specific population under investigation. Second, measures of support, stress, and outcomes have not been similar in their level of specificity. For example, if specific stressful situations are assessed, a global measure of support may not match the specific support needs created by such situations. These issues were addressed in the present study.

There are a number of potential stress-buffering mechanisms of social support (Cohen and Wills, 1985). As depicted in Figure 1, perceived and received support may intervene at specific points along the pathway from encountering stressors, through experiencing stress, to subsequent outcomes such as self-confidence. Perceived support is hypothesised to intervene when a stressor is encountered, leading it to be appraised as less stressful (Cohen and Wills, 1985; Cohen et al., 2000). The perception that others are available to help may redefine the threat posed by a stressor, alter an individual’s perceptions of his/her available resources to cope, or lead an individual to feel more in
control, which could all prevent a stressor from being appraised as highly stressful (Cohen and Wills, 1985; Schwarzer and Leppin, 1991). Once stress is experienced, however, both perceived and received support may intervene, such that support might reduce or eliminate the negative effect of the stress on self-confidence (Cohen and Wills, 1985; Cohen et al., 2000). The perception that others are available to provide help and assistance may reduce or alter the affective reaction, physiological response, or behavioural response to the stressful event (Cohen et al., 2000). The receipt of support may reduce the impact of stress appraisal by decreasing the perceived importance of the problem, by leading to improved coping, or by providing a distraction from, or a solution to, the problem (Cohen et al., 2000).

With regard to the left hand side of Figure 1, there is a lack of consensus as to whether this should be tested as a main effect (i.e., perceived support leads to less stress) or a buffer effect (i.e., when encountering stressors, those with high levels of perceived support experience less stress compared with those with low levels of perceived support) (Cohen and Wills, 1985; Kahn and Byosiere, 1992; Lakey and Cohen, 2000; Bianco and Eklund, 2001). A main effect would be demonstrated if perceived support was significantly associated with less stress independent of stressors; a buffering effect would be demonstrated if the interaction term of stressors and perceived support was significantly associated with less stress. The normal procedure for testing stress-buffering effects is moderated hierarchical regression analysis (Cohen and Wills, 1985; Jaccard et al., 1990; Biddle et al., 2001), which incorporates tests for main effects of social support and interactions of stressors/stress and social support (stress-buffering). This is the procedure we followed in the present study. We were therefore able to test
for main and interactive effects in all models. The following models and hypotheses were specified for this study.

*Model 1: Stressors and perceived support upon stress.*

It was hypothesised that stressors would be associated with increases in stress. Perceived support would be associated with decreases in stress. An interactive effect would be explained in terms of stress-buffering and would be demonstrated by the following: the detrimental effect of stressors on stress would be reduced for those with high perceived support compared to those with low perceived support.

*Model 2: Stress and perceived support upon self-confidence.*

*Model 3: Stress and received support upon self-confidence.*

*Model 4: Stress and both perceived and received support (entered simultaneously) on self-confidence*

For models 2-4, it was hypothesised that stress would be associated with decreases in self-confidence. Perceived and received support would be associated with increases in self-confidence. Interactive effects would be explained in terms of stress-buffering and would be demonstrated by the following: the detrimental effect of stress on self-confidence would be reduced for those with high perceived and received support compared to those with low perceived and received support. Models 2 and 3 allowed the effects of perceived and received support to be considered separately, so that the results could be compared to previous research that has assessed only one type of support. Model 4 allowed the effects to be considered simultaneously, thereby offering the opportunity to examine whether one type of support was of greater influence in relation to self-confidence.
Prior to testing main effect and stress-buffering models, Rees and Hardy (2004) constructed and refined their measurement of the key social support variables. The purpose of this was to ensure context-specific and accurate measurement of social support, not to develop and validate a scale. This same strategy was used in the present study, and follows two recommendations from the social support literature: a) social support measures should be relevant to the situational context in which they are being used; and b) social support researchers should write new items to capture specific aspects of the support needs of the target population (House and Kahn, 1985; Wills and Shinar, 2000; Bianco and Eklund, 2001). This is akin to the measurement strategy within self-efficacy research (Bandura, 1997), for which it has been argued a “one-measure-fits-all” approach has only limited explanatory and predictive value. Furthermore, because of problematic issues of construct validity and content relevance in sport of the many existing social support measures (Rees and Hardy, 2000; Rees et al., 2000), measurement in the present study was guided by the insights of high-level performers regarding their experiences of social support (Rees and Hardy, 2000).

