

## **A STRENGTH-BASED APPROACH TO ATHLETE ENGAGEMENT: AN EXPLORATORY STUDY**

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### **ABSTRACT**

*Strength-based interventions have proven effective in the sport and athletic environment in a number of studies. However, few studies have investigated the effect of an integrated strength-based approach on positive athlete outcomes. This study investigated the effect of team-strength use and individual strength use on athlete engagement. Participants were 235 semi-professional athletes from South Africa's major sports, football and rugby. A cross-sectional, quantitative and exploratory research design was implemented. Structural equation modelling was used to determine the empirical validity of the relationship between the variables. Statistical analyses revealed individual strength use as a predictor of athlete engagement, and team-strength use as an enabler of individual strength use. Individual strength use further mediated the relationship between team-strength use and athlete engagement. These findings provide valuable knowledge content in terms of the development of athletes through a strength-based approach. The authors discuss the practical implications of the results and make recommendations for interventions and future research.*

**Key words:** Strength-based approach; Athlete engagement; Structural equation modelling; Mediation.

### **INTRODUCTION**

The development of the field of Positive Psychology resulted in an emphasis on the strengths of people, as opposed to studying their weaknesses and pathology, which was the customary focus of traditional psychology during its earlier history (Seligman & Csikszentmihalyi, 2000; Linley *et al.*, 2006). Compton (2005) states that Positive Psychology is concerned with what human beings can excel at, as opposed to what they do wrong. This view is shared by Cravens *et al.* (2010), who point out that Positive Psychology is aimed at studying, establishing and enhancing levels of positive emotions and attributes amongst people. The strength-based approach forms part of this recent paradigm in psychology. This concept of strength-based approaches was first introduced by Buckingham and Clifton (2001), who describe it as a developmental approach that emphasises the positive qualities of people and develops them in order for the individual to achieve optimal performance.

The strength-based approach was introduced as an alternative to the traditional deficit-based approach. This tenet adopts the view that every human being has a unique set of potentialities and strengths, which can be used to boost performance in a variety of contexts (Seligman & Csikszentmihalyi, 2000; Wood *et al.*, 2011). From the perspective of Positive Psychology, strengths can be described as unique inherent capabilities that an individual hold, emerging from a specific way of feeling, thinking or acting and that drives the individual towards optimal performance and assists with the attainment of goals (Linley *et al.*, 2006). The identification, utilisation and development of strengths are major prerequisites for optimal growth and realisation of human potential (Kaiser & White, 2009).

### Value of a strength-based approach in a sport context

The strength-based approach has long been used purposefully in the athletic community as a means of developing flourishing athletes and harnessing positive outcomes (Noble *et al.*, 2000). In fact, it can be argued that it resonates most closely with the development of athletes from a psychological perspective, as it is concerned with optimum performance and heightened achievement in individuals that are outcomes very much associated with psychological intervention in sport (Sarkar & Fletcher, 2013). This means that a strength-based approach provides a useful platform to athletes, as it is focused on optimisation and peak performance (Kaiser & White, 2009). The approach assists people to optimally utilise the resources available to them and to translate their inherent capabilities into desirable end results (Stander *et al.*, 2014). A strength-based approach is focused on potential and thus capitalises on the virtues of the athlete (Linley *et al.*, 2006).

In research conducted on athletes, a number of interventions aimed at developing strengths have yielded favourable outcomes. A summary of some of these studies is provided in Table 1.

*Table 1.* **RESEARCH STUDIES IN SPORT WHERE A STRENGTH-BASED APPROACH LED TO POSITIVE OUTCOMES**

Author(s)	Target population	Outcomes
Gould <i>et al.</i> (2002)	Olympic athletes	Developmental process of enhancing psychological virtues of athletes through workshop intervention predicted competition success.
Golby & Sheard (2004)	Professional rugby league players from Great Britain	Strength-based psychological skills training enhanced hardiness levels and subsequently led to greater performance.
Gordon (2012)	Sri Lankan professional cricket players	Strength-based coaching (individually and in small group contexts) enhanced levels of mental toughness amongst participants.

