

The influence of role-playing games on perceived social competence:

A qualitative analysis

by

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## DEDICATION PAGE

This thesis is dedicated to my wife, Michelle, and my cats, Chester and Dutch.

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## ABSTRACT

This study examined the relation between tabletop role-playing games and social competence in young adults. A mixed methods approach was used to extend previous research in this area. The Strengths and Difficulties Questionnaire was used to assess perceived social competence from participants and semi-structured interviews were conducted to collect detailed qualitative data about experiences with role-playing games. Six young adults (3 men, 3 women) between the ages of 19 and 24 ( $M = 21.2$ ,  $SD = 2.6$ ) participated. Responses on the SDQ indicated that people who play role-playing games have typical strengths and difficulties with respect to social competence. The qualitative description indicated the emergence of four themes: Content Focus, Social Focus, Creativity Focus, and Identity Focus. These themes are consistent with findings from previous case study research, in that role-playing games may have the potential to improve social competence.

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## CHAPTER ONE

### Literature Review

#### Social Competence

Social competence is a psychological construct that can be broadly defined as “effectiveness in social interaction” (Rose-Krasnor, 1997). However, in the literature, there are several divergent perspectives on the precise definition of social competence. The diversity of these perspectives can be seen through the variety of operational definitions used in studies of social competence (Cavell, 1990). Social competence is usually operationalized in one of three ways: (1) by the products of social functioning, (2) by skills of social functioning or (3) social competence as rated by an observer (Cavell, 1990). Products of social competence can be social attainments (e.g., a romantic relationship, a job), global judgments of social competence (e.g., the characteristic of leadership) or peer acceptance (e.g., to be preferred by peers when they are asked to make a preference; Cavell, 1990). Skills of social competence can be encoding skills (e.g., role-taking, empathy), decision skills (e.g., self-efficacy, means-end thinking), or enactment skills (e.g., self-regulation, delay of gratification). Social competence as observed by others is typically examined in terms of rate of social interaction, specific social behaviours, adequacy of performance in relevant tasks (e.g., social performance in a contrived, experimental condition; Cavell, 1990). In an attempt to unite the divergent definitions of social competence, Cavell (1990) has proposed a Tri-Component Model of social competence.

Cavell’s (1990) Tri-Component Model of social competence has a hierarchical structure based on two assumptions about the measurement of social competence: (1) neither the determinants nor the products of social functioning can be ascertained unless we examine performance itself and (2) social functioning is most profitably measured in terms of the

adequacy of performance of relevant social tasks. The model forms a hierarchy of three sub-constructs: social adjustment, social performance, and social skills. Social adjustment, defined as “the extent to which individuals are currently achieving societally determined, developmentally appropriate goals” (Cavell, 1990, p.117), is at the top of the model’s hierarchy. Social performance, defined as “the degree to which an individual’s responses to relevant, primarily social situations meet socially valid criteria” (Cavell, 1990, p. 118) is the mid-tier level of the hierarchy, and social skills, defined as “specific abilities that enable one to perform competently within social tasks” (Cavell, 1990, p.118), is the final component of the hierarchy.

In a similar attempt to unify the disparate perspectives of social competence, Rose-Krasnor (1997) reviewed the social competence literature and attempted to create another cohesive definition of social competence. Rose-Krasnor’s (1997) definition of social competence involves transactional, context-dependent, and goal-specific characteristics. Although social competence can be variable, it always features six component categories: (1) interpersonal knowledge and skills, (2) positive self-identity, (3) cultural competence, (4) social values, (5) decision-making skills, and (6) self-regulation (Han & Kemple, 2006). Interpersonal knowledge and skills are expressed through social and emotional problem solving and empathy. Positive self-identity involves a sense of competence, self-worth, and purpose. Cultural competence involves knowing how to appropriately account for cultural differences in interpersonal interactions. Social values are an individual’s ability to recognize, adopt, and embody the values of his or her own culture. Decision-making skills are expressed in the ability to act purposefully to accomplish goals. Finally, self-regulation is the ability to moderate impulsivity by monitoring oneself. Social competence can be improved throughout an individual’s life, but development begins in childhood (Rose-Krasnor, 1997).

## **The Development of Social Competence**

The development of social competence in childhood follows a developmental sequence that is related to how children play (Howes, 1987; Howes & Matheson, 1992). During early toddlerhood, children obtain skills that allow them to sequence words with pretend actions. Once these skills have been obtained and practiced, children begin to participate in social role-play activities where they alter their behaviour depending on imagined situations. The skills gained during social role play allow children to develop stable relationships with their peers and, over time, allow them to become more aware of the thoughts, feelings, and expectations of others (Rose-Krasnor, 1997). Achievements related to social competence during childhood can be categorized in terms of academic, conduct, and social expectations (Masten, Coatsworth, Neemann, Gest, Tellegen, & Garnezy, 1995). During adolescence, the achievements associated with social competence become more complex and put more demands on the individual, expanding to include expectations associated with employment and with romantic relationships. The change of expectations between childhood and adolescence highlights the importance of developing social competence to meet the demands of a social environment that becomes increasingly complex throughout development (Han & Kemple, 2006).

The influence that social role-play can have on the developmental trajectory of social competence is demonstrated by a study conducted by Howes and Matheson (1992). These authors conducted a longitudinal observational study of the play behaviours of 48 children from infancy through preschool at daycare facilities that supports the assertion that social competence develops through social role-playing with which children naturally engage. In addition to qualitative observations and child interviews, the researchers also collected data using standardized measures of social competence. Specifically, they used the Baumrind Preschool Q-

set (Baumrind, 1968), the Howes Peer Play Scale (Howes, 1980), the Harter and Pike Pictorial Scale of Perceived Competence and Acceptance for Young Children (Harter & Pike, 1984), and a procedure involving enactment of social dilemmas developed by Mize and Ladd (1988). The sample was observed six different times and the child interview was conducted once all of the behavioural observations were collected. According to Howes and Matheson (1992), social pretend play (i.e., role-playing) is, developmentally, the highest form of play and is an activity with which children naturally engage as a way to practice social skills. Results suggested that children who engaged in social pretend play, especially when they did so earlier than their peers, were more likely to be rated by observers as more prosocial and sociable and less aggressive. In other words, children who engaged in role-playing were more likely to be more socially competent. These results underscore the developmental importance of social competence.

Social competence is an important part of development and weak social competence can result in psychological distress and behavioural concerns (e.g., depression, conduct problems) from childhood to adulthood. For example, a study conducted by Stepp, Pardini, Loeber, and Morris (2011) suggested that adolescents with higher levels of social competence are less likely to exhibit delinquent behaviour. Generally, high levels of social competence are associated with individuals who are better able to appropriately navigate social environments and who are resilient when experiencing hardship (Rose-Krasnor, 1997). A longitudinal study conducted by Rockhill, Stoep, McCauley, and Katon (2009) examined the relationship between academic performance, social supports, social competence, and depressive and conduct problems in middle school children. Social competence was measured in 521 participants in grades 6 to 8 using the Childhood Behavioral Checklist 4-18 (CBCL 4-18; Achenbach, 1991) and the Teacher Report Form (TRF; Achenbach & Edelbrock, 1986). Depressive symptoms were assessed using the

Mood and Feelings Questionnaire (MFQ; Angold & Costello, 1987) and conduct problems were assessed using the Youth Self-Report (YSR; Achenbach, 1991). Academic performance was measured through the participants' GPAs. Results indicated that social competence mediated the associations between academic performance, depressive symptoms, and conduct problems and that intervention to improve social competence could improve academic outcomes

Another longitudinal study (Lee, Hankin, & Mermelstein, 2010) suggested that a similar relationship exists between social competence and relationship quality in adolescents. This study investigated the relations between social competence, negative social interactions, negative cognitive style, and depressive symptoms in adolescents. A sample of 356 students between the ages of 11 and 17 completed measures of social competence, cognitive style, relationship quality, and depression as a baseline measurement and were asked to complete the same questionnaires again five weeks later. Social competence was measured using the Self-perception Profile for Children (SPPC; Harter, 1985), cognitive style was measured using the Adolescent Cognitive Style Questionnaire (ACSQ; Hankin & Abramson, 2002), depressive symptoms were measured using the Children's Depression Inventory (CDI; Kovacs, 1985), and relationship quality was measured using the Network or Relationships Inventory (NRI; Furman & Buhrmester, 1985). Results indicated that there was a negative relation between social competence and depressive symptoms, such that low baseline social competence predicted increased depressive symptoms later on, partially mediated by negative interactions with parents.

### **The Improvement of Social Competence**

Since the development of social competence can have such a dramatic impact on social success, behaviour, and psychological well-being, it would be worthwhile to examine activities that may improve social competence. Some studies have already examined extracurricular

activities as potential supports for the development of social competence. For example, a longitudinal study conducted by Perez-Aldeguer (2013) suggested that involvement in collaborative musical theatre can have a direct and positive impact on social competence. The sample consisted of 58 students enrolled in a music education program focussed on musical theater. Participants completed the Group Climate Questionnaire (MacKenzie, 1983), the Group Cohesion Evaluation Questionnaire (Glass & Benshoff, 2002), the Social Skills Scale (Goldstein et al., 1989), and the Questionnaire of Social Competence in Higher Education (developed specifically for this study), prior to the beginning of the program and again once the program was finished. A significant, positive difference was found between the pre- and post-test scores when the participants' social competence was assessed, particularly in ratings of social skills on the Social Skills Scale (Goldstein et al., 1989). These results suggested that involvement in extra-curricular activities that involve the exploration of roles can improve social competence.

