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How Does Perceived Support Lead to Better Performance? An Examination of Potential Mechanisms

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Abstract

Using a high-performance sample of 118 golfers, we examined the relationship between perceived support and performance. Observed variable path analysis revealed that the beneficial effects of perceived support were primarily attributable to esteem support. High levels of esteem support were associated with appraising a competition as less of a threat. Esteem support was also positively associated with situational control, which was positively associated with challenge appraisals and negatively associated with threat appraisals. Challenge appraisals were associated with better performance and threat appraisals with poorer performance. These results highlight possible mechanisms underlying the relationship between esteem support and performance.

How Does Perceived Support Lead to Better Performance? An Examination of Potential Mechanisms

There is considerable evidence to suggest that individuals who perceive their relationships as supportive experience a range of favorable outcomes (Cohen, Underwood, & Gottlieb, 2000; Cohen & Wills, 1985), and recent studies have demonstrated links between social support and Olympic performance (e.g., Gould, Guinan, Greenleaf, Medbery, & Peterson, 2002), performance-related factors in tennis (e.g., Rees & Hardy, 2004), and performance outcome in golf (Rees, Hardy, & Freeman, 2007). Despite this evidence, the specific mechanisms through which social support operates remain poorly understood (Lakey & Cohen, 2000; Saltzman & Holahan, 2002). For researchers and practitioners alike, a detailed examination of the mechanisms underpinning effects of social support is vital if understanding of social support is to progress. Elucidating the mechanisms underpinning effects of social support will not only serve to enhance theory, but will also help in the development of effective theory-led support interventions (Thoits, 1995).

Social support is a complex construct and has been conceptualized in different ways (Bianco & Eklund, 2001; Cohen, Gottlieb, & Underwood, 2000). For example, a distinction exists between the perception of support availability and the perception of support recently received. Although both of these constructs are usually assessed via self-report questionnaires, the constructs typically share as little as 20% common variance (e.g., Goodwin, Costa, & Adonu, 2004) and may have different relationships with outcomes (Barrera, 1986; Lakey & Cohen, 2000). Researchers (e.g., Holt & Hoar, 2006) have therefore argued that authors need to be clear in their conceptualization and measurement of social support. The present study focuses on the perception of support availability.

One way in which the perception of support availability is hypothesized to lead to favorable outcomes (including performance) is through reducing the stressfulness of situations (Barrera, 1986). Individuals with high levels of perceived available support will tend to believe that they have the resources to cope with difficult situations and so are less likely to cognitively appraise those situations as stressful compared to individuals with low levels of perceived available support (Bianco & Eklund, 2001). This process is, of course, limited by its lack of differentiation between types of stress. The transactional theory of stress (Lazarus, 1999; Lazarus & Folkman, 1984) distinguishes between types of stress and emphasizes the important role of cognitive appraisal in the stress process.

Cognitive appraisal is an evaluative process that determines why and to what extent a particular situation is stressful, and consists of two sets of judgments (Lazarus, 1999; Lazarus & Folkman, 1984): primary and secondary appraisal. Primary appraisal involves evaluating what is at stake for the individual, and whether a situation is irrelevant, benign-positive, or stressful. Stress appraisals can be further categorized as harm, benefit, threat, or challenge (Lazarus, 2000). Harm appraisals arise when a loss has already occurred to an individual. Benefit appraisals arise when a gain has occurred. Threat and challenge appraisals are future-orientated and arise if there is potential for a loss or gain respectively. Although empirical evidence has suggested that there is a large overlap between threat and measures of stress (Peacock & Wong, 1990), and the terms threat and stress have been used interchangeably (Lonsdale & Howe, 2004), Lazarus (2000) suggested that challenge and threat are unique types of stress. Challenge is associated with performance facilitation, and threat with impairment (Lazarus, 2000; Skinner & Brewer, 2002). In sport psychology (e.g., Jones & Hardy, 1990) it has been similarly noted that the effect of stress on performance may be perceived in both a negative and a positive manner.

Secondary appraisal involves evaluating what can be done about the situation and the resources the individual has to deal with the demands presented (Lazarus & Folkman, 1984). Appraisals of situational control are a key judgment within secondary appraisal (Peacock & Wong, 1990). It is important, however, to recognize what is meant by control. Beliefs about control relate to feelings of mastery and confidence, but could be assessed as general beliefs about control or situational appraisals of control (Folkman, 1984; Lazarus & Folkman, 1984). In the present study, we assessed situational control appraisals, which reflect the individuals' evaluations of the efficacy of their personal resources to meet the demands of the situation (Peacock & Wong, 1990).

