Foreword
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This thesis concentrates on the effects of anxiety on police officers’ shooting behavior under pressure. Although police officers are required to perform well under stressful circumstances, anxiety does not leave them – or their performances – unaffected (e.g., Anderson, Litzenberger, & Plecas, 2002). But how does anxiety affect police officers’ shot accuracy? Do anxious officers make different shooting decisions? And is it possible to prevent negative effects of anxiety through reality-based practice? The current thesis aims to provide answers to these questions.

The experiments that are reported in this thesis focus on the ‘average’ police officer. To this end, a wide range of participants was recruited from within the Dutch police force. In total, more than 200 police officers volunteered to participate, including trainees, officers, senior officers, project managers, and detectives. The oldest participant was almost 60 years old and had over 40 years of active working experience. The youngest was 20 years old and just had over half a year of training and education. Of the participants, 89% was male and 11% was female. All participants were qualified to carry a firearm on duty and – at the time of measurement – were conducting active service.

In each experiment, participants executed realistic shooting exercises in which they fired a handgun that was similar to their duty weapon (Walther P5). For the purpose of the experiments, this handgun was specifically prepared to fit colored-soap cartridges or equipped with a laser diode that emitted a single laser pulse upon firing. Anxiety was manipulated by having participants perform against opponents (played by experienced firearms instructors) that could fire back with colored-soap cartridges, stab with an electrical knife, or by asking participants to take position in a shooting simulator a ‘shootback canon’, which could be used to fire back at participants. Measures that were taken include gaze behavior, movement execution, decision making (e.g., shoot or don’t shoot) and shot accuracy.

The thesis starts with an introduction into police shootings in real-life (Chapter 1), thereby covering the current state of affairs with respect to incidence, practice and examination in The Netherlands. Next, a review of the literature on anxiety and perceptual-motor performance is presented (Chapter 2). Although in general, many studies have focused on effects of anxiety on perceptual-motor performance, empirical
findings are still scattered and an overarching framework that explains the mechanisms underlying this relationship does not yet exist. Based on the reviewed literature, an integrated model is proposed, which recognizes three operational levels (i.e., attentional, interpretational, and behavioral) at which anxiety may affect different aspects of goal-directed action.

In correspondence with the model (which is depicted on p. 35), experimental findings are reported in three different sections: (A) threat-related attention, (B) threat-related interpretation, and (C) threat-related responses. In Section A, two experiments are reported that test the impact of anxiety (Chapter 3) and training with anxiety (Chapter 4) on police officers’ shot accuracy under pressure. In Section B, three experiments are reported that test the impact of anxiety (Chapters 5 and 6) and training with anxiety (Chapter 7) on police officers’ shooting decisions. Finally, in Section C, two experiments are reported that test the impact of threat-related responses (i.e., avoidance) on police officers’ shooting performance (Chapter 8) and execution of arrest and self-defense skills (Chapter 9).

After reporting the experiments, Chapter 10 summarizes the experimental findings and – turning back to the theoretical model presented in Chapter 2 – indicates directions for future research. As will be shown, anxious officers spend more time attending to threat-related information, tend to interpret situations as more threatening, and have more difficulty inhibiting threat-related responses, thereby strongly affecting their decision making and operational effectiveness. Finally, based on these findings, Chapter 11 will consider practical implications and discuss how police officers’ may improve their shooting performance under stressful circumstances.

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