A recent study conducted by Corbett, Key, Qualls, Fecteau, Newsom, Coke, and Yoder (2016) investigated the efficacy of a theatre-based intervention for improving the social competence of children diagnosed with Autism Spectrum Disorder (ASD). Thirty-three children between the ages of 8 and 14 years, who were diagnosed with ASD, were randomly assigned to an experimental or a wait-list control condition. Seventeen participants were assigned to the experimental condition and received 10 four-hour long intervention sessions and a follow up assessment. Sixteen participants were assigned to the wait-list control condition and did not receive the intervention, but received a follow-up assessment for the sake of comparison to the experimental group. The follow-up assessment consisted of the Social Responsiveness Scale (SRS; Constantino & Gruber, 2005), the Adaptive Behavior Assessment System (ABAS; Harrison & Oakland, 2000), and the Peer Interaction Paradigm (PIP; Corbett et al., 2010).

Findings indicated that participants who received the theatre-based intervention showed improved social competence when compared to participants in the wait-list control group, further reinforcing the suggestion that extra-curricular activities could facilitate the development of social competence.

### **Tabletop Role-playing Games**

Another extra-curricular activity that could positively influence social competence is tabletop role-playing games. Tabletop role-playing games are imagination games in which players take on the role of characters in a fictional world (Blackmon, 1994). Each player creates a character using a set of rules that involve statistics and probability that govern the generation of skills and abilities. Playing these games involves a player who referees the game, called a Game Master (GM) or Dungeon Master (DM), who presents the other players' characters with situations that require co-operation and problem-solving to overcome. Outcomes are determined by rolling polyhedral dice and modifying the results using static numerical values that represent their skills and abilities, simulating the interaction between situational probability and the capability of an individual. The earliest role-playing game was a game called *Chainmail* (Gygax & Perren, 1971).

Chainmail was developed in the 1970s by Gary Gygax and Jeff Perren, who were members of a club, the Lake Geneva Tactical Studies Association (LGTSA) who met regularly to play tabletop wargames. Wargames are simulations of historical or fantastical battles, often using painted models to represent military units. Wargames date back as early as 1913 with the publication of H.G. Wells' *Little Wars* (Wells, 1913), which detailed rudimentary rules for miniaturized battle. While playing wargames, Gygax and Perren became interested in the stories of the individual units in their armies, specifically wondering what it would be like to play a

game where players took on the roles of heroes in large wars, like the characters in J.R.R. Tolkien's *Lord of the Rings* trilogy (Tolkien, 1954; Tolkien, 1955). From this idea, they developed *Chainmail* (Gygax & Perren, 1971), the first tabletop role-playing game. Eventually, the rules established in *Chainmail* were revised and released as *Dungeons & Dragons* (Gygax & Arneson, 1974), one of the most popular tabletop role-playing games of all time.

The popularity of *Dungeons & Dragons* (Gygax & Arneson, 1974) can be seen in the cultural impact of the game. Since the original publication in 1974, seven successive editions of the ruleset as well as dozens of new tabletop role-playing games directly inspired by *Dungeons & Dragons* (e.g., *Swords & Wizardry*, *Pathfinder*, *Exalted*) have been published. *Dungeons & Dragons* has also informed the development of popular computer games, such as *Ultima* (Garriot, 1981) and *Doom* (Peterson, Romero, Green, & Hall, 1993). In addition to its influence in the games industry, *Dungeons & Dragons* created creative properties outside of tabletop role-playing games, including several series of fantasy novels, a Saturday morning cartoon, two feature length films, and a clothing line. Finally, *Dungeons & Dragons* was the impetus behind the creation of several tabletop game conventions, such as Gen Con (Gen Con LLC, 2016) and DragonCon (DCI Inc., 2016). During the height of its popularity, in the 1970s and 1980s, *Dungeons & Dragons* garnered criticism of the potential psychological impact that tabletop role-playing games may have on children, teens, and young adults.

### **Psychological Controversy and Tabletop Role-playing Games**

Since the early 1970s, there have been several examples of individuals or groups claiming that playing *Dungeons & Dragons* (Gygax & Arneson, 1974) negatively affects the psychological well-being of young people. One of the most influential examples was the attempted suicide of 16-year-old Dallas Egbert in the steam tunnels beneath Michigan State

University in 1979 (BBC, 2014). A private investigator had been hired to find Egbert and publically speculated that there was a connection between Dungeons & Dragons and Egbert's suicide attempt. In 1981, *Mazes and Monsters* (Jaffe, 1981), a fictionalized novel based on Egbert's experience with role-playing games and the investigation surrounding his suicide, was published. *Mazes and Monsters* (Jaffe, 1981) further fuelled the speculation about the negative influence of Dungeons & Dragons on psychological well-being and, in 1982, was adapted as a film of the same name. Media attention on events like Egbert's suicide attempt led to the development of parent groups, such as Bothered About Dungeons and Dragons (BADD), who took a political stance against the game, based on its supposed psychological impact. The media's negative representation of role-playing games prompted a response from clinical researchers, who conducted several studies examining the psychological effects of playing Dungeons & Dragons.

In response to the evidence of the negative psychological influence of Dungeons & Dragons, several studies were conducted to determine the influence that the game may have on the psychological well-being of young people. Simon (1987) investigated the emotional stability of Dungeons & Dragons players and found no significant differences between players and non-players on Cattell's (1949) Sixteen Personality Factors Questionnaire, whereas Douse and McManus (1992) suggested that players are generally less feminine, less empathic, more scientific, and more introverted than controls. Carter and Lester (1998) suggested that people who play Dungeons & Dragons (Gygax & Arneson, 1974) did not differ from non-players on scores of depression, suicidal ideation, psychoticism, extraversion or neuroticism. Finally, Abyeta and Forest (1991) investigated the potential connection between playing Dungeons & Dragons and criminal behaviour using a self-report questionnaire and found no differences

between players and controls. Taken together, these studies suggest that the negative psychological impact of tabletop role-playing games (with specific attention to Dungeons & Dragons) promoted by groups like BADD is not supported by the literature. This being said, studies investigating electronic role-playing games have resulted in somewhat discrepant findings.

### **Computer Role-playing Games**

Computer role-playing games (cRPGs) are the digital counterpart to tabletop role-playing games. Originally, computer role-playing games were direct translations of tabletop role-playing games, with the computer taking the place of the Game Master and one player taking on the role of several characters. Once the internet became popular, cRPGs were produced that allowed multiple players to play together on a computer server through a text-based interface that allowed for a more traditional role-playing experience to be mediated by a computer; these games were called Multi-user Dungeons (MUDs). As technology improved, online role-playing games became more technologically refined and graphically impressive. In the 1990s, games like Ultima Online (Koster, 1997) and Everquest (Sony Online Entertainment, 1999) were released, where a single player played a character in a world populated with hundreds, if not thousands, of other player-controlled characters. These games are called Massively Multiplayer Online Role-playing Games (MMORPGs). The most popular MMORPG is World of Warcraft (Blizzard Entertainment, 2004), a spin-off of the popular Warcraft (Blizzard Entertainment, 1994) real-time strategy series. A significant amount of psychological research has been conducted to investigate the influence that MMORPGs may have on players, with particular attention to addiction.

The focus and results of research investigating online cRPGs, specifically with respect to MMORPGs, significantly contrasts with studies investigating tabletop role-playing games. cRPG research is more focused on addiction and dependence, whereas tabletop RPG research is focused on suicide, crime, and personality development. Furthermore, the research investigating the influence of tabletop role-playing games on behaviour and mental health does not consistently identify negative effects, whereas research investigating cRPGs suggests that there can be a negative influence on players. In a review of the literature related to addiction to online cRPGs, Young (2009) reported the results of studies that investigated the impact of cRPGs on players. People who spend a significant amount of time playing online cRPGs will neglect sleep, diet, exercise, and social interaction to make more time for playing cRPGs. In one example, a couple from South Korea spent so much time playing cRPGs that they neglected to take care of their four-month-old daughter, who eventually died of suffocation. According to Young (2009), people who become preoccupied with online cRPGs often lose focus on responsibilities in their lives (e.g., school work, going to their job) and spend more time playing their favorite game. Preoccupied gamers will also lie about the amount of time they spend playing games, will begin to lose interest in activities that used to interest them (e.g., hobbies, socializing), will become socially and psychologically withdrawn, and express anger or irritability when confronted about their preoccupation. Youths who become preoccupied with online cRPGs are particularly vulnerable to their negative effects and display poorly developed social skills and low self-esteem as well (Young, 2009). These results are consistent with a recent study conducted by Berle, Starcevic, Porter, and Fenech (2015) that found that players of online cRPGs reported significantly more life interference (e.g., poor work or study performance, poor social functioning, and poor physical health) and problematic usage behaviours (e.g., playing longer

than planned, playing despite not wanting to) than controls. The literature, unfortunately, also suggests that preoccupation with online cRPGs is not rare.