Although isolated strength-based interventions, as highlighted in Table 1, have yielded positive athlete outcomes in a number of studies, no documented work has examined the value of an overarching team culture of strength use on group level, or the total capacity of an athlete for strength use on individual level and its subsequent effect on positive outcomes. Team-strength use refers to the extent to which the culture, policies and practices of a sport team enable the use of strengths of its members (Stander & Mostert, 2013). Individual strength use entails the individual's inherent capacity to proactively capitalise on his/her character strengths to achieve goals (Stander *et al.*, 2014). It is important to explore the predictive potential that the strength dimensions, both team and individual, can yield within the athletic environment. The need for research in this domain in order to understand the potential of an integrated strength-based approach in the prediction of favourable athlete outcomes is important. This study explores the value of team and individual dimensions of strength use in predicting athlete engagement.

### **Strength-based approach and athlete engagement**

Athlete engagement refers to an athlete's general fondness over his/her sport (Lonsdale *et al.*, 2007a). It comprises four factors, namely confidence, dedication, enthusiasm and vigour. These factors have been defined by Lonsdale *et al.* (2007a). Confidence indicates "a belief in one's ability to attain a high level of performance and achieve desired goals" (Lonsdale *et al.*, 2007a:472). Dedication refers to "a desire to invest effort and time towards achieving goals" (Lonsdale *et al.*, 2007a:472). Enthusiasm is characterised through "feelings of excitement and high levels of enjoyment" (Lonsdale *et al.*, 2007a:479). Vigour is "a sense of physical and mental liveliness" (Lonsdale *et al.*, 2007a:472). Athlete engagement is an important prerequisite for athletes to experience dispositional flow (Hodge *et al.*, 2009) and has been linked to athletic performance (Russel *et al.*, 2005). The link between athlete engagement and performance is due to the willingness of the engaged athlete to invest greater effort to achieving success in his/her sport (Hodge *et al.*, 2009).

It is plausible that both the team and individual strength dimensions will predict higher levels of athlete engagement. Firstly, team-strength use can be described as a resource from the perspective of the established theory known as the job demands resources (JD-R) model (Stander & Mostert, 2013). This model holds that all functional roles, within any context, come with a set of demands and resources (Bakker *et al.*, 2003; Bakker & Demerouti, 2007). Resources constitute those properties that make the attainment of organisational or team goals possible (Demerouti & Bakker, 2011). Job resources in the athletic environment has been associated with outcomes, such as greater team cohesion (Pummel *et al.*, 2008), as well as easier transition between competitive levels of sport (Jones *et al.*, 2014). It is possible to argue that team-strength use is a resource, as a team culture that promotes the strengths of its members leading to higher levels of enjoyment and ultimately, performance (Kaiser & White, 2009). It is also possible that team-strength use will influence a culture where the expression of individual strengths is encouraged and, as a result, more readily implemented by individual athletes.

Secondly, it is predicted that individual strength use of athletes will promote their level of engagement with their sport. Athletes, who have the inherent will to promote their strengths, will engage in their sport in a manner that is purposeful and directed, seeking to enable their character strengths in such sport (Lonsdale *et al.*, 2007b). Based on the broaden-and-build

theory, the use of strengths will lead to positive emotions and thought-action repertoires that leave the person in an engaged state (Frederickson, 2002).

The potential of the individual strength-based approach towards fostering engagement is even greater than that of team-strength use, as proven in a number of studies (Stander & Mostert, 2013; Stander *et al.*, 2014). Thus, although the value of team-strength use is undisputed, proactive behaviour toward strength use on individual level should yield larger potential value toward athlete engagement. This is because individual strength use implies a more active participation and behaviour from the athlete; manifesting in inherent capabilities that facilitate resolve and resilience and make the attainment of goals more possible (Hobfoll *et al.*, 2003).

