Chapter 38
Can Video Games Be Used as a Stealth Assessment of Aggression?
A Criterion-Related Validity Study

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ABSTRACT

The current pilot study examined how well a reflective moral-choice video game predicted the rating scale scores of aggression types. To begin, the authors used a coding system to examine in-game proactive and reactive behaviors. This analysis resulted in a tallied score for each construct. These game-based scores were then included in regression models, examining how well within-game behaviors predict scores on a pre-existing rating scale of both proactive and reactive aggression. Findings indicated that game-based proactive scores were not predictive of proactive aggression ratings; however, reactive game-based scores were predictive of reactive aggression ratings. Implications for these findings are discussed.

INTRODUCTION

In recent years, researchers have begun to examine whether video games may be employed as stealth assessments (Ke & Shute, 2015; Shute, 2011; Wang, Shute, & Moore, 2015). That is, can a video game be used as a measurement tool for examining psychological constructs *in situ* (Shute, 2011). This growing body of literature has investigated the use of video games to measure a variety of factors including, academic skills (Sabourin, 2015), cognitive abilities (Shute & Wang, 2015), and trait-oriented constructs (Ventura & Shute, 2014). Results across these studies have demonstrated that when video game selection is done with intent (i.e., selected to measure a specific construct), within-game measures significantly correlated with independent psychological instrumentation (DeRosier et al., 2012) or were predictive of measured individual differences (Ventura & Shute, 2014).

The current pilot study aimed to build upon the stealth assessment literature by examining whether the constructs of proactive and/or reactive aggression could be measured through video game-based behaviors. For clarity sake, the purpose of this research was not to examine whether video games cause aggression (see Ferguson 2007, 2013), but whether assessing behavior exhibited within a video game yields similar results to those found with a traditional assessment. The primary reason for such a study is that currently there are limited methods for directly assessing aggression. Instead, aggression has been traditionally examined indirectly through the use of disciplinary counts (e.g., office referrals in children and criminal charges in adults; Pas, Bradshaw, & Mitchell, 2011) or through the use of rating scales (Dodge & Coie, 1987). The first method (i.e., disciplinary counts) requires that the aggression become so intense that it is harmful to society; whereas, the second method relies on the rater to be both truthful (Norfolk & Floyd, 2016) and self-aware (Csikszentmihalyi & Larson, 2014). Given the limitations associated with these traditional assessment techniques, this pilot was designed to examine whether a video game might provide an avenue for the direct assessment of aggressive behavior. By employing a criterion-related validity model, the current study examined the use of in-game behaviors as an *in situ* stealth assessment of proactive and reactive aggression.

BACKGROUND

Proactive-Reactive Aggression

The study of proactive-reactive aggression stems from the social information processing (SIP) model (Crick & Dodge, 1996). This model proposes that when people are presented with a social dilemma, they are required to encode, interpret, evaluate, and respond to a given social situation (Burgess et al., 2006). Over time the misinterpretation of social cues in conjunction with the outcomes associated with enacted responses, result in overlapping but distinct forms of aggression; these forms are referred to as proactive and reactive aggression (Crick & Dodge, 1996; Dodge, 1991).

Proactive aggression (PA) is considered to be an intrinsically motivated form of aggression (Raine et al., 2006). Self-serving in nature, individuals who exhibit proactively aggressive tendencies believe that intentional, goal-oriented, aggressive behavior is a socially effective tool for achieving a desired outcome (Crick & Dodge, 1996). For example, Law et al. (2012) in their study on cyberbullying, describe proactive aggression as the intentional engagement in an aggressive act to obtain resources or achieve a goal. While Hubbard and colleagues (2010) report that people engaging in proactive aggression had

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