Although other variables, such as perceived competence or self-efficacy, might influence how individuals appraise situations (Lazarus, 1999), the literature suggests perceived available support may also be salient in this regard (Cohen, 1988; Lakey & Cohen, 2000; Schwarzer & Leppin, 1991). Lakey and Cohen (2000) argued that a greater understanding of the links between social support and primary and secondary appraisal would be an important contribution to the support literature. The present study sought to examine whether the influence of perceived available support on an upcoming competitive performance occurred through situational control, challenge, and threat appraisals. Because the focus was on an upcoming performance, harm/loss and benefit appraisals were not examined because they relate to judgments of situations that have already occurred.

Researchers have suggested that high levels of perceived available support may lead individuals to feel in control (Cohen, 1988; Schwarzer & Leppin, 1991). The influence of perceived available support on situational control appraisals might explain why individuals with high perceived available support would view a situation as more of a challenge and less of a

threat. As Lazarus and Folkman (1984) pointed out, in stressful encounters "beliefs about control . . . play a major role in determining the degree to which a person feels threatened or challenged" (p. 76). Further, if situational demands are perceived as taxing or exceeding an individual's resources to cope, the situation would be appraised as a threat (Blascovich & Tomaka, 1996; Lazarus & Folkman, 1984). If situational demands are within an individual's resources to cope, then the situation would be appraised as a challenge. Because perceived available support leads individuals to believe that they possess the resources to cope with situational demands and feel in control (Schwarzer & Leppin, 1991), we would predict that those with high levels of perceived available support would appraise a situation as more of a challenge and less of a threat.

Prior to testing the mechanisms through which perceived available support influences performance, the present study constructed and refined a measure of perceived available support. The purpose of constructing a measure of support was to ensure context-specific and accurate measurement of social support, not to develop and validate a scale. The same strategy has been used in previous social support research (e.g., Rees et al., 2007; Rees & Hardy, 2004), 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 (Bianco & Eklund, 2001; House & Kahn, 1985; Wills & Shinar, 2000). The development and use of situation-specific support measures is similar to the measurement strategy within self-efficacy research (Bandura, 1997), for which it is noted that a "one-measure-fits-all" approach has only limited explanatory and predictive value. Further, because of problematic issues of construct validity and content relevance in sport of the many existing social support measures, measurement in the present study was guided by the insights of high-level

performers regarding their experiences of social support (Rees & Hardy, 2000). Thus, four dimensions of sport-relevant perceived available support were assessed: emotional, esteem, informational, and tangible support (Rees & Hardy, 2000). Emotional support relates to others being there for comfort and security, leading to a person feeling loved and cared for. Esteem support relates to others bolstering a person's sense of competence or self-esteem. Informational support relates to others providing advice or guidance. Tangible support relates to others providing concrete instrumental assistance (Cutrona & Russell, 1990).

Although there is often overlap between dimensions of support in naturalistic settings (Cohen & Wills, 1985; Rees et al., 2007), Cutrona and Russell (1990) argued that each dimension can have unique effects on outcomes. Cutrona and Russell suggested that esteem support may be the most important dimension of support in achievement contexts. No study, however, has examined the unique effects of perceived available emotional, esteem, informational, and tangible support on objective performance outcomes. Identifying which dimensions of support are associated with beneficial effects on performance and how they operate may help to develop effective support interventions,

In light of the preceding discussion, this study focused on the following research question: Do perceived available emotional, esteem, informational, and tangible support exert beneficial effects upon objective performance outcome through their influence on the cognitive appraisal process? To examine this question we hypothesized and tested a path model. We predicted paths from perceived available emotional, esteem, informational, and tangible support to challenge and threat via situational control, along with paths from challenge and threat to performance. Perceived importance was also incorporated into the model as a control variable. Specifically, paths were included from perceived importance to challenge and threat, because

challenge and threat appraisals may be influenced by whether participants perceive that there is something important at stake (Lazarus, 1999).

Method

Participants

Participants were a high performance sample of 118 male British golfers, mean age 25.4 years (SD 6.5), with handicaps ranging from +2 (national/international level) to 4 (strong club players). The golf handicap system runs from "+" numbers (the best players) through "0" to "28" (the poorest players). The number of participants within each handicap were as follows: +2 (n = 4); +1 (n = 9); 0 (n = 23); 1 (n = 31); 2 (n = 22); 3 (n = 17); 4 (n = 12).