The predisposition of athletes to proactively utilise their strengths, also translates resources available in the athletic context into desired outcomes more readily. This is due to the anticipatory nature of the individual who can, on a psychological level, harness his/her individual virtues, mediating towards a higher likelihood of the attainment of goals through optimising the resources available to such an individual in a particular context (Hobfoll *et al.*, 2003).

## **PURPOSE OF RESEARCH**

The aim of this study was to investigate the relationship between team-strength use, individual strength uses and athlete engagement. The study will address a number of research gaps, namely evaluating the relationship between a strength-based approach and athlete engagement and providing knowledge on the effect of an integrated strength-based approach on both the team and individual level within the athletics environment.

## **METHODOLOGY**

### **Research design**

A cross-sectional research design was implemented, analysing data gathered from a large sample group that represented 2 sporting codes. Maree (2011) described that a cross-sectional research design is utilised when data are gathered at a singular point in time. The study was conducted with time consciousness, that being the seasonal considerations of competitive sport of the athletes. A quantitative research design was implemented. This study was exploratory and descriptive.

### **Participants and procedure**

Participants in this study were 235 semi-professional athletes, participating in South Africa's 2 foremost sports (from spectator and participation perspectives), namely football and rugby. These athletes were selected from 2 university campuses, 1 based in Gauteng and the other in the North-West Province. The criteria for selection and classification of the semi-professional nature of participants were:

- They had to receive a form of compensation for participation in their sport (salary, bursary, or stipend).

- They had to be busy with another significant time-consuming activity alongside their active sport participation, such as studying.
- They had to have clear aspirations of playing sport at an elite (professional) level.

Research was conducted through the distribution of questionnaires after a match that the participating athletes competed in. This was done by engaging with the management teams of the sporting codes of the 2 campuses. Participants assembled in pre-arranged lecture halls on campus close to the field after participating in a game; and were briefed about the research process. Enough time was allowed post-match for athletes to complete team talks, take showers and attend to general post-match affairs. Questionnaires were distributed and the researchers were present at the venue for the purpose of answering any questions the participants may have had. Questionnaires took about 20 minutes to complete. All the athletes were informed of the voluntary and confidential nature of their participation. Participants were distinguished based on the type of sport in which they participated (football or rugby) and their level of participation (club/university provincial or national). Ethical approval was obtained for the study (NWU-00108-14-S8). Table 2 elaborates on the demographic characteristics of the participants.

Table 2. CHARACTERISTICS OF PARTICIPANTS (N=235)

Item	Category	Frequency	Percentage (%)
Gender	Male	173	73.60
	Female	62	26.40
Sport	Football	167	71.10
	Rugby	68	28.90
Level of participation	University	163	69.40
	Club/Provincial	46	19.60
	National	21	8.90
	Missing information	5	2.10

Participants were diverse pertaining to gender, sport and level of participation. The mean age of the participants was  $20.73 \pm 2.49$  years.

## Measuring instruments

### *A biographical questionnaire*

This questionnaire was designed by the authors and was incorporated into the study to distinguish such factors as, type of sport, level of participation and gender.

### *Team-strength use and proactive behaviour towards strength use*

Team- and individual strength use were assessed by an adapted version of the *Strength Use and Deficit Improvement Questionnaire* (SUDIQ) by Van Woerkom *et al.* (2016). The measure comprises 4 items for the dimension of team-strength use and 4 items for individual strength use. Items are scored on a 7-point frequency scale ranging from 0 (*almost never*) to 6 (*almost always*). An example of an adapted team-strength use item is, "My team allows me to use my talents". Sufficient reliability has been established for the SUDIQ team-strength use dimension,

including a Cronbach alpha coefficient of 0.96 (Stander & Mostert, 2013). An example item for individual strength use is, "In my sport, I focus on the things I do well". Stander and Mostert (2013) determined reliability of  $\alpha=0.93$  for individual strength use through the Cronbach alpha coefficient.