An important consideration when testing for main and stress-buffering effects of social support is whether to employ aggregate or more differentiated measures of the key variables. Viswesvaran et al. (1999) advocated the use of aggregate measures of stressors, stress, and support in order to best illustrate how social support works. Kahn and Byosiere (1992) suggested that research should deal with combinations of stressors. Cohen and Wills (1985) noted that although social support may be broken down into specific dimensions conceptually, in naturalistic settings the dimensions are not usually very independent. In this study, we employed aggregate measures of stressors, stress,
perceived support and received support. This helps to reduce the risk of Type I errors, as well as aiding clarity, affording a primary focus upon differences between perceived and received support.

Method

Participants

Participants were 222 university athletes (120 males, 102 females), mean age 19.84 years ($s=1.97$ years), in team ($n=157$) and individual ($n=65$) sports. All participants were involved in the knockout stages of the British Universities Sports Association (BUSA) competition. The competitive standard of participants included international ($n=17$), national ($n=31$), county/regional ($n=116$), university 1st team ($n=36$), and university 2nd team ($n=22$). The study was approved by an institutional ethics review committee, and participants provided informed consent.

Procedures

Two weeks prior to an important competition/match (first round of the knockout stages of the BUSA competition), participants completed a measure of perceived support. On the day before the competition/match, participants completed measures of stressors, stress, received support and self-confidence in relation to the upcoming competition/match.

Measures

Perceived support. Perceived support was assessed with a nine-item measure constructed specifically for this study. The items represented two dimensions of support (emotional, esteem) identified by Rees and Hardy (2000) in a study into the social support experiences of high-level sportspeople. Emotional and esteem support have
been shown to buffer the effects of a wide range of stressful events (Cohen and Wills, 1985), and were deemed to best match the needs elicited by the stressors in this study. The measure asked, “To what extent do you have someone . . .,” and participants responded on a 5-point Likert scale ranging from 1 (not at all) to 5 (a lot). There were four emotional support items (e.g., who talks things through with you) and five esteem support items (e.g., who encourages you). Confirmatory factor analysis (Jöreskog and Sörbom, 1993) of the two-factor model using the data in the present study revealed a good model fit (cf. Hu and Bentler, 1999: $\chi^2(26)=54.60, P=0.00$; RMSEA=0.07; SRMR=0.04; CFI=0.96; NNFI=0.95). Cronbach’s alpha internal reliability coefficients for the two subscales were 0.78 and 0.81. The correlation between the two subscales was substantial ($r=0.76, P<0.05$). Correlations of this magnitude have been noted with other social support measures (see, e.g., Brookings and Bolton, 1988). This correlation lends support to summing the subscales to create a total perceived support score, which was used for all subsequent analyses. The Cronbach’s alpha internal reliability coefficient for this total score was 0.88.

**Stressors.** Stressors were measured by way of three examples drawn from the literature on sources of stress in sport (e.g., Scanlan *et al.*, 1991; Gould *et al.*, 1993; Noblet and Gifford, 2002). Chosen for their relevance to university athletes and their potential to apply to a range of sports, the stressors were: personal problems, expectations from others, and difficulty balancing sport and study commitments. The measure asked, “Please indicate to what extent you have encountered these situations over the past two weeks . . .,” and participants responded on a 5-point Likert scale ranging from 1 (not at all) to 5 (a lot). Confirmatory factor analysis was not conducted
on the three stressor items, because they were chosen to assess different sources of stress. They were not, therefore, intended to form a single-factor model. The items were, however, summed to create a total score for stressors. This served to reduce the number of models to be tested and aided clarity, but should not be interpreted as evidence that the stressors measure the same underlying construct.