Procedures

The study was approved by an institutional ethics review committee, and participants provided informed consent. Recruitment of participants was opportunistic (convenience sample), at various golf courses in the South-East of England on the practice day preceding competitions. Participants completed measures of perceived available support, situational control, challenge, threat, and perceived importance. The presentation of measures was systematically rotated to minimize order effects. After the competition, the participants' scores were recorded. Competitions were held over a maximum of 2 days, ranging from two to four rounds of golf.

Measures

Perception of support availability. Perception of support availability was assessed using a 20-item self-report questionnaire constructed specifically for this study, to ensure the measure was relevant to the population under study (House & Kahn, 1985; Wills & Shinar, 2000). The items were derived from statements made by high-level sportspeople about their social support experiences (Rees & Hardy, 2000), and represented dimensions of emotional, esteem,

informational, and tangible support (cf. Cutrona & Russell, 1990). Prior to data collection, both authors scrutinized the items making up each scale. Another two independent researchers correctly assigned 100% of the items to their social support dimensions. All the items were also scrutinized for relevance and representativeness by two golf teaching professionals, two national level competitors (handicaps of +2 and +1) and two strong club golfers (handicaps of 2 and 3). 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*). Sample items included "who gives you moral support?" (emotional), "who encourages you?" (esteem), "who gives you technical advice?" (informational), and "who helps with tasks to leave you free to practice?" (tangible).

Challenge, threat, situational control, and perceived importance. Challenge, threat, situational control, and perceived importance were assessed using the relevant subscales from the Stress Appraisal Measure (SAM: Peacock & Wong, 1990). The SAM was designed to assess six dimensions of primary (challenge, threat, and centrality) and secondary (controllable-by-self, controllable-by-others, uncontrollable-by-anyone) appraisal, and an overall stressfulness dimension. The present study used the challenge, threat, controllable-by-self (situational control), and centrality (perceived importance) subscales. Each subscale consists of four items, which were reworded for use in this study. The measure asked, "To what extent . . . ," followed by each item in question format. Participants responded on a 5-point Likert scale ranging from 1 (*not at all*) to 5 (*extremely*). Sample items included "am I eager to play in this competition?" (challenge), "does this competition make me feel anxious?" (threat), "do I have the ability to do well in this competition?" (controllable-by-self), and "does this competition have important consequences for me?" (centrality). The SAM has strong psychometric properties (Peacock &

Wong, 1990), and is one of the few instruments developed in a systematic manner specifically to assess dimensions of primary and secondary appraisal (Monroe & Kelley, 1997).

Performance. Performance was assessed by an objective measure of golf performance, based on the number of shots taken in a competition (hereafter termed Golf Performance Index: GPI). Because participants had different handicaps and various competitions were used, on different courses, on different days, and with differing weather conditions, a procedure was employed to standardize scores. The number of shots taken was adjusted based on the participants' handicap and the difficulty rating of the course[1]. To demonstrate the calculation of GPI, let us consider one player as an example. Player A had a handicap of 4 and shot 78 in a competition. The difficulty rating for the competition was 72. Player A's GPI would be calculated by subtracting 72 (the difficulty) and 4 (the handicap) from 78 (the number of shots), which would give a GPI of +2. As competitors completed between two and four rounds, scores were averaged across the rounds, to give the equivalent of a one-round score. Lower GPI represents better performance.

Analyses

Prior to testing the hypothesized path model, the factor structure of the perception of support availability measure and stress appraisal scales were tested using confirmatory factor analyses (Jöreskog & Sörbom, 1996). The hypothesized path model, and subsequent respecifications, were then tested by analyses of covariance structures with LISREL 8.30 (Jöreskog & Sörbom, 1996) using observed variable path analysis. Maximum likelihood estimation was employed. Recursive path models were defined, with perceived importance, emotional, esteem, informational, and tangible support specified as exogenous variables, and all other variables specified as endogenous variables. The gamma matrix defines the structural

relationship between exogenous and endogenous variables. The beta matrix defines the structural relationships between all the endogenous variables. The gamma matrix specified that emotional, esteem, information, and tangible support influenced situational control and that perceived importance influenced challenge and threat. The beta matrix specified that situational control influenced challenge and threat, which both influenced GPI. The psi matrix, which defines the residuals of the endogenous variables, was operationalized as a diagonal matrix. The estimated standardized path coefficients were assessed by their *t* values, using a critical value of 1.96 ($p < .05$). The fit of this model, and other models analyzed in the present study, was assessed by the χ^2 statistic relative to degrees of freedom ratio, Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Comparative Fit Index (CFI), and Non-Normed Fit Index (NNFI). An acceptable fit was demonstrated by cut off values of less than 2 for the χ^2 to degrees of freedom ratio, close to .06 for RMSEA, .08 for SRMR, .95 for CFI, and .95 for NNFI (cf. Hu & Bentler, 1999). The RMSEA and SRMR have a lower limit of 0. The CFI has an upper limit of 1 and the NNFI can exceed 1 (Kelloway, 1998).