### ***Athlete engagement***

Athlete engagement was assessed using the *Athlete Engagement Questionnaire* (AEQ) developed by Lonsdale *et al.* (2007a). This is a 16-item questionnaire containing 4 subscales, namely confidence, dedication, enthusiasm and vigour. A 5-point frequency scale is applied in the AEQ, with responses ranging from 1 (*almost never*) to 5 (*almost always*). As example, an item for confidence is, "I believe I am capable of accomplishing my goals in sport". For dedication, an example item is "I am determined to achieve my goals in sport". Enthusiasm is reflected through the example item, "I feel excited about my sport". An example of an item for vigour is, "I feel really alive when I participate in my sport". Lonsdale *et al.* (2007a) reported Cronbach Alpha coefficient values of 0.84 to 0.89 for the four AEQ scales.

### **Statistical analysis**

Mplus 7.31 (Muthén & Muthén, 2015) was utilised to implement structural equation modelling methods. First, a measurement model was specified and investigated for fit in a confirmatory factor analysis (CFA) framework. The standard fit indices were considered, namely Comparative Fit Index and Tucker-Lewis Index (CFI and  $TLI \geq 0.90$ ), Root mean square error of approximation ( $RMSEA \leq 0.08$ ) and Standardised root mean square residual ( $SRMR \leq 0.05$ ). Given acceptable fit of the measurement model, structural regressions were added to the measurement model to form the structural model.

For all parameters in the model, statistical significance was set at the 95% level ( $p < 0.05$ ). For correlations, practical significance of the values will be taken at 0.30 and above (medium effect), and 0.50 and above (large effect) (Cohen, 1988). Due to the high correlations between the components of athlete engagement, it was decided to create a second order factor from its components. In terms of the potential mediating effect of individual strength use between team-strength use and athlete engagement bootstrapped resampling was used in order to generate 95% confidence intervals (CI's) for the indirect effect with 10 000 draws from the data (Rucker *et al.*, 2011).

## **RESULTS**

### **Fit of measurement model and correlations**

Results of the CFA revealed that the measurement model was an adequate fit to the data (CFI=0.93;  $TLI=0.92$ ;  $RMSEA=0.07$ ;  $SRMR=0.05$ ). Results of the correlation matrix are presented in Table 3.

All of the main study variables, namely team-strength use, individual strength use and athlete engagement were practically significantly related to each other with at least medium effect. Specifically, team-strength use and individual strength use were correlated with large practical effect ( $r=0.66$ ). Athlete engagement was more strongly correlated with individual strength use

( $r=0.74$ ) than with team-strength use ( $r=0.49$ ). Furthermore, the components of athlete engagement were highly correlated and some presented potential issues with discriminant validity; this gave support to the decision to estimate athlete engagement as a second order factor to minimise the issue of multicollinearity. Variables revealed sufficient internal consistency, with all Cronbach's Alpha values being higher than 0.70 (Nunnally & Bernstein, 1994).

Table 3. CORRELATIONS BETWEEN VARIABLES

Variables	1	2	3	4	5	6	7
Team-strength use	(0.93)						
Individual strength use	0.66**	(0.87)					
Confidence	0.43*	0.64**	(0.88)				
Dedication	0.45*	0.67**	0.79**	(0.87)			
Vigour	0.44*	0.66**	0.76**	0.80**	(0.85)		
Enthusiasm	0.43*	0.64**	0.75**	0.79**	0.77**	(0.71)	
Athlete engagement	0.49*	0.74**	0.86**	0.91**	0.88**	0.87**	(0.94)

\*=Medium practical significance      \*\*=Large practical significance  
Alpha coefficient in brackets on the diagonal

### Structural regression and indirect effect

The structural model was also found have adequate fit to the data: CFI=0.92; TLI=0.91; RMSEA=0.07; SRMR=0.05. Table 4 presents the results from the structural regressions in the model.