**Stress.** Although stressors produce stress in many people, individual differences in the degree of reaction are normally evident (Lazarus and Folkman, 1984). Participants were therefore asked to indicate the stress they had experienced resulting from the stressors. The measure asked “Please indicate how stressed you have felt as a result of the following situations over the past two weeks . . . ,” and participants responded on a 5-point Likert scale ranging from 1 (not at all) to 5 (a lot). The items were summed to create a total score for stress.

**Received support.** Received support was assessed using the same nine items included in the perceived support measure. To reflect received support, items were reworded to be in the perfect tense and participants were asked to rate the extent to which they had received those types of support in the past two weeks. The measure asked, “In the past two weeks, to what extent has someone . . . ,” and participants responded on a 5-point Likert scale ranging from 1 (not at all) to 5 (a lot). Barrera (1986) suggested that it could be argued that self-report scales of received support are actually assessing “perceived-received support” (p. 417), because they rely on the retrospective evaluations of the participants. The alternative method of measuring received support is behavioural observation. However, Burleson and MacGeorge (2002) have highlighted the practical difficulties associated with attempting to observe the
support transactions of a large number of participants in real world settings. More importantly, behavioural observation fails to represent the individual’s perception of whether helping behaviour is regarded as supportive (Burleson and MacGeorge, 2002). Confirmatory factor analysis of the two-factor model using data in the present study revealed a reasonably good fit (cf. Hu and Bentler, 1999: $\chi^2(26)=58.80$, $P=0.00$; RMSEA=0.07; SRMR=0.04; CFI=0.96; NNFI=0.94). Cronbach’s alpha internal reliability coefficients for the two subscales were 0.72 and 0.84. As with the perceived support measure, the correlation between the subscales was substantial ($r=0.73$, $P<0.05$). The two subscales were summed to create a total received support score, which was used for all subsequent analyses. The Cronbach’s alpha internal reliability coefficient for this total score was 0.87.

*Self-Confidence.* Self-confidence was assessed using the scale from the revised version of the Competitive State Anxiety Inventory-2 (CSAI-2R) (Cox et al., 2003). The self-confidence scale in the CSAI-2R has five items, and participants respond on a 4-point Likert scale ranging from 1 (not at all) to 4 (very much so) to statements about how confident they feel right now about an upcoming competition. Sample items included “I’m confident I can meet the challenge” and “I’m confident about performing well.” Confirmatory factor analysis of the one-factor model using the data in the present study revealed a good fit (cf. Hu and Bentler, 1999: $\chi^2(5)=8.60$, $P=0.13$; RMSEA=0.06; SRMR=0.03; CFI=0.99; NNFI=0.98). The Cronbach’s alpha internal reliability coefficient for the scale in the present study was 0.81.

*Analyses*
The models in this study were tested in a three-step process using moderated hierarchical regression analyses (Baron and Kenny, 1986; Jaccard et al., 1990). In line with the testing of main and stress-buffering effects of social support (Cohen and Wills, 1985), the predictor variable (stressors or stress) was initially entered, followed by the moderator(s) (perceived and/or received support), and then the product term(s) (predictor*moderator). The significance of increments in explained variance in the dependent variable over and above the variance accounted for by those variables already entered into the equation, as well as the sign of the regression coefficients, was assessed at each step. In all the models the independent variables were centred, by standardising them, before the product term was created (Jaccard et al., 1990). The unstandardised solution was then examined. An alpha level of 0.05 was used for all tests.

Results

Means, standard deviations, and intercorrelations of all variables are displayed in Table 1. Results from the moderated hierarchical regression analyses are shown in Table 2.

Stressors and Perceived Support upon Stress

There was a significant main effect for stressors upon stress ($R^2=0.60$, $b=0.64$, $P=0.00$), with higher levels of stressors associated with higher levels of stress. There was a non-significant main effect for perceived support upon stress ($\Delta R^2=0.00$, $b=0.00$, $P=0.93$) and there was a non-significant interaction ($\Delta R^2=0.00$, $b=-0.05$, $P=0.16$).