Results

Measures

Perception of support availability. A confirmatory factor analysis (Jöreskog & Sörbom, 1996) was conducted on the four-factor model using the data in the present study; the four-factor model revealed a good model fit (cf. Hu & Bentler, 1999; χ^2 (164) = 178.76, $p = .20$; RMSEA = .03; SRMR = .05; CFI = .98; NNFI = .97). Cronbach's alpha internal reliability coefficients for the four subscales ranged from .85 to .90. Means, standard deviations, and the intercorrelations of the subscales and all other variables in this study are displayed in Table 1.

Stress appraisal scales. Confirmatory factor analysis (Jöreskog & Sörbom, 1996) of the four-factor model using the data in the present study revealed a reasonable model fit (cf. Hu & Bentler, 1999; χ^2 (98) = 129.34, p = .00; RMSEA = .05; SRMR = .07; CFI = .94; NNFI = .93). Cronbach's alpha internal reliability coefficients were .80 for challenge, .77 for threat, .80 for controllable-by-self, and .82 for centrality.

Observed Variable Path Analyses

The estimated standardized path coefficients for the model (Model 1) are shown in Figure 1. GPI was predicted by both challenge (β = -.19, t = -2.07) and threat (β = .20, t = 2.16). Challenge (β = .69, t = 10.29) and threat (β = -.46, t = -6.50) were both predicted by situational control. Challenge (γ = .15, t = 2.29) and threat (γ = .45, t = 6.26) were also both predicted by perceived importance. Situational control was predicted by available esteem support (γ = .39, t = 3.32), but not by available emotional (γ = .13, t = 1.08), informational (γ = -.02, t = -.21), or tangible (γ = .16, t = 1.39) support. The total effect of available esteem support upon GPI was -.09 (t = -2.31), with higher esteem support associated with lower (better) GPI. Overall, Model 1 accounted for 9.8% of the variance in GPI, but the data in this study revealed a poor model fit (χ^2(16) = 72.23, p = .00; RMSEA = .18; SRMR = .11; CFI = .89; NNFI = .74). Modification indices for gamma suggested that the fit of the model could be improved by specifying additional paths from all four dimensions of available support directly to both challenge and threat. These paths were added to the model and it was retested (hereafter termed Model 2).

The estimated standardized path coefficients for Model 2 are shown in Figure 2. GPI was predicted by both challenge (β = -.19, t = -2.02) and threat (β = .20, t = 2.05). Challenge was predicted by direct paths from perceived importance (γ = .19, t = 3.23) and situational control (β = .47, t = 6.34), and indirectly by esteem support (γ = .19, t = 2.94). Challenge was not predicted

by either direct or indirect paths from available emotional, informational, or tangible support. Threat was predicted by direct paths from perceived importance (γ = .41, t = 6.13) and situational control (β = -.23, t = -2.91), and by both direct (γ = .39, t = 3.32) and indirect (γ = -.09, t = -2.19) paths from available esteem support. Threat was not predicted by either direct or indirect paths from available emotional, informational, or tangible support. Situational control was significantly predicted by available esteem support (γ = .39, t = 3.32), but not by available emotional (γ = .13, t = 1.08), informational (γ = -.02, t = -.21), or tangible (γ = .16, t = 1.39) support. The total effect of available esteem support upon GPI was -.13 (t = -2.61), with higher esteem support associated with lower (better) GPI. Overall, Model 2 accounted for 10.2% of the variance in GPI and there was a good model fit ($\chi^2(8) = 16.16$, p = .04; RMSEA = .09; SRMR = .04; CFI = .98; NNFI = .92). A $\chi^2_{difference}$ test revealed that the specification of the additional paths from perceived support to challenge and threat significantly improved the fit in Model 2 compared to Model 1 ($\chi^2_{difference} = 56.07$, $p < .05$).