Table 4. STANDARDISED ESTIMATES FOR STRUCTURAL PATHS

Path	$\beta$	SE	p	Result
TSU → Athlete engagement	0.01	0.09	0.976	Not significant
ISU → Athlete engagement	0.72	0.08	0.001	Significant
TSU → ISU	0.64	0.06	0.001	Significant

TSU=Team-strength use      ISU=Individual strength use  
 $\beta$ =Standardised beta coefficient      SE=Standard error      p=Two-tailed significance

As evident from Table 4, the path from team-strength use to individual strength use was significant ( $\beta=0.64$ ;  $p<0.01$ ), but the direct path from team-strength use to athlete engagement was not significant ( $\beta=0.01$ ;  $p=0.976$ ). However, the path from individual strength use to athlete engagement was significant ( $\beta=0.72$ ;  $p<0.01$ ). The model explained 60.20% of the variance in athlete engagement.

**Table 5. INDIRECT PATHS BETWEEN TEAM-STRENGTH USE AND ATHLETE ENGAGEMENT**

Variable	Estimate	p	95% CI	
			Lower	Upper
Individual strength use (ISU)	0.46	0.001	0.30	0.63

p<0.001 CI = Confidence interval

Although team-strength use did not predict athlete engagement, an indirect effect existed when individual strength use was added. The results from the bootstrapping revealed a mediating effect between team-strength use and athlete engagement through individual strength use (0.46; S.E.=0.08; 95% CI [0.30, 0.63];  $p<0.001$ ), illustrated in Table 5. This provided evidence for an indirect-only mediation model (Zhao *et al.*, 2010).

## DISCUSSION

The aim of this study was to investigate the relationship between team-strength use, individual strength uses and athlete engagement. The results revealed direct paths between individual strength use and athlete engagement. Although it could not be conclusively proven that team-strength use predicted athlete engagement, indirect effects were established, with individual strength use serving as a mediator between team-strength use and athlete engagement. Furthermore, team-strength use was revealed as a predictor of individual strength use.

The greater potential of individual strength uses as revealed in this study may be attributed to the relatively easier manner in which individuals use their inherent capabilities, as opposed to team-strength use which suggests the creation of a team culture; something that is more difficult and takes longer (Dolny, 2009). It is difficult to build trust, team and individual awareness in a short period of time. One can further argue that the sample was a group of semi-professional athletes and that the coaches of semi-professional athletes tend to spend less time focusing on team development compared to full professional athletes that spent most of their time together as a team. Usually a professional team will be together for a longer period, where the team will optimise the use of individual strengths through a culture of trust and caring (Lencioni, 2005; Mach *et al.*, 2010).

## PRACTICAL IMPLICATIONS

According to these results, it is evident that individual strength use was a significant and stronger predictor of athlete engagement than team-strength use. Individual strength use refers to an individual's inherent capacity to utilise his/her virtues to achieve desired outcomes (Hobfoll *et al.*, 2003). Thus, sport coaches, team managers and administrators should focus their energy towards interventions that promote the proactive utilisation of individual strengths in an effort to develop confident, vigorous, enthusiastic and dedicated athletes that is the core dimensions of engagement (Lonsdale *et al.*, 2007b). This engagement will also translate into enhanced athletic performance and achievement (Lonsdale *et al.*, 2007b). Individual interventions refer to the development of the individual athlete and are best achieved through such aspects as sport psychological services, coaching, mentoring and guiding the athlete,



thereby assisting such athletes to explore means of utilising his/her strengths in the most effective manner.

The study revealed that team-strength use predicted individual strength use. This is important, as it suggests that, although team-strength use may not directly affect engagement, it does influence the individual athlete to more readily use his/her unique character strengths, which in turn will lead to the engagement experience. Moreover, the results suggested that, should an athlete have the capability and capacity for individual strength use, that athlete will more actively translate a team culture of strength use into the engagement experience. Thus, although team-strength use may not be a direct influencer of engagement, this study still proposes a strong focus on creating a culture of team-strength use as it will indirectly affect engagement through its inducing properties on an individual level. This supports the work of Elbe *et al.* (2010), who have argued that a team culture is a vital part of the individual athlete experience. Coaches and administrators are, therefore, encouraged to develop a culture of team-strength use, by accentuating the virtues of individual players in the context of the whole team and by having players share and gain knowledge on each other's virtues.