One study, conducted by Hussain and Griffiths (2009), examined the characteristics of excessive MMORPG playing. A sample of 119 participants ( $N = 83$  males) with a mean age of 28.5 years were asked to complete a questionnaire based on the Behavioral Addiction Scale (Griffiths, 2005). The results of the study suggested that 7% of online cRPG players could be classified as dependent on online cRPGs. Hussain and Griffiths (2009) operationally defined dependence as high scores on six statements adapted from the psychometrically validated Exercise Addiction Inventory (EAI; Terry, Szabo, & Griffiths, 2004). These statements were rated on a five-point Likert scale. The statements were: “Online gaming is the most important thing in my life”; “Conflicts have arisen between me and my family and/or my parent about the amount of online gaming I do”; “I use online gaming as a way of changing my mood”; “Over time I have increased the amount of online gaming I do in a day”; “If I have to miss an online gaming session I feel moody and irritable”; and “If I cut down the amount of online gaming I do, and then start again, I always end up gaming as often as I did before”. The results also suggested that dependent players use cRPGs to alter their mood more than non-dependent players. These results are consistent with the research that has investigated the extent to which online cRPG preoccupation can interfere with daily functioning.

Despite the concerning findings with respect to cRPGs, the clinical literature does not suggest that traditional tabletop role-playing games have a similar influence on players. In fact, some research suggests that tabletop role-playing games can be useful as interventions or adjuncts to interventions for maladaptive social behaviour and to improve social competence.

## **Tabletop Role-playing Games as Interventions**

There have been three studies that examine the use of role-playing games in addition to interventions or as interventions themselves. The rationale for investigating the clinical use of role-playing games varies from study to study, depending on the theoretical orientation of the researchers. Zayas and Lewis (1986) and Blackmon (1994) approached role-playing games from a psychodynamic perspective, whereas Rosselet and Stauffer (2013) took a behavioural perspective. However, the rationales presented in the literature each touch upon the use of a safe, artificial environment in which groups of players are presented with novel situations that provide the opportunity to exercise social skills as a way to accomplish a shared goal. All three studies have been case studies of individuals or small groups.

Zayas and Lewis (1986) summarized the results of the use of a game similar to *Dungeons & Dragons* (Gygax & Arneson, 1974) in a group therapy setting. The purpose of the game was to help develop interactional skills and foster teamwork in a group of eight boys between the ages of eight and nine years. Sessions took place at a community center in a culturally diverse area of New York City once a week for two hours over the course of a school year (approximately 40 weeks in total). Goals and challenges related to social skills, such as group problem-solving, planning ahead, reinforcement of group contracts through the introduction of a new member, and appreciation of individual uniqueness, were created for particular sessions. According to Zayas and Lewis (1986), these goals and challenges were met or overcome by the group and demonstrate the strength of role-playing games as an intervention tool. Zayas and Lewis (1986) analyzed their qualitative observations using two frameworks, Shulman's shared activity functions (1971) and Vinter's activity-setting dimensions (1967), to determine the effectiveness of the intervention. The results suggested that the use of tabletop role-playing games as a group

intervention can be effective. The participants were observed working together to achieve goals, planning around each other's motivations and desires, inducting a new member into their group, and solving problems as a group while keeping in mind how individual differences contributed to a solution. Based on their qualitative observations, Zayas and Lewis (1986) suggested that the effectiveness of tabletop role-playing games comes from the players' ability to take on a wide variety of roles in innumerable, novel, and challenging situations that require them to work together to accomplish a collective goal. They also suggest that the safe environment of the game, free of real-world consequences, allows players the freedom to experiment with their identities and actions, something that is not necessarily available in reality.

In a case study, Blackmon (1994) reported on the interaction between a client's course of treatment and his involvement in a game of Dungeons & Dragons (Gygax & Arneson, 1974). His client was a 19-year-old male who had attempted suicide due to depression that stemmed from a long-term struggle with initiating and maintaining social relationships. Prior to treatment, the client had been diagnosed with "free-floating depression" (Blackmon, 1994, p. 625) and was prescribed desipramine. Blackmon (1994) treated his client in a hospital setting following the suicide attempt and later saw him privately twice a week. When the client mentioned that he had been invited to play a game of Dungeons & Dragons, the clinician suggested attending the game and asked the client to report on his experiences. As treatment proceeded, the client reported that he had experienced significant improvement in his social functioning. Blackmon (1994) suggested that this was due, at least in part, to the ability of Dungeons and Dragons to simulate a wide variety of social situations with a significant number of unpredictable elements, like magic spells and monsters.

Using an Adlerian play therapy perspective, Rosselet and Stauffer (2013) reported on a case where clinicians used an adapted version of Dungeons & Dragons (Gygax & Arneson, 1974) as a group intervention for several groups of gifted boys, aged 8 to 16 years, who struggled socially and behaviourally. Role-playing interventions ran over the course of a weekend (Friday to Sunday), once a semester (i.e., twice a year) for two years. The game was played on the Saturdays of the treatment weekends in several sessions that were two hours long, separated by breaks for meal times and other activities. Sundays were spent reflecting on the experience of playing the game. Rosselet and Stauffer (2013) provided a detailed account of a 15-year-old boy who had completed the role-playing intervention because his struggles with social skills were contributing to low self-esteem and poor academic performance, specifically with respect to emotion regulation. After completing four weekend interventions and with ongoing support from his psychologist and social support network, the boy demonstrated significant progress in his ability to interact appropriately with his peers. Rosselet and Stauffer (2013) suggested that the influence that games like Dungeons & Dragons can have on social skills development is due to the way that the game allows individuals to take on a wide variety of roles and experiment with novel social situations.

### **Summary**

Social competence is a collection of skills and abilities that inform social success, with success being measured based on the outcomes of social interactions (Cavell, 1990; Han & Kemple, 2006; Rose-Krasnor, 1997). Social competence is important since low social competence is associated with psychological distress and problem behaviours (Lee, Hankin, & Mermelstein, 2010; Rockhill, Stoep, McCauley, & Katon, 2009; Stepp, Pardini, Loeber, Morris, 2011). During development, social competence is fostered through social games, the most

advanced of which is social role-playing (Howes, 1987; Howes & Matheson, 1992). Activities that are similar to social role-playing, involving social problem-solving in novel situations and role-taking, have been shown to improve social competence in children and youth (Perez-Aldeguer, 2013). Tabletop role-playing games are a type of activity that is extremely similar to social role-playing and have been explored as an activity for improving social competence in children and adolescents. Previous case studies have suggested that role-playing games may improve the social competence of players through the opportunities for social interaction offered by the games (Blackmon, 1994; Rosselet & Stauffer, 2013; Zayas & Lewis, 1986). If role-playing games do improve social competence, experiences with role-playing games should have themes that reflect the improvement of the skills and abilities that comprise social competence.

## CHAPTER TWO

### **The influence of role-playing games on perceived social competence: A qualitative analysis**

#### **Social Competence**

Social competence is a psychological construct that can be generally defined as “effectiveness in social interaction” (Rose-Krasnor, 1997, p.112). Social competence is typically operationally defined in terms of rate of social interaction, specific social behaviours and/or adequacy of performance in relevant tasks (e.g., social performance in a contrived, experimental condition) (Cavell, 1990). The development of social competence in childhood follows a developmental sequence that is related to how children play (Howes, 1987; Howes & Matheson, 1992). In early childhood, children begin to participate in social role-play activities where they alter their behaviour depending on imagined situations. The skills gained during social role play allow children to develop stable relationships with their peers and, over time, allow them to become more aware of the thoughts, feelings, and expectations of others (Rose-Krasnor, 1997). Social role-play can improve the development of social competence to help meet the expectations of a changing environment.

The influence that social role-play can have on the developmental trajectory of social competence is demonstrated in a study conducted by Howes and Matheson (1992). According to Howes and Matheson (1992), social pretend play (i.e., role-playing) is, developmentally, the highest form of play and is an activity with which children naturally engage as a way to practice social skills. Their results suggest that children who engaged in social pretend play, especially when they did so earlier than their peers, were more likely to be rated by observers as more prosocial and sociable and less aggressive. This underscores the developmental importance of social competence.

Social competence is an important part of development and poorly developed social competence can result in psychological distress and behavioural concerns (e.g., depression, conduct problems) from childhood to adulthood (Rockhill, Stoep, McCauley, & Katon, 2009; Stepp, Pardini, Loeber, & Morris, 2011). Generally, high levels of social competence are associated with individuals who are better able to appropriately navigate social environments and who are resilient when experiencing hardship (Rose-Krasnor, 1997). Not only are psychological and behavioural concerns associated with poor social competence, but a diagnosis of a psychological disorder is associated with the development of poor social competence (Cole, Martin, Powers, & Truglio, 1996; Settiani & Kendall, 2012).