Discussion

This study examined the relationship between perceptions of support availability and objective performance outcome in a competitive sport environment. The findings add to the existing literature that social support may have beneficial effects in a performance context (e.g., Gould et al., 2002; Rees & Hardy, 2004; Rees et al., 2007). The results of the present study suggest that esteem support may be the key perceived available support dimension predicting performance, with high levels of esteem support associated with high levels of performance. This finding is congruent with the suggestion of Cutrona and Russell (1990) that esteem support would be the most effective support dimension in achievement contexts. Although this was the first study to examine the effects of different dimensions of perceived available support on

objective performance outcome, the importance of esteem support has been observed in other studies that used alternative measures of support and/or different outcome variables. For example, Rees et al. (2007) noted the importance of perceptions of received esteem support for golf performance. Esteem support has also been found to be the most important dimension of available support in preventing post-traumatic stress disorder (Hyman, Gold, & Cott, 2003), reducing depression (Johnson, Meyer, Winett, & Small, 2000), and predicting positive health outcomes during recovery from coronary artery surgery (King, Reis, Porter, & Norsen, 1993). As Cohen and Wills (1985) argued, it appears esteem support is beneficial in a wide range of stressful situations.

Lakey and Cohen (2000) noted that too many studies address whether social support is related to outcomes, without providing information about how support contributes to these outcomes. The present study addressed this issue by examining potential mechanisms through which perceived available support influenced performance. It has been suggested that perceived available support influences situational control (Cohen, 1988; Schwarzer & Leppin, 1991), and situational control itself influences the degree to which situations are viewed as a challenge and/or a threat (Lazarus & Folkman, 1984). Model 1 examined these propositions by testing an indirect relationship between perceived support and challenge and threat, with perceived available support operating through appraisals of situational control. The data in this study, however, revealed a poor fit to this model. The addition of direct paths from the four dimensions of perceived support to challenge and threat (Model 2) significantly improved the fit of the model.

Lakey and Cohen (2000) argued that a greater understanding of the links between social support and primary and secondary appraisal would be an important contribution to the support

literature. The significant parameters in Model 2 suggested perceived available esteem support may influence both primary and secondary appraisal constructs. Higher levels of available esteem support were directly associated with appraising the upcoming competition as less of a threat. Higher levels of available esteem support were also associated with indirect effects on both challenge and threat. That is, higher levels of available esteem support were associated with higher levels of situational control, which were associated with challenge and threat. It has been argued that the balance between the situational demands and an individual's resources to cope influences the degree to which a situation is appraised as a challenge and a threat (Blascovich & Tomaka, 1996; Lazarus & Folkman, 1984). Higher levels of available esteem support might have led individuals to believe that they had the resources available to cope with the situational demands and feel more in control (Schwarzer & Leppin, 1991) and, thereby, to appraise the competition as more of a challenge and less of a threat. Challenge and threat appraisals were in turn associated with performance outcome. Congruent with previous research (Lazarus, 2000; Skinner & Brewer, 2002), challenge was associated with performance facilitation, and threat with impairment. According to the stress prevention model (Barrera, 1986) perceived support should lead to favorable outcomes through reducing the stressfulness of situations. However, this process is limited by its lack of differentiation between types of stress. The findings of the present study suggest that perceived available support might influence how stressful situations are cognitively appraised rather than reducing overall stress.

The results of this study provide additional evidence for the beneficial effect that perceived available support may play in relation to sports performance, and there are some important applied implications of these findings. Stress is a major factor in sport (Jones & Hardy, 1990), and increasing levels of perceived available support may help athletes interpret this stress

in a positive way. Hardy and Crace (1991) suggested that sport involves trying to eliminate as many unknowns as possible to increase perceptions of control, which are important for optimal performance. The positive relationship between perceived available support and situational control suggests that developing athletes' perceived available support may help them to cultivate this perception of control. The findings of the present study suggest that esteem support may be the principal dimension of support in this regard. The potential importance of esteem support raises the question, how can one enhance the esteem support athletes perceive to be available? The relationship between perceptions of support and support actually received is only moderate (Barrera, 1986; Bianco & Eklund, 2001; Dunkel-Schetter & Bennett, 1990), and the receipt of support does not necessarily lead to an increase in perceived support (Rook & Dooley, 1985). On the other hand, Norris and Kaniasty (1996), using a longitudinal design, found that received support did affect perceived support over time. A supportive environment may, therefore, need to be nurtured over time for athletes to perceive that they have high levels of support available to them.