In summary, the premise of this research is that individual strength use must be the core developmental focus to achieve engagement amongst athletes; however, team-strength use should also be promoted as part of a culture that enables and promotes the individual strength use of the sport team members. This should be done in an integrated and complementary fashion.

## CONCLUSION AND RECOMMENDATIONS

Future research should be directed at investigating the effect of an integrated strength-based approach on other favourable athlete outcomes, such as flow, performance and mental focus. Furthermore, a deeper understanding is required of both strength dimensions in the realm of sport and particularly of the individual dimension. Such understanding relates to the antecedents of a strength-based approach in the context of sport, as well as the demographic variables that influence the levels of the strength dimensions. Such demographic variables may include the level of participation of the athlete in his/her sport, the intensity and frequency of training preparation the athlete invests in his/her sport and the age/experience of the athlete. Comparing these results with a group of full-time professional athletes can contribute to our understanding of the role of optimising individual and team-strengths. Finally, this study used a cross-sectional design. Future studies may benefit from a longitudinal approach, by investigating both the effect of individual strength utilisation capacities and a team environment conducive for strength use on athlete outcomes.

## REFERENCES

- BAKKER, A.B. & DEMEROUTI, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3): 309-328.
- BAKKER, A.B.; DEMEROUTI, E.; TARIS, T.; SCHAUFELI, W.B. & SCHREURS, P. (2003). A multi-group analysis of the Job Demands-Resources model in four home care organizations. *International Journal of Stress Management*, 10(1): 16-38.

- BUCKINGHAM, M. & CLIFTON, D.O. (2001). *Now, discover your strengths*. New York, NY: Free Press.
- COHEN, J. (1988). *Statistical power analysis for the behavioural sciences* (2<sup>nd</sup> ed.). Hillsdale, NJ: Lawrence Erlbaum Associates.
- COMPTON, W.C. (2005). *An introduction to positive psychology*. Belmont, CA: Wadsworth.
- CRAVENS, K.S.; OLIVER, E.G. & STEWART, J.S. (2010). Can a positive approach to performance evaluation help accomplish goals? *Business Horizons*, 53(3): 269-279.
- DEMEROUTI, E. & BAKKER, A.B. (2011). The job demands-resources model: Challenges for future research. *South African Journal of Industrial Psychology*, 37(2): 1-9.
- DOLNY, H. (2009). *Team coaching: Artists at work*. Johannesburg (South Africa): Penguin.
- ELBE, A.M.; STRAHLER, K.; KRUSTRUP, P.; WIKMAN, J. & STELTER, R. (2010). Experiencing flow in different types of physical activity intervention programs: Three randomized studies. *Scandinavian Journal of Medicine and Science in Sports*, 20(1): 111-117.
- FREDERICKSON, B. (2002). *Handbook of positive psychology*. New York, NY: Oxford University Press.
- GOLBY, J. & SHEARD, M. (2004). Mental toughness and hardiness at different levels of rugby league. *Personality and Individual Differences*, 37(1): 933-942.
- GORDON, S. (2012). Strengths-based approaches to developing mental toughness: Team and individual. *International Coaching Psychology Review*, 7(2): 210-222.
- GOULD, D.; DIEFFENBACH, K. & MOFFETT, A. (2002). Psychological characteristics and their development in Olympic champions. *Journal of Applied Sport Psychology*, 14(3): 172-204.
- HOBFOLL, S.E.; JOHNSON, R.J.; ENNIS, N. & JACKSON, A.P. (2003). Resource loss, resource gain, and emotional outcomes among inner city women. *Journal of Personality and Social Psychology*, 84(3): 632-663.
- HODGE, K.; LONSDALE, C. & JACKSON, S. (2009). Athlete engagement in elite sport: An exploratory investigation of antecedents and consequences. *Sport Psychologist*, 23(1): 186-202.
- JONES, R.A.; MAHONEY, J.W. & GUCCIARDI, D.F. (2014). On the transition into elite rugby league: Perceptions of players and coaching staff. *Sport, Exercise, and Performance Psychology*, 3(1): 28-45.
- KAISER, R.B. & WHITE, R.P. (2009). Debunking an unbalanced approach to development. *Leadership in Action*, 28(5): 9-12.
- LENCIONI, P. (2005). *Overcoming the five dysfunctions of a team*. San Francisco, CA: Jossey-Bass.
- LINLEY, P.A.; JOSEPH, S.; HARRINGTON, S. & WOOD, A.M. (2006). Positive psychology: Past, present, and (possible) future. *Journal of Positive Psychology*, 1(1): 3-16.
- LONSDALE, C.; HODGE, K. & JACKSON, S. (2007). Athlete engagement: II. Development and initial validation of the Athlete Engagement Questionnaire. *International Journal of Sport Psychology*, 38(4): 471-492.
- LONSDALE, C.; HODGE, K. & RAEDEKE, T.D. (2007). Athlete engagement: A qualitative investigation of relevance and dimensions. *International Journal of Sport Psychology*, 38(4): 451-470.
- MACH, M.; DOLAN, S. & TZAFRIR, S. (2010). The differential effect of team members' trust on team performance: The mediation role of team cohesion. *Journal of Occupational and Organizational Psychology*, 83(3): 771-794.
- MAREE, K. (Ed.). (2011). *First steps in research*. Pretoria (South Africa): Van Schaik.
- MUTHÉN, L.K. & MUTHÉN, B.O. (2015). *Mplus user's guide* (6<sup>th</sup> ed.). Los Angeles, CA: Muthén & Muthén.

