Emotions in Social Computer Games: Relations with Bullying, Aggression, and School Belonging

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ABSTRACT

This article explores the set of emotions expressed by middle school youth (n = 96) when participating in a social computer game. In this article, we present the design of the game, the instruments used to assess bullying in the physical world, and the analysis of the emotions expressed during gameplay and their association with aggressive behaviors. Participants completed surveys on bullying experiences prior to playing the game. The game required participants to form teams and answer two sets of trivia questions, in competitive and cooperative stages. Results show a relation between the roles that participants have in their physical social environment and how they play the virtual game, in terms of the type of emotions they display.

Keywords: Bullying, Computer Games, Cyberbullying, Emotions, Virtual Game

INTRODUCTION

In this article, we explore the relation between the emotions elicited by the players of a social computer game and the self-reported measures of aggression, victimization, and other relational variables by youth between the age of 10 and 12 years old.

The game, called a Social Sensing Game or SSG (Mancilla-Caceres, 2014) was designed to support the gathering of data related to peer aggression and has been previously used for efficient data collection and for creating models of game behavior that help predict the roles of bully, victim, or bystander using gameplay data. Previous results using this...
game (Mancilla-Caceres, Pu, Amir, & Espelage, 2012; Mancilla-Caceres, Amir, & Espelage, 2013) have shown that instances of coercive/aggressive behavior and prosocial behavior are related to psychological measures of bullying, relational aggression, and victimization.

In this article, we explore through a correlational analysis how players interact with one another and how they express emotions and intentions through chat messages. Part of our goal is to show the effectiveness and the possible utility of games like SSGs to study the association between offline and online behavior and to further understand how the design of such tools (the games) affect the expression of emotions and behaviors.

Understanding how children interact with technology, how they express themselves, and what we can learn from such expressions will help expand our understanding and capabilities for teaching, communicating, and developing healthy social relationships in the technology-filled future.

**BULLYING AND PEER AGGRESSION**

A rigorous debate has emerged about how best to define bullying and how to distinguish it from other forms of aggression and/or peer victimization (AERA, 2013; Rodkin, Espelage, & Hanish, in press). One of the first predominant definitions of bullying that continues to be used in the literature and in the legal arena is as follows: “A student is being bullied or victimized when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more students” (Olweus, 2010, p. 11). More recent definitions of bullying emphasize observable or non-observable aggressive behaviors, the repetitive nature of these behaviors, and the imbalance of power between the individual/group perpetrator and victim (Gladden, Vivolo-Kantor, Hamburger, & Lumpkin, 2014; Ybarra, Espelage, & Mitchell, 2014). An imbalance of power exists when the perpetrator or group of perpetrators have more physical, social, or intellectual power than the victim. In a recent examination of a nationally representative study, early and late adolescents that perceived their perpetrator as having more power reported greater adverse outcomes (e.g., depression, suicidal ideation) than victims who did not perceive a power differential (Ybarra et al., 2014).

In 2010, the Department of Education and the Centers for Disease Control and Prevention collaborated to develop a uniform research definition. This group defined bullying as follows: “Bullying is any unwanted aggressive behavior(s) by another youth or group of youths who are not siblings or current dating partners that involves an observed or perceived power imbalance and is repeated multiple times or is highly likely to be repeated. Bullying may inflict harm or distress on the targeted youth including physical, psychological, social, or educational harm.” (Gladden et al., 2014, p.7). These behaviors include verbal and physical aggression that ranges in severity from making threats, spreading rumors, and social exclusion, to physical attacks causing injury.

The literature about theories that address bullying and peer aggression is vast and therefore, we will focus only on those that served as inspiration for the design of SSGs, and that have been previously studied in the context of these games (Mancilla-Caceres, Espelage & Amir, in press).

**RESOURCE CONTROL THEORY**

*Resource Control Theory* (RCT) (Hawley, 2003) proposes that all things that can be seen as generally desirable by children can be considered as resources, for example, all things material (money, food), social (popularity, teacher’s attention), or informational; and that there exists an adaptive function or utility of being aggressive (or a bully) among youth. According to RCT, children have the capacity to employ a wide range of strategies when interacting with their peers to obtain desired limited resources. For example, they can use coercive and pro-
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