Richman, Hardy, Rosenfeld, and Callanan (1989) suggested a number of strategies that could be implemented to help develop a supportive environment, including educating athletes, their coaches, family, and friends as to the benefits of social support, and encouraging athletes to be proactive in using this resource. Cutrona and Cole (2000) also provided a range of mechanisms and techniques that may enhance effective support. Providing opportunities for interactions may increase communication, strengthen bonds between network members, and improve individuals' sense of belonging to a supportive environment. Cognitive therapy techniques may help to change maladaptive beliefs (Cutrona & Cole, 2000), such as if athletes feel they must not request help and support (Hardy, Jones, & Gould, 1996). Further, sport

psychologists could model and/or coordinate appropriate supportive behaviors (Cutrona & Cole, 2000). Modeling appropriate support may help unskilled others who are often poor providers of support, offering unhelpful support or giving inappropriate advice (Lehman, Ellard, & Wortman, 1986), which may have detrimental effects on outcomes. The findings of the present study suggest that in this context golfers may benefit most from available esteem support rather than available emotional, informational, or tangible support. Items from the support measures used in the present study provide examples of specific forms of esteem support that may be beneficial. For example, esteem support includes aspects such as having someone "who reinforces the positives," "tells you, you can do it," "believes in you," "encourages you," and "reassures you."

Some limitations of the present study should be noted. First, although the purpose of the present study was to examine the potential mechanisms through which perceived available support might affect upon performance, it should be acknowledged that other variables might influence how individuals' appraise situations. For example, perceived competence or self-efficacy might influence the degree to which athletes appraise a competition as a challenge or a threat (Lazarus, 1999). Second, with the exception of performance outcome, all variables in this study were assessed by self-report. A potential limitation of this practice is confounders. For example, negative affectivity (Watson & Pennebaker, 1989), social desirability, or individuals avoiding extreme responses, might have led to inflated relationships between the variables of interest (Cohen, Kessler, & Underwood, 1997). Third, perceived available support, situational control, challenge, and threat were also measured simultaneously. Although this potential concern could be overcome by collecting perceived available support prior to challenge, threat, and situational control, such a modification may not change the findings, because perceived available support has been noted to remain stable over time (Sarason, Sarason, & Shearin, 1986).

Fourth, it should be noted that the present study assessed perceptions of support that were generally available in golf, and not the support available with reference to the specific competition. Although general support was found to be beneficial, the findings may have been different if competition-specific support measures had been used. Finally, the sample in the present study consisted of only male golfers. Caution should therefore be exercised in generalizing the findings to females or athletes in different sports.

Blascovich and Mendes (2000) highlighted that before and during performance an individual's original appraisal can be continuously modified. For example, although a competition may initially be viewed as a threat, it may be reappraised as a challenge upon reflection. Future research should examine this appraisal process over time and determine if social support influences how participants reappraise upcoming competitions. Although it is perceived available support that is primarily hypothesized to operate through the cognitive appraisal process (Lakey & Cohen, 2000), future research should also consider the effect of received support on cognitive appraisal. Through receiving help and support, an individual may appraise that he/she now has the resources to cope with a situation, leading to more positive reappraisal.

Researchers (e.g., Lakey & Cohen, 2000; Saltzman & Holahan, 2002) have highlighted the need to identify how social support influences a range of outcomes. Barrera (1986) proposed a number of models that explain how social support may exert beneficial effects upon outcomes. One model is the stress prevention model, which posits that perceived available support reduces the stressfulness of situations, leading to more favorable outcomes. Similarly, Bianco and Eklund (2001) suggested that because individuals who are high in perceived available support know that they have the resources to cope with difficult situations, they are less likely to view events as

stressful compared to individuals with lower levels of perceived available support. The present study highlighted that a more precise analysis of how situations are appraised may help to better elucidate the effects of perceived available support. Both challenge and threat are types of stress (Lazarus, 1999; Lazarus & Folkman, 1984), and in the present study available esteem support was associated with higher levels of challenge appraisals, which were associated with better performance. It may be, therefore, that perceived available support does not always exert beneficial effects through reducing stress. Instead, individuals with high levels of available esteem support may appraise competitive situations as more of a challenge and less of a threat. This distinction is subtle compared to the stress prevention model, but perhaps an important one considering that not all stress is associated with negative consequences (Jones & Hardy, 1990).

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Footnote

[1] The difficulty rating was the Competition Standard Scratch, which is a standard measure that is used throughout Great Britain to adjust the handicaps of golfers after they have played in a competition. It is calculated by the host golf club using the scores returned in the competition, based on a standard formula developed by the Council of National Unions (http://www.congu.com/faqDetail2.asp?id=149).

