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Personality and performance in real-world competitions: Testing trait activation of fear of negative evaluation, dispositional reinvestment, and athletic identity in the field

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ABSTRACT

Objectives: Based on the trait activation principle, researchers have tested whether personality traits are capable of predicting sport performance (under pressure). Typically, however, these investigations followed experimental approaches in the laboratory and only rarely in the field. Accordingly, the purpose of this study was to test for the generalizability of findings gained in these experimental studies and to investigate potential trait activation for real-world performance in competitions. Based on prior studies on the prediction of performance under pressure, the selected personality traits involved fear of negative evaluation, dispositional reinvestment, and athletic identity.
Design: Personality traits were used as predictors for low-pressure and high-pressure basketball free-throw performance.
Method: First, 53 basketball players completed trait questionnaires. Second, directly prior to performance assessments, participants reported on perceived importance, their somatic and cognitive state anxiety, and confidence. Third, free-throw performance was assessed in a low-pressure condition (i.e., successful free-throw percentage for 30 attempts) and repeatedly in 12 high-pressure conditions within real basketball matches (i.e., successful free-throw percentage for total attempts).
Results: Two main findings were identified: First, none of the traits predicted performance under low pressure. Second, under high-pressure, only fear of negative evaluation as well as state anxiety were significantly negatively associated with performance in competitions.
Conclusion: These results extend existing literature and add applied and ecologically valid empirical support for the relevance of anxiety-related traits (i.e., fear of negative evaluation) and states for performance under pressure in real-world competitions, emphasizing the importance of self-presentational considerations in athletes when the stakes are high.

1. Introduction

In their sporting careers, athletes frequently face pressure-inducing situations. Some athletes enjoy the excitement of big events, are able to perform excellently, up to previous exhibited standards, or even show clutch performances (Otten, 2009) when it counts. Others, in contrast, respond with increased anxiety to these pressure circumstances, underperform, or experience choking under pressure (Baumeister, 1984; Martens, Vealey, & Burton, 1990 see Beilock & Gray, 2007; Mesagno & Hill, 2013 for comprehensive reviews). Sport psychology researchers have suggested and found that the quality of performance under pressure, understood as a dimensional concept ranging from poor to excellent performance,[1]

[1] Although choking under pressure typically appears to be intuitive and even familiar, its scientific definition, operationalization, and conceptual distinction from underperformance turn out to be rather difficult and are still heatedly debated. As no broad definitional, operational, and conceptual consensus was yet reached, we, in this study, do not focus on the investigation of the choking phenomenon per se, but on the investigation of a dimensional concept of performance (under LP and under HP) that ranges from poor to excellent.

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may be predicted by the athletes' personality characteristics (e.g., Geukes, Mesagno, Hanrahan, & Kellmann, 2013a; Mesagno, Harvey, & Janelle, 2012; Wang, Marchant, Morris, & Gibbs, 2004). Most of the studies that addressed the personality/performance-relationship, however, have relied on experimental designs within laboratory-based scenarios. Field-based studies are rare and studies using real competitions with "natural" high-pressure (i.e., HP) have not been investigated. As laboratory-based HP situations are presumably largely different from those HP situations that athletes actually experience during competitions (cf. Geukes et al., 2013a; Mesagno, Harvey, & Janelle, 2011), this study tests whether personality traits found to predict performance under pressure in the laboratory also show this capability in competitions, in situations when it really counts.

1.1. The interactionist background

When investigating the relationship between personality and performance, researchers face a temporal and conceptual distance between the considered concepts: Personality traits are defined to be stable over time (Allport, 1966), whereas performance under pressure is situational in nature (Baumeister & Showers, 1986). Thus, researchers need to provide a rationale why and how stable personality traits should relate to situational outcomes. In prior sport psychology studies on the prediction of performance through personality traits (cf. Geukes et al., 2013a), this rationale was suggested from an interactionist perspective. The interactionist perspective originated from a debate on the predictability and consistency of behavior across situations within differential psychology. Here, two relatively opposing positions, dispositionism and situationism, are integrated, concluding that both person and situation variables jointly determine situational behaviors or performances (i.e., behavioral outcomes; e.g., Mischel, 1973). Tett and Gutermann (2000) extended this perspective by offering the interactionist principle of *trait activation*. Within this principle, the authors argue that a trait will (only) be relevant (i.e., be capable of predicting individual differences) in a situation when the situation is relevant for this trait. In case a situation is irrelevant to a trait, this trait will not be capable of predicting (individual differences in) behavior. Translating this into the context of performance under pressure (see Geukes et al., 2013a), a personality trait would predict performance under pressure only when the pressure situation was relevant to that trait, with no significant performance-prediction in cases where it was irrelevant. Thus, on the basis of the trait activation principle one could (a) explain *when* a personality trait predicts performance in situations (when the trait is relevant for the situation, i.e., is activated) and (b) get initial insights into *why* and *how* these associations emerge (i.e., due to trait-relevant situational cues, e.g., specific aspects of the pressure manipulation).