### **Psychological Disorders and Social Competence**

Anxiety and depression, two of the most common psychological disorders in children (Canadian Mental Health Association, 2016), are strongly associated with and reinforce poor social competence (Cole, Martin, Powers, & Truglio, 1996; McCauley, Myers, Mitchell, Calderon, Schloredt, & Treder, 1993; Settiani & Kendall, 2012). Previous studies suggest that when children have anxious traits, their peers recognize this and react to them negatively (Settipani & Kendall, 2012). Negative interactions with peers reinforce anxious behaviours and lead children to form friendships with children who have anxious traits as well, which may limit their opportunities to learn and practice more successful social strategies (Settipani & Kendall, 2012). Similarly, previous studies suggest that children who have poor social competence are at risk for developing depression based on negative interactions with their peers (Cole, Martin, Powers, & Truglio, 1996). The reinforcement of poor social competence puts children who are diagnosed with anxiety or depression at a significant social disadvantage (Howes & Matheson, 1992; Rockhill, Stoep, McCauley, & Katon, 2009). It would be worthwhile for interventions for

anxiety and depression to focus on improving social competence. Typically, interventions for anxiety and depression in children do not focus on the social consequences of those disorders (Chosak & Baer, 2016), but they can involve social role-playing to teach strategies related to social situations.

Common interventions for anxiety and depression do not typically focus on improving social competence, but can incorporate social role-playing. Social skills training and cognitive-behavioural therapy (CBT) can both involve role-playing (Barlow, Durand, & Stewart, 2009). In these interventions, role-playing is done in isolated scenarios between clients, or between practitioners and clients, and is meant to practice skills and strategies to manage emotions or social situations. For example, in social skills training, a client may be taught to provide social reciprocity. They would then be expected to demonstrate their newly learned skill in the role-playing scenario with a psychologist and receive feedback on their performance (Chosak & Baer, 2016).

### **Role-playing Games**

Tabletop role-playing games are imagination games in which players take on the role of characters in a fictional world (Blackmon, 1994). Each player creates a character using a set of rules that govern the generation of skills and abilities. Playing these games involves a player who referees the game, called a Game Master (GM) or Dungeon Master (DM), who presents the other players' characters with situations that require co-operation and problem-solving to overcome. Outcomes are determined by rolling polyhedral dice and modifying the results using static numerical values that represent a character's skills and abilities, simulating the interaction between situational probability and the capability of a character. Although tabletop role-playing games (e.g., Dungeons & Dragons; Gygax & Arneson, 1974) have been popular since their

inception in the 1970s (BBC, 2014), there has been a significant negative reaction to their usage, with particular emphasis on the perceived effects on the psychological well-being of children, adolescents, and young adults. Groups such as Bothered About Dungeons and Dragons (BADD) and films such as *Mazes and Monsters* (BBC, 2014) have suggested that tabletop role-playing games can induce suicidal behaviour and criminality in youth.

Several studies have examined the psychological effects of Dungeons & Dragons, the most popular tabletop role-playing game. In contrast to the claims made by the media, Carter and Lester (1998) suggested that people who play Dungeons & Dragons do not differ from non-players on measures of depression, suicidal ideation, psychoticism, extraversion or neuroticism and Abyeta and Forest (1991) found no differences between players and controls on measures of self-reported criminal behaviour. The results of these studies suggest that the portrayal of role-playing game players in the media was not accurate. Researchers further contradicted the representation of role-playing games in the media by suggesting that playing role-playing games may actually have psychological benefits (Blackmon, 1994).

Researchers have noted that tabletop role-playing games may be psychologically beneficial due to their similarity to role-playing methods used in psychotherapy (Blackmon, 1994) and play therapy (Rosselet and Stauffer, 2013), both of which have been used to promote social competence in young people. Role-playing in psychotherapy involves the client and therapist taking on different roles in scenarios that are relevant to the client's presenting problem (Rubin, 2007; Zwolinski, 2011). The goal of role-playing is to learn and practice skills and strategies that the client can then apply to any real-life scenarios they experience. Similarly, play therapy involves a therapist using toys and games as a way to frame and discuss a client's presenting problem and to help him or her practice skills and strategies (Lin & Bratton, 2015;

Rubin, 2007). The studies that focused on the benefits of playing role-playing games were case studies that were conducted to determine the clinical utility of role-playing games as, or as adjuncts to, psychological interventions. To date (and to our knowledge), only three studies examining the use of role-playing games as adjuncts to psychological interventions or as interventions themselves have been conducted. All three were case studies of individuals or small groups and although these studies were similar with respect to their focus on role playing games as psychosocial interventions, the researchers' perspectives on role-playing games varied from study to study. However, the rationales presented in these studies each touch upon the use of a safe, artificial environment in which groups of players are presented with novel situations that provide the opportunity to exercise social skills as a way to accomplish a shared goal.

Zayas and Lewis (1986) investigated the use of a game similar to Dungeons & Dragons in a group therapy setting. The purpose of the game was to help develop interactional skills and foster teamwork in a group of eight boys between the ages of eight and nine years. Sessions took place in a community center in a culturally diverse area of New York City once a week for two hours over the course of a school year. Goals related to social skills were created for particular sessions, based on the social challenges of the players. These included reinforcing a group contract by introducing a new member, group problem-solving and appreciation for individual uniqueness, and working together to create plans for their adventure. According to Zayas and Lewis (1986), these goals were usually met or overcome by the group and demonstrate the potential for role-playing games to improve the social skills of young people who play them. During the lifespan of the intervention group, Zayas and Lewis (1986) determined the effectiveness of the game as an activity for training social skills using two measures of opportunity for socialization within an activity. For both measures, the results suggest that the

use of tabletop role-playing games as a group intervention can be an effective way to improve social skills. Based on their qualitative observations, Zayas and Lewis (1986) suggested that the effectiveness of tabletop role-playing games comes from the players' ability to take on a wide variety of roles in innumerable, novel, and challenging situations that require them to work together to accomplish a collective goal. They also suggested that the safe environment of the game, free of real-world consequences, allows players the freedom to experiment with their identities and actions, something that is not necessarily available in reality.

In a case study, Blackmon (1994) reported on the interaction between a client's course of treatment and his involvement in a game of *Dungeons & Dragons*. The participant was a 19 year-old male who had attempted suicide due to depression that stemmed from a long-term struggle with initiating and maintaining social relationships. Prior to treatment, the client had been diagnosed with "free-floating depression" (Blackmon, 1994, p. 625). Blackmon (1994) treated his client in a hospital setting following the suicide attempt and later saw him privately twice a week. When the client mentioned that he had been invited to play a game of *Dungeons & Dragons*, Blackmon (1994) suggested that the client attend the game and asked the client to report on his experiences to determine if playing the role-playing game would be beneficial for his client's social skills. As treatment proceeded, the client reported that he had experienced significant improvement in his general social functioning, both within his role-playing group as well as in his daily life. Blackmon (1994) suggested that this was due, at least in part, to the ability of *Dungeons and Dragons* to simulate a wide variety of social situations within the safe environment of a game, allowing players to gain experience with the unpredictable nature of social interactions.

Using an Adlerian play therapy perspective, Rosselet and Stauffer (2013) reported on a case where clinicians used an adapted version of Dungeons & Dragons as a group intervention for several groups of 6 to 12 gifted boys, aged 8 to 16 years, who struggled socially. Role-playing interventions ran over the course of a weekend (Friday to Sunday), once a semester (i.e., twice a year) for two years. The game was played on the Saturdays of the treatment weekends in several sessions that were two hours long, separated by breaks for meal times and other activities. Sundays were occupied with group discussion about the experience of playing the game. Rosselet and Stauffer (2013) provided a detailed account of a 15 year-old boy who had completed the role-playing intervention because his struggles with social skills were contributing to low self-esteem and poor academic performance. After completing four weekend interventions and with ongoing support from his psychologist and family the boy demonstrated significant improvement in his social skills. Rosselet and Stauffer (2013) suggested that the influence that games like Dungeons & Dragons can have on social skills development is due to the way that the game allows individuals to take on a wide variety of roles and experiment with novel social situations.

Based on the results of the three case studies investigating role-playing games as psychological interventions or adjuncts to intervention, it seems that role-playing games might be beneficial to the development of social skills in players. Zayas and Lewis (1986) suggested that role-playing games used as a way to structure group therapy for children was an effective way to improve social skills. Similarly, Rosselet and Stauffer's (2013) case study suggested that role-playing games can be an engaging structure for the delivery of social skills interventions. Finally, Blackmon's (1994) case study of a psychotherapy client suggested that the use of a role-playing game in addition to psychological intervention may help to improve a client's social

skills. Although there are only three case studies investigating the clinical use of role-playing games, they have consistently suggested that playing role-playing games may have a positive effect on the social skills of the players.