Stress and Perceived Support upon Self-Confidence

There was a significant main effect for stress upon self-confidence ($R^2=0.07$, $b=-0.15$, $P=0.00$), with higher stress associated with lower self-confidence. There was a
significant main effect for perceived support upon self-confidence ($\Delta R^2=0.11$, $b=0.20$, $P=0.00$), with higher perceived support associated with higher self-confidence. There was a significant interaction of stress and perceived support (stress-buffering effect) upon self-confidence ($\Delta R^2=0.02$, $b=0.08$, $P=0.04$). This interaction is displayed graphically in Figure 2.

Stress and Received Support upon Self-Confidence

There was a significant main effect for stress upon self-confidence ($R^2=0.07$, $b=-0.83$, $P=0.00$), with higher stress associated with lower self-confidence. There was a significant main effect for received support upon self-confidence ($\Delta R^2=0.14$, $b=0.22$, $P=0.00$), with higher received support associated with higher self-confidence. There was a significant interaction of stress and received support upon self-confidence ($\Delta R^2=0.07$, $b=0.21$, $P=0.00$). This interaction is displayed graphically in Figure 2.

Stress, Perceived and Received Support, and Self-Confidence

There was a significant main effect for stress upon self-confidence ($\Delta R^2=0.07$, $b=-0.92$, $P=0.00$), with higher stress associated lower self-confidence. There were significant main effects for both perceived support and received support upon self-confidence ($\Delta R^2=0.17$, $P=0.00$), with higher perceived ($b=0.12$, $P=0.00$) and received ($b=0.16$, $P=0.00$) support associated with higher self-confidence. The significant variance ($\Delta R^2=0.07$, $P=0.00$) accounted for by the two interactions was primarily attributable to received support ($b=0.24$, $P=0.00$) and not perceived support ($b=-0.04$, $P=0.37$).

Discussion
The results suggest that both perceived and received support were associated with main and stress-buffering effects upon self-confidence, but that when entered simultaneously, it was primarily received support that contributed to stress-buffering. There was no evidence for perceived support leading to stressors being appraised as less stressful. The results provide evidence of the beneficial effects of social support upon self-confidence and provide partial support for the buffering effects of perceived and received support represented in Figure 1.

The graph displaying the interaction between stress and perceived support upon self-confidence demonstrates that the detrimental effect of stress upon self-confidence was partially reduced for those with high perceived support compared to those with low perceived support (cf. Cohen and Wills, 1985). Similarly, the graph displaying the interaction between stress and received support upon self-confidence demonstrates that the detrimental effect of stress upon self-confidence was partially reduced for those with high received support compared to those with low received support (cf. Cohen and Wills, 1985). The stress-buffering effect of perceived support has been noted in previous research in both sport psychology (Rees and Hardy, 2004) and general social psychology (Cohen and Wills, 1985). Empirical evidence for the stress-buffering effect of received support has, however, been mixed, with some studies finding effects, others finding no effects, and some even finding effects in the opposite direction (Cohen and Wills, 1985; Barrera, 1986; Dunkel-Schetter and Bennett, 1990). It may be easier to detect stress-buffering effects when received support and outcomes are measured simultaneously, as they were in the present study. The nature and time-frame of the variables assessed might also help to explain the generally beneficial effects found for
received support. Jacobson (1986) noted that because stressful situations unfold over
time, support needs may also change. According to Jacobson, emotional support should
be most effective during the onset of stressful situations, whereas informational and
tangible support should be most effective when stressful situations persist. The present
study examined the stressful situations encountered “over the past two weeks” and only
assessed emotional and esteem support. Significant effects for received support may
therefore have been found because the dimensions of support matched the needs elicited
by the stressful events at this particular point in time. Finally, discussing the general
social psychology literature, Dunkel-Schetter and Bennett (1990) suggested two
potential reasons for the inconsistent findings for received support that were satisfied in
the present study. First, by using sport-specific measures of support, attention was paid
to the context in which support was received. Second, the measures of stress and support
were comparable in their level of specificity.