Considering this interactionist idea—whether implicitly or explicitly within their studies—researchers have identified a number of personality traits that are relevant, and activated, in HP (and not to low-pressure; i.e., LP) situations, and are thus capable of predicting HP performance. Among these traits are trait anxiety and self-confidence (e.g., Wang, Marchant, Morris, et al., 2004; Wine, 1971), narcissism (e.g., Geukes, Mesagno, Hanrahan, & Kellmann, 2012, 2013a; Wallace & Baumeister, 2002; Wallace, Baumeister, & Vohs, 2005), self-consciousness (e.g., Baumeister, 1984; Geukes, Mesagno, Hanrahan, & Kellmann, 2013b; Wang, Marchant, Morris, et al., 2004), approach and avoidance coping (Wang, Marchant, & Morris, 2004), and action orientation (Gröpel, 2015; Heckhausen & Strang, 1988). For this study, our interest especially was on fear of negative evaluation (Mesagno et al., 2012) and dispositional reinvestment (e.g., Kinrade, Jackson, & Ashford, 2010; Masters, 1992; Masters, Polman, & Hammond, 1993), because these two traits nicely map onto assumed process-explanations (i.e., distraction explanation vs. self-focus explanation) of comparatively poor performances in pressure situations.[2]

1.2. Predicting performance under pressure through personality

In the past three decades many researchers have investigated choking under pressure (i.e., choking), with the most prominent and acknowledged explanations being the distraction model and the self-focus model (Beilock & Gray, 2007; Lewis & Linder, 1997). Within the distraction model, researchers (e.g., Hardy, Mullen, & Martin, 2001; Mullen, Hardy, & Tattersall, 2005) explain that performance decrements occur because under pressure athletes become distracted from the task. With increasing arousal, athletes direct attention to task-irrelevant cues (e.g., the crowd or anxiety-related thoughts), resulting in the failure to attend to task-relevant cues and ultimately leading to poor performance. There is substantial empirical evidence supporting the distraction explanation (e.g., Hardy et al., 2001; Mullen et al., 2005; Oudejans, Kuipers, Kooijman, & Bakker, 2011). On a trait level, negative associations between anxiety-related traits and performance under pressure (e.g., fear of negative evaluation; Mesagno et al., 2012; see also Wang, Marchant, Morris, et al., 2004; Wine, 1971) have been linked to the distraction explanation of choking, providing indirect empirical support for it.

Within the self-focus model, researchers (e.g., Baumeister, 1984; Beilock & Carr, 2001; Jackson, Ashford, & Norsworthy, 2006; Masters, 1992) explain that choking occurs because under pressure athletes direct attention to the task execution itself, due to increased effort to perform correctly. At an expert level, when skills are well or even over-learned, consciously monitoring (and controlling) its execution disrupts the automatic processes and leads to substandard performance. The self-focus explanation has received substantial empirical support (e.g., Beilock & Carr, 2001; Gucciardi & Dimmock, 2008; Jackson et al., 2006; Mesagno, Marchant, & Morris, 2009). On a trait level, negative associations between self-focus-related traits (e.g., dispositional reinvestment; Kinrade et al., 2010; Masters, 1992; Masters et al., 1993) and performance under pressure have been linked to the self-focus model, providing indirect empirical support for it.

1.2.1. Fear of negative evaluation

Personality traits that revolve around (competitive) anxiety defined as, "a tendency to perceive competitive situations as threatening and to respond to these situations with [state anxiety]" (Martens, Vealey, et al., 1990, p. 11), were conceptually related to the distraction model of choking (see Mesagno et al., 2012; Wang, Marchant, Morris, et al., 2004; Wine, 1971). Because of its strong associations with choking (Mesagno et al., 2012), we chose a rather cognitive sub-facet of competitive anxiety (i.e., fear of negative evaluation) as a representative. Fear of negative evaluation refers to the "apprehension and distress arising from concerns about being judged disparagingly or hostilely by others" (Carleton, McCreary, Norton, & Asmundson, 2006, p. 297). In line with the distraction model, athletes high in fear of negative evaluation showed a significant increase in competitive anxiety and a significant decrease in performance on a basketball free-throw task from a LP to a HP

[2] Within our study and to inform our selection of personality traits, we refer and build on the knowledge provided by the self-focus and the distraction model of choking. As we neither target choking per se (but a dimensional performance concept) nor investigate process explanations (but investigate the relevance, i.e., activation, of personality traits in LP and HP situations), our study does not provide a direct test of the applicability of these choking models; our results only provide initial and indirect empirical evidence with regard to choking explanations.