### **The Current Study**

The current study aims to determine whether role-playing games have an influence on social competence by expanding on the literature and examining player's experiences with role-playing games. Previous studies investigating the use of tabletop role-playing games have been case studies, relying primarily on the observation of groups or individuals. The current study primarily uses qualitative methods as well, but in a more structured way. The current study uses semi-structured interviews to collect specific, detailed information about experiences with role-playing games, which is not necessarily possible using observational methods. Additionally, the current study used a questionnaire to gather information about the participants' perceived social strengths and weaknesses, to support the findings of the semi-structured interviews. Employing both of these methods allowed for a rigorous investigation of the relation between role-playing games and social competence that was not presented in previous studies.

Findings of the current study were expected to reflect the observations made in previous case studies, namely that a positive association would be found between involvement in tabletop role-playing games and perceived benefits to social competence. It was expected that if role-playing games help to improve social competence, themes of improvement of social competence would be present in the semi-structured interviews. It was also expected that the results of the questionnaire would support the themes present in the interviews by suggesting that participants did not experience significant social challenges.

## Method

### Participants

Participants were six young adults (3 men, 3 women) between 19 and 24 years of age ( $M = 21.2$ ,  $SD = 2.6$ ). A seventh participant was excluded from the study due to a misunderstanding of the participation requirements. Participants were recruited using a poster that was posted in several locations within the Halifax Regional Municipality. These locations included stores specializing in selling or providing space for role-playing games, such as the Board Room Café and Games People Play, as well as comic book shops, such as the Monster Comic Lounge and Strange Adventures, since comic book shops usually sell and provide space for role-playing games. Recruitment was also conducted using Internet forums for people who play tabletop role-playing games (e.g., [gelatinousdudes.com](http://gelatinousdudes.com)). Participants were compensated for their time with a gift card valued at \$10.

The study met all ethical requirements for research involving human participants as outlined by the Mount Saint Vincent University Research Ethics Board.

### Measures

**Demographic and role-playing habits questionnaire.** Demographic and role-playing habit information was collected from each participant using a questionnaire designed by the researcher (see Appendix A). Demographic questions included age, gender, level of education, and employment status. Questions about role-playing habits focused on frequency of playing role-playing games, how many other people participants typically play role-playing games with, and whether they use technology to play role-playing games.

**Strengths and Difficulties Questionnaire (SDQ; Goodman, 2009).** Information about participants' perceived social strengths and weaknesses was obtained using the Strengths and

Difficulties Questionnaire (Goodman, 2009). The questionnaire consists of 33 items. Twenty-five of the items are three-point scales where the participant is asked to select not true, sometimes true, or certainly true in response to statements about themselves. The remaining eight items are four-point rating scales, which have different responses depending on the content of the item (see Appendix B). Responses are coded to provide scores for five scales: emotionality, peer problems, prosocial behaviour, hyperactivity, and conduct problems. Scores on each scale fall into one of three descriptive categories: normal, borderline, or abnormal. Scale scores can range from 0 to 10. The scores associated with each category change depending on the scale that is being scored (see Appendix C). Scores on the scales are intended to correspond to the intensity of the associated descriptor. For example, if a participant received a score of 10 on the emotionality scale, he or she would fall within the abnormal range for that scale, as this score would indicate a higher level of emotionality compared to the average.

**Semi-structured interview.** Qualitative information about participants' role-playing experiences was collected using a semi-structured interview. An interview guide (Appendix D) was designed to obtain specific information about participants' experiences with role-playing games and how these experiences related to their perceived social competence. The interview guide features seven general questions, each with prompts to gather more detailed information if the participant's response was missing key details or did not answer the question that was asked. Three of the questions focused on role-playing games broadly. During the interviews, participants were asked to name role-playing games that they played regularly. The last four questions focused on experiences with the specific role-playing games named by the participant and were repeated for each role-playing game that the participant mentioned to ensure that as

much detail as possible was gathered about their experiences, since different games can offer different experiences.

### **Procedure**

Following the informed consent procedure, participants were asked to complete the demographic and role-playing habits questionnaire and the SDQ (Goodman, 2009). Once both questionnaires were complete, the interview began. Interviews were recorded using a digital microphone and a computer. Interviews took between 20 and 60 minutes to complete. Once the interview was finished, the participants were given a gift card to thank them for their participation.

## **Results**

### **Demographic Data and Role-playing Habits**

Half ( $n = 3$ ) of the participants reported that their highest level of education was high school/GED, two participants reported that community college was their highest, and one participant reported that some university was their highest. Only two participants reported that they were employed full time or part time, with the remaining two participants reporting that they were employed casually or were a full time student. With respect to role-playing habits, Table 1 and Table 2 summarize the frequency with which participants played role-playing games and the size of the groups that they played with. Most participants reported that they played with a regular group, with one participant reporting that they played with an Adventurer's Guild, a casual group of players that meet at a local board game store. All participants reported playing in person with other players regularly and most participants reported that they did not play through the Internet regularly, with only one participant stating that they do.

## **Semi-structured Interviews**

Interview responses were analyzed using qualitative description. Qualitative description is a method of analyzing written, verbal or visual messages to make inferences from data in their context (Sandelowski, 2000), similar to content analysis (Elo & Kyngas, 2007). The aim of qualitative description is to attain a straightforward and unambiguous description of a phenomenon; the outcome of the analysis is a set of concepts or categories describing the phenomenon (Sandelowski, 2000).

Qualitative description involves three phases of analysis: preparation, organization, and reporting. The preparation phase involves selecting the unit of analysis that is representative of the topic being studied and to become thoroughly familiar with the data through repeated readings. In the current study, the unit of analysis is the semi-structured interviews collected from the participants. The organization phase for qualitative description involves openly coding the data, creating categories, and abstraction (i.e., determining the general themes to which specific parts of the text relate). The unit of analysis is read through again, creating notes and headings that condense the text. Once generated, headings and notes are transferred out of the margins of the text and onto sheets called coding sheets, where they are grouped together and further condensed into categories. From the generated categories, a general description of the research topic is formulated, using a process called abstraction. Abstraction involves creating more categories using content-characteristic words, as well as subcategories within the main categories, as appropriate. The themes produced from the use of qualitative description in the current study are presented in Figure 1.

Analysis of the interview data from the current study revealed four broad themes: the Content Focus theme, the Social Focus theme, the Identity Focus theme, and the Creativity

Focus theme. The core theme that unifies the experiences of the participants was Role-playing Games Are Appealing for Social and Personal Reasons. Quotations relevant to the themes and subthemes are provided below using pseudonyms to keep participants' identities confidential.

**Theme 1: Content focus.** When reflecting on their experiences with role-playing games, several of the participants in this study found that they were attracted to their favorite role-playing game because of the content of the game (e.g., rules, settings). Several participants noted that their interest in and attraction to role-playing games came from a pre-existing interest in fantasy fiction, such as J.R.R. Tolkien's Lord of the Rings books (Tolkien, 1954; 1955). For example, when asked about why he started playing tabletop role-playing games, Aidan (age 24) reported: *"I first started playing tabletop role-playing games... just because I liked the whole fantasy aspect"*. Similarly, Courtney (age 24) noted: *"I've always been into fantasy novels and stuff like that"*. Bill (age 19) stated that he *"like[s] the mythos behind [the game] more than maybe the game itself"*.

**Theme 2: Social Focus.** When reflecting on their experiences with role-playing games, several participants in this study reported on how their experiences with role-playing games were influenced by social factors and how their experiences influenced their social experiences outside of playing tabletop role-playing games.

**Theme 2 Subtheme 1: Social context.** Participants noted that their initial experiences with tabletop role-playing games often came about as a result of a pre-existing interest in tabletop role-playing games among their group of friends. For example, Estelle (age 19) reported: *"It's something that my friend wanted to do"*. Fiona (age 20) noted: *"My boyfriend's little brother was a DM. So, one day he got me to play it and I haven't stopped"*. Similarly, participants also noted that their experiences in role-playing games were often influenced

positively and negatively by social factors external to the game (e.g., arguments with friends, family hardship). For example, Dennis (age 19) noted that, *“If one of our players may have said something prior during the day or something, I may just be a little less lenient when it comes to playing with them and with trying to be more relaxed”*. Similarly, Aidan said: *“When outside forces generally dampen your spirits. I know when my grandma died, I was not at all for D&D”*.