Some researchers have noted a need for research that examines the effects of
both perceived and received support within the same study, hypothesising that buffering
effects would be more likely for received support, whilst perceived support would be
associated with main effects (e.g., Dunkel-Schetter and Bennett, 1990; Bianco and
Eklund, 2001). In the present study, when we tested a model with perceived and
received support entered simultaneously, both types of support were associated with
main effects upon self-confidence, but it was primarily received support that contributed
to the stress-buffering effect upon self-confidence. It may be that although perceived
support can buffer the negative effect of stress up to a point, if the situation remains
unresolved an individual may actually need to receive support to cope with the ongoing demands.

Although there was no evidence for perceived support leading to stressors being appraised as less stressful, it may be that perceived support does not directly influence the relationship between stressors and stress, but rather operates by influencing an individual’s cognitive appraisal process. Schwarzer and Leppin (1991) suggested that support might influence the cognitive appraisal process through altering an individual’s perceptions of his/her available resources to cope, or by leading an individual to feel more in control. This could then lead to appraising the situation as less of a threat and/or more of a challenge (Folkman and Lazarus, 1985). Challenge and threat appraisals are themselves both forms of stress (Lazarus and Folkman, 1984; Lazarus, 2000). Perceived support might, therefore, have been associated with the more specific appraisals of challenge and threat, even though it was not associated with the less differentiated stress measure we used in the present study. Relatively few studies have examined the influence of social support on cognitive appraisal and a greater understanding of these links would be an important contribution to the social support literature (Lakey and Cohen, 2000).

The present study has important implications for social support interventions aimed at increasing self-confidence. The results suggest that emotional and esteem support are associated with beneficial effects upon self-confidence, but that the distinction between perceived and received support needs to be recognised. The main effects imply that both perceived and received support should be increased irrespective of the stress an athlete is under. The stress-buffering effects imply that, although for
those under stress both perceived and received support might be increased, the emphasis
should be on increasing the support athletes actually receive. Items from the support
measures used in the present study provide examples of specific forms of emotional and
esteem support that athletes may find useful. Emotional support includes aspects such as
having someone “who listens to your concerns,” “is always there for you,” “talks things
through with you,” and “helps take your mind off things.” Esteem support includes
aspects such as having someone “who reinforces the positives,” “boosts your
confidence,” “believes in you,” “encourages you,” and “lifts your morale.” Richman et
al. (1989) also suggested a number of other specific strategies, such as arranging social
events away from the sporting environment, providing athletes with communication
training, encouraging athletes to be proactive in both using and providing social support
and coaches having an open door policy, so that they are available to provide help to
athletes when required.

Some potential limitations of the present study should be noted. First, due to the
correlational nature of the study, it is important to note that no causal relationships can
be inferred from the data. For example, a correlation between received support and self-
confidence may indicate that self-confident individuals feel they receive greater support,
rather than the receipt of support leading to higher self-confidence. Second, Gardner et
al. (1998) noted that a major concern with self-report research is that any empirical
demonstration of a relationship between two variables can be attributed, at least in part,
to shared method variance. For example, negative affectivity (Watson and Pennebaker,
1989), social desirability, or individuals avoiding extreme responses, might have led to
inflated relationships (Cohen et al., 1997) between the variables of interest in this study.
Shared method variance is a valid concern for the main effects reported in this study. It seems very unlikely, however, that shared method variance could account for the interactions (stress-buffering effects). The interactions demonstrated that individuals responded differently under high stress conditions than under low stress conditions. Equally, of those reporting high levels of stress, some individuals reported high self-confidence, while others reported low self-confidence. Effects were therefore due to content and not method. Third, the timing of the administration of the perceived and received support measures may be a concern. Perceived support was assessed two weeks prior to the assessment of received support. Received support was assessed two weeks later, because stress-buffering effects of received support are likely to occur as a result of support being mobilised in response to the stress arising from a stressful situation (Gore, 1985). Perceived support, on the other hand, has been shown to be relatively stable over time (Sarason et al., 1986), suggesting that the timing of its assessment is less critical. Nonetheless, received support may appear to have been a more important stress-buffer than perceived support, simply because it was assessed at the same time as the self-confidence measure.