- NOBLE, D.N.; PERKINS, K. & FATOUT, M. (2000). On being a strength coach: Child welfare and the strengths model. *Child and Adolescent Social Work Journal*, 17(2): 141-153.
- NUNNALLY, J.C. & BERNSTEIN, I.H. (1994). *Psychometric theory* (3<sup>rd</sup> ed.). New York, NY: McGraw-Hill.
- PUMMEL, B.; HARWOOD, C. & LAVALLEE, D. (2008). Jumping to the next level: A qualitative examination of within-career transition in adolescent event riders. *Psychology of Sport and Exercise*, 9(4): 427-447.
- RUCKER, D.D.; PREACHER, K.J.; TORMALA, Z.L. & PETTY, R.E. (2011). Mediation analysis in social psychology: Current practices and new recommendations. *Social and Personality Psychology Compass*, 5(6): 359-371.
- SARKAR, M. & FLETCHER, D. (2013). How should we measure psychological resilience in sport performers? *Measurement in Physical Education and Exercise Science*, 17(4): 264-280.
- SELIGMAN, M.E.P. & CSIKSZENTMIHALYI, M. (2000). Positive psychology: An introduction. *American Psychologist*, 55(1): 5-14.
- STANDER, F.W. & MOSTERT, K. (2013). Assessing the organisational and individual strengths use and deficit improvement amongst sport coaches. *South African Journal of Industrial Psychology*, 39(2): 1-13.
- STANDER, F.W.; MOSTERT, K. & DE BEER, T.L. (2014). Organisational and individual strengths use as predictors of engagement and productivity. *Journal of Psychology in Africa*, 24(5): 403-409.
- VAN WOERKOM, M.; MOSTERT, K.; ELS, C.; BAKKER, A.B.; DE BEER, L.T. & ROTHMANN, S. (2016). Strengths use and deficit correction in organizations: Development and validation of a questionnaire. *European Journal of Work and Organizational Psychology*, 25(6): 960-975.
- WOOD, A.M.; LINLEY, P.A.; MALTBY, J.; KASHDAN, T.B. & HURLING, R. (2011). Using personal and psychological strengths lead to increase in well-being over time: A longitudinal study and the development of the strengths use questionnaire. *Personality and Individual Differences*, 50(1): 15-20.
- ZHAO, X.; LYNCH, J.G. & CHEN, Q. (2010). Reconsidering Baron and Kenny: Myths and truths about mediation analysis. *Journal of Consumer Research*, 37(2): 197-206.

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