**Theme 2 Subtheme 2: Social and psychological improvement.** Several participants suggested that their experiences with tabletop role-playing games improved their social skills. For example, Dennis stated: *“I’ve noticed that I’m a little more- I’m able to speak clearer almost.”* Similarly, Fiona noted: *“I think I used to be really shy”*. Estelle stated: *“I’m a lot more social, like I meet a lot of people through D&D. I was very antisocial before I started it and it’s kind of helped me open up and get closer to people”*. Finally, Aidan said: *“I’d say I’m a lot more social now. I was social before, don’t get me wrong. But now, I’m just like, ‘Hello, random person, how are you?’”*

**Theme 2 Subtheme 3: Relationship building.** When discussing what they had gained from playing role-playing games, several participants noted that they had gained new friendships or had improved pre-existing friendships, partially due to the low barrier to entry for playing role-playing games. For example, when asked whether she felt that she had gained new friends through role-playing games, Estelle said *“Yes, definitely”*, but also noted *“We get into a lot of fighting because we have different personalities. ... So, it’s a bit dysfunctional but we’re always kind of on the same page in the end. We always work it out and end up having a good time”*. Bill said: *“I’ve really been able to hold on to my best friendships through role-playing games”* and *I use role-playing games to hold the friends I have close. They don't have a lot of money, whereas I do. So, we can't go to this and that and all of this stuff all the time, so we get*

*back to it's not a big money sink, so my friends who don't have a lot of money can still hang out with me six hours a week. I've met a few girlfriends through D&D or best friends who I've become close friends with. So, a lot of my relationships I can account for through some sort of role-playing.*

**Theme 2 Subtheme 4: Social atmosphere.** When discussing what their role-playing group looked like and what motivated them to continue playing role-playing games, several participants suggested that the atmosphere of their role-playing group was generally positive. For example, Bill noted: *“the group itself is very fun and playful and we take it very casually.”* Estelle said: *“Oh, they’re fun.”* Aidan stated: *“I would say that for the most part, it's a fun time. There are certain people in both groups who are just hilarious to be around.”*

**Theme 3: Identity Focus.** Participants in this study focussed on parts of their identity related to role-playing games and how role-playing games influenced their identity and allowed them to experiment with their identity.

**Theme 3 Subtheme 1: Character creation.** Several participants expressed their enjoyment of creating new role-playing characters and trying to create characters that represented different parts of themselves. For example, Fiona noted: *“I love my character. So, for me, I keep coming back because I want to see how her story unfolds.”* Dennis said:

*This is my character, I'm now just stuck with them, I want to be this character and I want to enjoy playing as this character. So, I keep coming back and it's like "oh, it's time to play this awesome character I've created and who I've more elaborated on as since the initial session and this character has this big long back story and fears and pros and cons to this characters.*

**Theme 3 Subtheme 2: Taking on roles.** Participants also reported that they enjoyed trying different types of roles within role-playing games as a way to see how they could perform in a role that they are not used to having. For example, Aidan said: *“You can play so many different types of people in those games. Like, in one game I’m a female character who is a warrior and in another game I’m a small little gnome wizard”*. Bill said:

*I try to think about how my character would play with it. Would my character run? Would my character fight? Would my character try to talk? Would he just give up and go with the situation? So I try to play with how my character, depending on which one I'm playing, because they're all different, how he would handle the situation. Then I would go with what I thought would be the smartest way.*

**Theme 3 Subtheme 3: Autonomy.** Participants noted that they enjoyed the freedom that role-playing games allowed for them to exercise different parts of their identity within safe space. For example, Bill noted that *“I felt like I had control over the situations ... I found it fun”*. Estelle said:

*It kind of gives you the ability, because you control the character, because the character is kind of a personification of you in a way and it’s how you would react in similar situations and I like how we get put in situations we wouldn't be put in in like, a normal life, and even if you haven't experienced things like spells, you can still work it out.*

**Theme 4: Creativity Focus.** Participants in this study reported on broad characteristics of playing role-playing games that they enjoyed. Participants generally discussed the amount of creativity that role-playing games allow players to exercise in their solutions to problems and their development of characters and stories. When asked about what she enjoyed about the game, Fiona said, *“It’s kind of cool to me that you can create your own world or play within someone*

*else's world". Estelle said, "I like how creative it is ... you've got werewolves and vampires and all these magical items, spells. It's all very creative and very fun".*

### **Strengths and Difficulties Questionnaire**

The scores produced by the Strengths and Difficulties Questionnaire (Goodman, 2009) are divided into five scales: conduct problems, hyperactivity, peer problems, prosocial behaviour, and emotional problems. In the current study, the participant score for each scale was within the average range (See Table 3).

### **Discussion**

The current study sought to obtain a deeper understanding of the social experiences of role-players by qualitatively examining participants' experiences with tabletop role-playing games. Based on information collected through questionnaires and semi-structured interviews, participants' experiences are summarized by the overall theme *Role-playing Games Are Appealing for Social and Personal Reasons*. Four themes, *Content focus*, *Social Focus*, *Identity Focus*, and *Creativity Focus* contributed to a detailed understanding of experiences with tabletop role-playing games. *Content focus* outlines the ways that the content of tabletop role-playing games influence how appealing they are to players. It is important to note that the high fantasy setting of most tabletop role-playing games, like the Tolkienesque setting of *Dungeons & Dragons*, was consistently noted as an appealing feature of game content. *Social Focus* outlines how social context can be a primary factor in convincing people to try playing tabletop role-playing games and how the social atmosphere of gaming groups, new and maintained friendships, and perceived social/psychological improvements can be primary influences on people's decision to continue playing tabletop role-playing games. *Identity Focus* outlines how playing role-playing games allow players to feel autonomous while taking on novel roles using

game characters that they have created themselves. Creativity Focus outlines the elements of playing a role-playing game that appealed to the participants, specifically the creativity involved in role-playing and that it is inexpensive to begin role-playing. This study supports previous findings about the positive effect that tabletop role-playing games may have on the social competence of players (Blackmon, 1994; Rosselet & Stauffer, 2013; Zayas & Lewis, 1986) by suggesting that players perceived improvements in their interpersonal skills after playing tabletop role-playing games; however, it moves beyond an explanation of how role-playing games may facilitate psychological and social skills interventions and provides a deeper firsthand account of the influence that tabletop role-playing has had on players.

### **Social Competence**

Based on previous case studies that have examined the influence of role-playing games on people's social skills (e.g., Blackmon, 1994; Rosselet & Stauffer, 2013; Zayas & Lewis, 1986), it was hypothesized that themes relating to improvements in social competence would emerge in the qualitative interviews. The contents of the Social Focus and Identity Focus themes suggest that the participants in this study experienced a perceived improvement in their social competence as a result of playing tabletop role-playing games. All six participants suggested that their social skills had been positively influenced by playing role-playing games. The improvements mentioned (e.g., becoming less shy, improving friendships) by participants are consistent with broad definitions of social competence (Cavell, 1990; Rose-Krasnor, 1997), in that participants reported that they became better able to achieve social success after participating in tabletop role-playing games. In the relationship building subtheme, participants discussed instances when they demonstrated social achievements, specifically the creation and maintenance of relationships, through their involvement with role-playing games. Social

achievements were also discussed in the social context and social atmosphere subthemes, where participants suggested that their involvement with role-playing games came about due, in part, to their acceptance within a social group and that their acceptance within that group has maintained due to their continued involvement with role-playing games. The successful use of social skills was also discussed, such as the use of empathy to solve in-game problems that was discussed in the taking on roles subtheme (Cavell, 1990; Rose-Krasnor, 1997). In the social and psychological improvement subtheme, participants noted that they felt that their ability to appropriately navigate social interactions had improved and that the skills they had developed through their involvement in role-playing games had helped them to make social achievements (e.g., forming and maintaining relationships).

The improvement in social skills suggested by the qualitative interviews is consistent with the developmental mechanisms of social competence. The development of social competence is related to how young children play (Howes, 1987; Howes & Matheson, 1992). During toddlerhood, children learn basic social skills and, as they grow, the skills they have acquired are practiced in new ways. Specifically, children begin to engage in social role-playing, where they take on different roles and engage with one another different social scenarios. Through social role-playing, children create and maintain stable relationships with one another and become more aware of the thoughts, feelings, and expectations of others (Rose-Krasnor, 1997). The self-reported improvement in social competence that is suggested by the current findings matches this pattern of development. As Zayas and Lewis (1986) suggested in their case study, tabletop role-playing games provide the players with the opportunity to frequently practice social skills in a safe and novel environment, similar to the way that children practice their social

skills through social role-play. Tabletop role-playing games allow players to refine their social skills.

### **Additional Themes**

Not only are the results of the current study consistent with previous research, they also expand upon previous findings. Responses to qualitative interviews suggested that there are important factors to take into account when considering the clinical application of role-playing games. The themes outside of the Social Focus theme (i.e., Content Focus, Creativity Focus, and Identity Focus) reflect personal reasons for engaging with tabletop role-playing games. The existence of these themes and subthemes suggests that, although role-playing games may help to improve social competence and have a strong social component, they are attractive to users for reasons beyond their social factors (Blackmon, 1994; Rosselet & Stauffer, 2013; Zayas & Lewis, 1986).

**Thematic Content.** Participants consistently noted that the fantastical elements of role-playing games, such as magic and monsters, played a primary role in their initial attraction to role-playing games. This focus on the content of role-playing games suggests that the thematic context within a game (i.e., the setting, the story) may have a significant effect on an individual's attraction to and enjoyment of a role-playing game. In their case study, Rosselet and Stauffer (2013) suggested that the fantasy elements of role-playing games, due to the malleable nature of a fantasy world, are important to their effectiveness as an intervention as they allow the game to be more flexible and engaging than a role-playing game in a real world setting. Similarly, Zayas and Lewis (1986) noted that there are a wide variety of role-playing games on the market, ranging from mundane games set within a realistic world, to games set in a purely fantastical

world and that the type of game used in a role-playing intervention should match the interests of the players.