Table 1

Means, SD, and Intercorrelations of Perceived Support, Situational Control, Challenge, Threat, and GPI

	Mean	SD	1	2	3	4	5	6	7	8
1. Emotional Support	3.58	.78								
2. Esteem Support	3.53	.80	.74*							
3. Informational Support	3.18	.80	.50*	.51*						
4. Tangible Support	3.11	.85	.58*	.59*	.68*					
5. Perceived Importance	2.65	.82	-.02	-.08	.03	-.08				
6. Situational Control	3.03	.77	.50*	.57*	.35*	.45*	.12			
7. Challenge	2.89	.81	.56*	.57*	.49*	.53*	.23*	-.70*		
8. Threat	2.63	.79	-.43*	-.56*	-.40*	-.46*	.41*	-.43*	-.41*	
9. GPI	2.75	2.47	-.28*	-.29*	-.20*	-.10	-.02	-.20*	-.27*	.27*

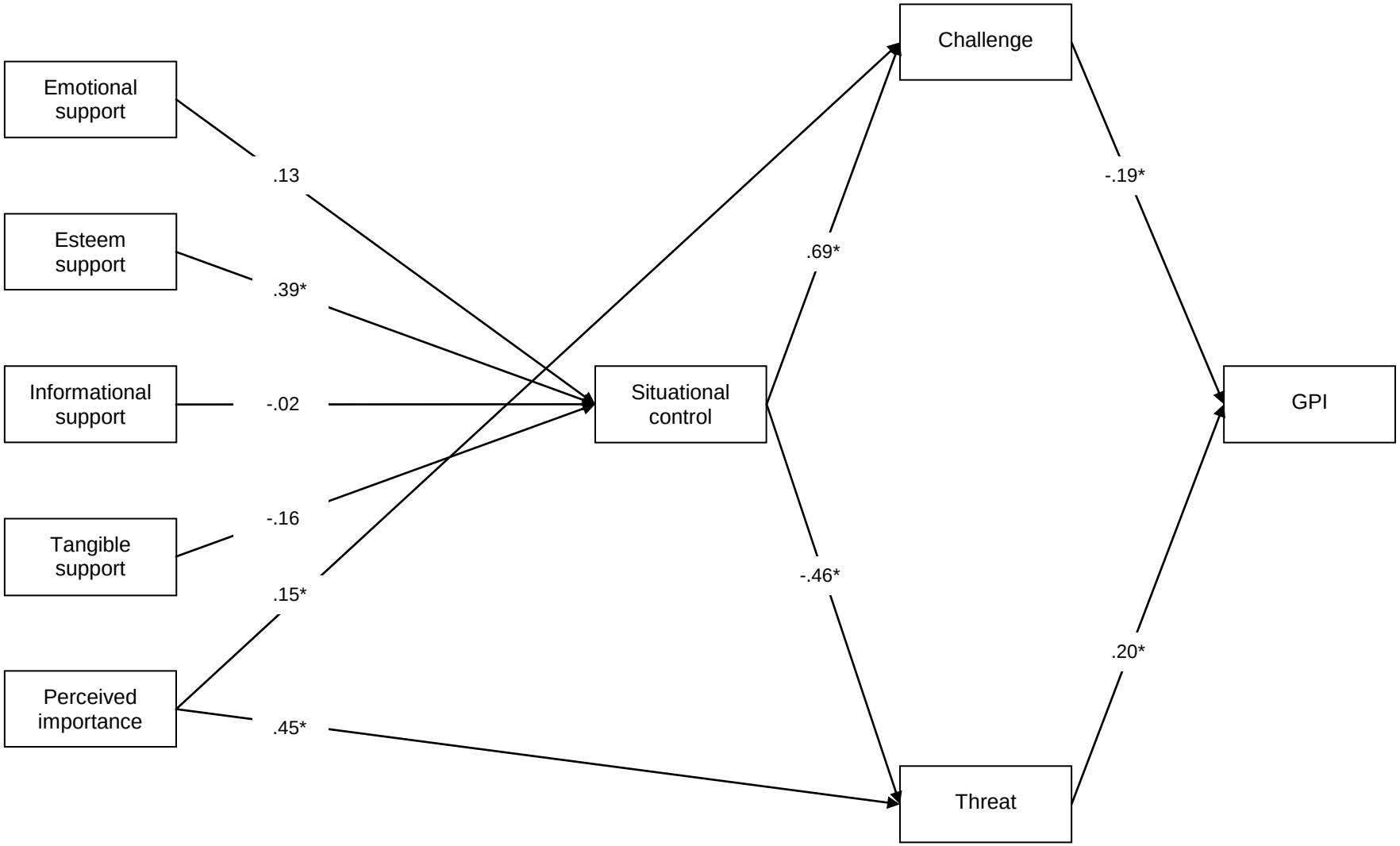
Note. * denotes correlation significant at .05 level (2-tailed)