Finally, although self-confidence was assessed in relation to an upcoming event, performance was not assessed. In general social psychology, self-efficacy has been found to mediate the relationship between social support and adaptive outcomes (Duncan and McAuley, 1993). In future researchers could therefore examine if the social support-performance relationship is mediated by self-confidence or other psychological states (Cohen et al., 2000). This assessment would help to identify the
mechanisms via which perceived and received support exert their effects in a performance context (e.g., see Lakey and Cohen, 2000).
References


Table 1

Mean±s and Intercorrelations of Stressors, Stress, Perceived Support, Received Support, and Self-Confidence.

<table>
<thead>
<tr>
<th></th>
<th>Mean±s</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Stressors</td>
<td>2.70±.75</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Stress</td>
<td>2.49±.83</td>
<td>.77*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Perceived Support</td>
<td>3.63±.65</td>
<td>-.06</td>
<td>-.05</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Received Support</td>
<td>3.18±.70</td>
<td>.04</td>
<td>.03</td>
<td>.46*</td>
<td></td>
</tr>
<tr>
<td>5. Self-Confidence</td>
<td>2.60±.63</td>
<td>-.14*</td>
<td>-.27*</td>
<td>.34*</td>
<td>.36*</td>
</tr>
</tbody>
</table>

*Note. * denotes correlation significant at 0.05 level (2-tailed)*
Table 2

*Moderated Hierarchical Regression Analyses.*

<table>
<thead>
<tr>
<th>Dependent Variable</th>
<th>Step</th>
<th>Independent Variable</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$P(F)$</th>
<th>$b^c$</th>
<th>$p(t)^d$</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stress</td>
<td>1</td>
<td>Stressors</td>
<td>.60</td>
<td>.60</td>
<td>.00</td>
<td>.64</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Perceived Support</td>
<td>.60</td>
<td>.00</td>
<td>.93</td>
<td>.00</td>
<td>.97</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Product</td>
<td>.60</td>
<td>.00</td>
<td>.16</td>
<td>-.05</td>
<td>.16</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>1</td>
<td>Stress</td>
<td>.07</td>
<td>.07</td>
<td>.00</td>
<td>-.15</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Perceived Support</td>
<td>.18</td>
<td>.11</td>
<td>.00</td>
<td>.20</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Product</td>
<td>.20</td>
<td>.02</td>
<td>.04</td>
<td>.08</td>
<td>.04</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>1</td>
<td>Stress</td>
<td>.07</td>
<td>.07</td>
<td>.00</td>
<td>-.83</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Received Support</td>
<td>.21</td>
<td>.14</td>
<td>.00</td>
<td>.22</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Product</td>
<td>.28</td>
<td>.07</td>
<td>.00</td>
<td>.21</td>
<td>.00</td>
</tr>
<tr>
<td>Self-Confidence</td>
<td>1</td>
<td>Stress</td>
<td>.07</td>
<td>.07</td>
<td>.00</td>
<td>-.92</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Perceived Support</td>
<td>.24</td>
<td>.17</td>
<td>.00</td>
<td>.12</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Received Support</td>
<td></td>
<td></td>
<td></td>
<td>.16</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Stress*Perceived Support</td>
<td>.31</td>
<td>.07</td>
<td>.00</td>
<td>-.04</td>
<td>.37</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Stress*Received Support</td>
<td></td>
<td></td>
<td></td>
<td>.24</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note. $n=222$. All variables standardised except for Product. Product formed from the two preceding (standardised) variables.

*aStepwise change in $R^2$. bProbability of $F$ for $\Delta R^2$. cUnstandardised regression coefficient in final equation. dProbability of $t$ for $b.*
Figure 1. The potential influence of perceived and received support on self-confidence (adapted from Cohen and Wills, 1985; Cohen et al., 2000).
Perceived or Received Support

Stressor

Stress

Self-Confidence
Figure Caption

2 *Figure 2.* Interaction of Stress and Perceived Support predicting Self-Confidence.

3 Interaction of Stress and Received Support predicting Self-Confidence.