**Identity.** Several participants mentioned aspects of role-playing games related to the exploration of different roles and parts of their identity. These subthemes suggest that engagement with tabletop role-playing games, at least in part, may be due to the opportunity for identity exploration that is allowed through character creation, the adoption of novel roles, and the autonomy allowed in the game. Not only do players get to experiment with different social roles and social behaviours, but they can explore what it means to be within a particular role in terms of personal beliefs and qualities and how those can influence behaviour. The Identity Focus theme and its subthemes are consistent with observations made by Blackmon (1994) and Rosselet and Stauffer (2013), about the potential for role-playing games to be used for identity exploration. Blackmon (1994) noted that the use of fantasy in therapeutic interventions is not new and that role-playing interventions can be a common practice among psychologists and psychiatrists. Unlike other interventions, the fantasy in role-playing games is highly structured and informed by a complex set of rules. Role-playing games allow players to explore their identity in a way that is reactive to their decisions, but is also controlled and safe. Similarly, Rosselet and Stauffer (2013) noted that the context of role-playing games as recreational activity, makes them a safe place for players to explore their identity by making meaningful decisions that reflect their identity and observing a tangible (albeit fictional) outcome. The appeal of role-playing games to young adults is also consistent with previous research on identity development, which suggests that as an individual's identity develops between childhood and adulthood, they explore different roles to determine what beliefs and qualities match their identity (Santrock, 2010).

## Components of Role-playing Game Interventions

Role-playing games may be useful as an alternative or adjunct intervention for the improvement of social competence in children and adolescents due to three key components of their design. The structure of role-playing games allows for a dynamic, responsive system where players can receive immediate feedback on their social performance. Role-playing games also tend to focus on content that may be found more engaging or entertaining by young people, potentially increasing their engagement with the intervention. Finally, the focus that role-playing games place on taking on new roles and exploring individual identities provides players with the opportunity to explore their own identities in addition to developing their social competence.

The structure of role-playing games, informed by the rules and overall design, provides novel social problem-solving opportunities and allows players to receive dynamic, on-going social feedback. The rules of role-playing games, though dense, allow for the facilitation of social encounters within and outside of the player group (Blackmon, 1994). Players not only need to navigate social situations that arise between one another during the course of the game, but also need to solve problems related to social encounters with non-player characters controlled by the Game Master, which can allow for novel social problems. For example, in the Dungeons & Dragons module *Ravenloft* (Hickman & Hickman, 1983), players are tasked with gaining the social favor of a count, something that players may encounter on a smaller scale within their daily life, but the game removes the long term social consequences and makes the situation more interesting through the use of fantastical content. The robustness of the rules not only provides ample opportunity for players to practice their social skills, but also to receive immediate feedback on their performance. For example, a player might practice social reciprocity during a

gaming session and he or she has the potential to receive feedback from the other players, the game master, and the game system itself. Complex rules govern the reactions of non-player characters, producing realistic social situations that players must overcome. These social encounters are a core component of role-playing games (Ewlat, 2013). In addition to their responsive design, role-playing games have features that make them more attractive to younger clients.

Unlike typical cognitive-behavioural interventions for depression and anxiety in children and adolescents, which may involve role-playing exercises, role-playing game interventions involve content that has the potential to be more engaging to clients compared to traditional role-playing exercises. Historically, role-playing games are intended to be set within a high fantasy setting, similar to J.R.R. Tolkien's *The Fellowship of the Ring* (Tolkien, 1954). As the current study and previous studies (e.g., Rosselet & Stauffers 2013; Zayas & Lewis, 1986) suggest, the fantastical content of role-playing games tends to be engaging for players of role-playing games. As well, according to a survey of books read by children and adolescents, young people tend to prefer fiction set within high fantasy settings (Renaissance Learning, 2016). These results suggest that being involved in activities that are thematically related to fantasy content may be more engaging than being involved in activities related to mundane (e.g., ordinary, real world) content for the type of player who would be attracted to role-playing games, meaning that role-playing games could be a more attractive alternative to children who have an interest in high fantasy stories. Similarly, role-playing interventions are structured in such a way that they allow for exploration of a client's identity in addition to the development of social skills, which may further improve intervention engagement.

Role-playing games offer a unique opportunity for clients to explore their identity while also learning and practicing social skills. The results of the current study, as well as the results of previous case studies, suggest that role-playing games provide the opportunity to explore one's identity by encouraging players to adopt new roles (Blackmon, 1994; Rosselet & Stauffer, 2013; Zayas & Lewis, 1986). Common interventions for anxiety and depression, such as CBT, do not typically involve identity exploration, as they mostly focus on providing clients with strategies for managing their cognitions and behaviour (Chosak & Baer, 2016). Since childhood and adolescence are periods of identity development (Santrock, 2010), it may be more engaging for an intervention to not only provide the opportunity to support the development for social competence, but also an opportunity to explore one's identity in a safe, but dynamic, environment. The potential for identity exploration, along with the structure and content of role-playing games, may make them an engaging alternative or adjunct for treating poor social competence. However, there are some logistical considerations that must be taken into account with the use of role-playing games.

### **Logistical Considerations for the Clinical Application of Role-playing Games**

The use of tabletop role-playing games as an intervention, or as an adjunct to an intervention, requires consideration of some logistical factors that are inherent to the design of tabletop role-playing games. Specifically, the density of the rules that are used to govern the use of role-playing games, as well as the time, space, and group available to players. These logistical considerations can determine whether a role-playing game is a good fit for a particular client or group of clients.

Typically, a role-playing game involves several books of rules, usually spanning one hundred or more pages each (Barton, 2008). Most games have one or two core rulebooks, but

these are the bare minimum for the rules of a role-playing game. In addition to these core rulebooks, there are books for rules related to monsters, spells, specific locations, and different classes of characters. Some of these materials are for reference only. However, for a game to run smoothly, players need to have a working knowledge of the most common concepts they will encounter in the game (Laws, 2002). For game masters, the demand to know the minutiae of the game is even higher. For a game to run smoothly, a game master needs to have a high level of knowledge of the game content and an intuitive understanding of the game's systems (Laws, 2002). For a role-playing intervention to be a viable intervention option, the client needs to be willing to learn the rules of the game and the psychologist, if he or she is acting as the game master, must have the time and willingness to become proficient in the game chosen for the intervention. As well, having multiple groups running at once could become complicated for a psychologist, since different groups may play different games, and the psychologist would be required have a deep familiarity with multiple game systems if he or she were to act as the game master. Simplified rule systems do exist (Microlite20, 2016), which may be ideal for the time-restrictive nature of the intervention setting, but offer a less dynamic game system with fewer opportunities for social feedback to a client. The time requirement to become familiar with the game system is in addition to the time requirement for the facilitation of the intervention itself.

A typical gaming session can last anywhere from an hour to an entire weekend (Blackmon, 1994; Rosselet & Stauffer, 2013). In a hospital or private practice setting, this kind of time commitment may be feasible, but it could become expensive for the clients. In a school environment, game sessions would need to be relegated to an after-school activity, due to the high caseload of most school psychologists (Huebner, 1992; Meyers & Swerdlik, 2003), which could increase the chances of player absenteeism. Again, simplified rule systems (e.g.,

Microlite20) do exist and can reduce the time needed for a game session, but reduced complexity also leads to a reduction in the dynamic nature of the game since the rules will be less detailed.

Taking factors like the length of a game session into account is important for effectively incorporating role-playing games into clinical practice.

Effectively using role-playing games in clinical practice involves keeping the social elements of role-playing games intact while managing the logistical considerations of role-playing games themselves. In order for role-playing games to influence the social competence of players, players need to have the opportunity to have meaningful social experiences while engaging with the game (Blackmon, 1994; Rosselet & Stauffer, 2013; Zayas & Lewis, 1986). Although role-playing games are heavily structured by their rules, they can be unpredictable due to their free-form nature (Blackmon, 1994), making it difficult to ensure that players are having meaningful social experiences. It is important to take into account the composition of the group of players that are involved with the game and shaping the structure of the game based on their needs. For example, using a more simplified rule system for groups that tend to not focus on the minutiae of the game structure or planning for shorter game sessions with more intense situations for groups whose attention may waver more. Future studies should investigate the best practices for modifying role-playing games to fit the needs of clients. It is also important to acknowledge that, due to the complicated rules and heavy reading and writing requirements involved in role-playing games, the use of role-playing games is limited to clinical populations who would not struggle to understand them.

## **Clinical Applications and Further Research**

Based on the current study, previous studies, and the inherent characteristics of role-playing games, there are some general guidelines for clinicians who are interested in using role-playing games as or in addition to interventions. Firstly, ensure that the content and structure of the role-playing game match the needs and preferences of the client. If the client is not engaged with the game or the game is not providing opportunities that are relevant to their presenting problem, the game may not be effective as an intervention. Secondly, the clinician must be aware of the logistical factors that are associated with role-playing games and how they match with his or her approach to interventions. If the rules of a role-playing game are too overwhelming, for instance, it may not be a good match. Finally, if a clinician decides to use role-playing games in intervention sessions with a client or group of clients and to manage the game as a Game Master/Dungeon Master, he or she must be fluent in the mechanics of the game he or she chooses to use, to allow for maximum opportunities for social benefits to the client(s). Future research into the clinical use of role-playing games should examine role-playing games using methods that will allow for further development of clinical guidelines.