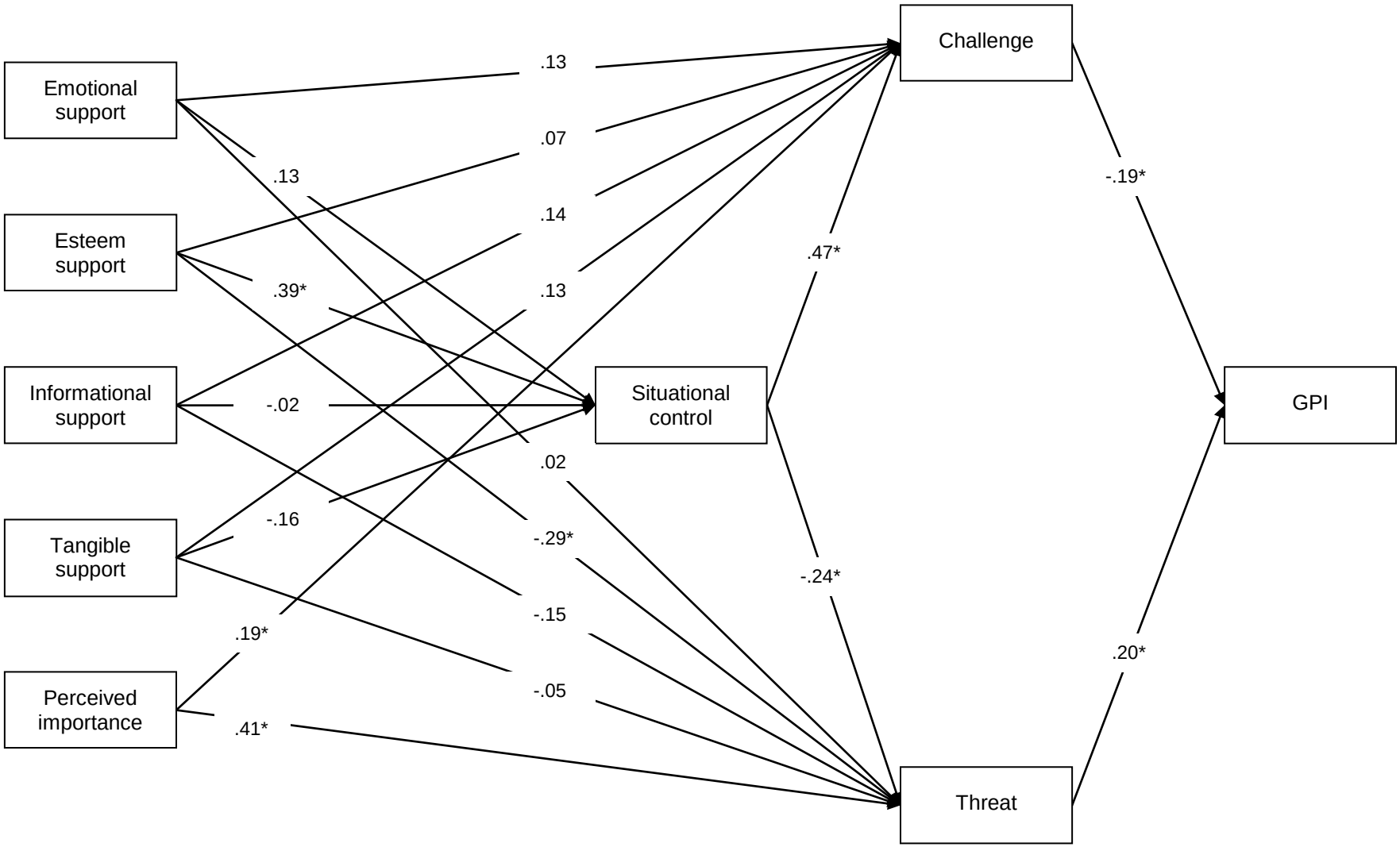
Figure Caption

Figure 1. The estimated standardized path coefficients for Model 1.

Figure 2. The estimated standardized path coefficients for Model 2.

Note. * denotes standardized path coefficient significant at .05 level


Challenge
Emotional support
.13
Esteem support
.39*
Informational support
-.02
Situational control
.69*
-.19*
GPI
-.16
Tangible support
.15*
-.46*
.20*
Perceived importance
.45*
Threat


Emotional support
Esteem support
Informational support
Tangible support
Perceived importance
Situational control
Challenge
Threat
GPI
.13
.07
.14
.13
.13
.39*
-.02
-.16
.19*
.41*
.02
-.29*
-.15
-.05
.47*
-.24*
-.19*
.20*