Moving forward, research examining the relation between social competence and role-playing games should adopt a systematic and experimental approach to determine which component(s) of role-playing games may influence social competence. Understanding the driving force behind role-playing games will allow for the development of streamlined interventions for social competence. As well, comparisons should be made between young people with social difficulties and young people without social difficulties, to determine whether the influence of role-playing games applies to a general population. Finally, if a standardized role-playing game intervention, such as a version of Dungeons & Dragons designed for

intervention purposes, were to be developed, randomized control trials should be conducted to validate the efficacy of the intervention. The current study was a first step in bridging the gap between previous case studies and future research, but only examined role-playing generally, not at a role-playing game intervention.

### **Strengths and Limitations**

This study primarily used semi-structured interviews and content analysis. The SDQ (Goodman, 2009) was also used to corroborate the findings of the semi-structured interviews. Using these methods allowed for the collection of new types of data about role-playing games that were previously unavailable in the literature. Each method has strengths and limitations.

**Semi-structured Interviews.** Although the semi-structured interviews provided detailed information regarding the relation between role-playing games and social competence, especially since interviews were conducted in a structured and standardized way, there are limitations that must be acknowledged. Specifically, the interpretation of the interview data could have been influenced by the researcher's biases. However, to ensure that the qualitative data of this study was collected and interpreted effectively, the researcher consulted with experienced qualitative researchers when designing the interview guide and when conducting content analysis. Since the interviews for this study were relatively short (i.e., they ranged from 30-60 minutes), the breadth and depth of information collected might not provide the same amount of detail as previous case studies focusing on a single individual or group of individuals over several sessions of an intervention. However, semi-structured interviews can provide a level of detail that cannot be obtained through other commonly used methods (e.g., questionnaires). Semi-structured interviews were chosen due to their systematic design and methodological soundness, which allowed for the collection of specific information related to the study hypotheses. Although the

data obtained in the current study may be less than in previous case studies, it might be more useful for drawing broad conclusions about a given phenomenon.

**SDQ.** This study used the SDQ to quantitatively support the findings of the semi-structured interviews with regards to social strengths and weaknesses. The SDQ was chosen due to the lack of a specific measure of social competence and because it has been used as a general measure of social strengths and challenges in previous research (Cavell, 1990; Rose-Krasnor, 1997). The results of the SDQ (Goodman, 2009) were in the normal range, suggesting that the participants in this study did not differ significantly from average in terms of their emotionality, peer problems, prosocial behaviour, hyperactivity, and conduct problems. These results corroborate the positive social themes present in the semi-structured interviews and are generally similar to the results of previous studies (Abyeta & Forest, 1991; Carter & Lester, 1998) that examined the daily functioning and personality characteristics of Dungeons & Dragons players, in that no significant negative results were found. These previous studies suggest that people who play Dungeons & Dragons do not differ from non-players on measures of depression, suicidal ideation, psychoticism, extraversion or neuroticism, and self-reported criminal behaviour. However, since the Strengths and Difficulties questionnaire is more general than the measures used in these previous studies, making a direct comparison between the results of the current study and the results of previous studies is difficult.

**Sample.** The current study focuses on the relationship between the development of social competence and the use of tabletop role-playing games, seeking to expand upon the conclusions of previous case studies. Unlike previous case studies, the sample of the current study was not from a clinical population. It is unknown if the participants in the current study could be considered a clinical sample since the participants were not asked about any psychological

disorders they may have been diagnosed with or psychological problems they may have experienced. Since the sample of the current study is not a clinical sample, the results may not necessarily generalize to a clinical population.

## **Conclusion**

The results of the current study corroborate and expand on the findings of previous case studies examining the influence of tabletop role-playing games on social functioning of players. Participants' experiences with role-playing games suggest that role-playing games provide a structured environment in which participants can improve their perceived social competence, through a structured system that reacts to their decisions in a realistic way. Participants' experiences with role-playing games also suggest that tabletop role-playing games are appealing to players because of the fantastical content, the allowance of identity exploration, and the design of the rules of role-playing games. As previous studies have suggested, these results indicate that role-playing games have the potential to be used as effective interventions for deficits in social competence. They also indicate that there are factors that limit the clinical utility of role-playing games, such as the extraordinary density of the rules that govern role-playing games and the content of the games themselves. It is possible that a simplified role-playing intervention could be designed to eliminate some of these limiting factors. Although research investigating role-playing game interventions is promising, more research will need to be conducted to further elucidate the clinical utility of a role-playing game intervention.

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Table 1

*Frequency of participant responses to an item on the demographic and role-playing habits questionnaire*

<u>How often do you play tabletop role-playing games?</u>	<u><i>n</i></u>
< 1 – 2 sessions a month	0
1 – 2 session a month	2
3 – 4 sessions a month	1
1 – 3 sessions a week	3
> 1 – 3 sessions a week	0

Table 2

*Frequency of participant responses to an item on the demographic and role-playing habits questionnaire*

---

When you play tabletop role-playing games, how many people do you play with?	<i>N</i>
1 – 2	0
3 – 4	2
4 – 5	3
5 – 6	1
> 6	0

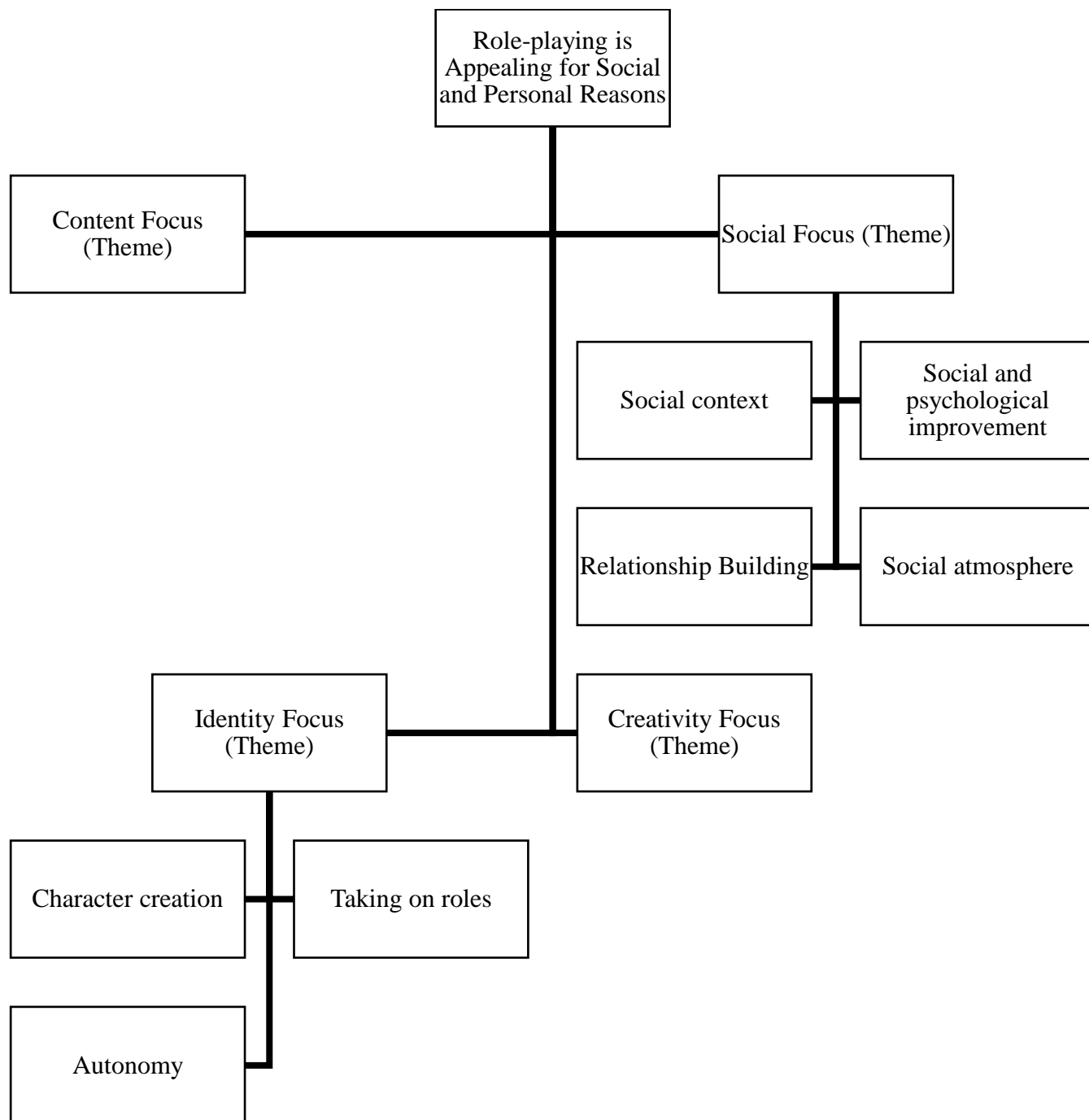
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Table 3

*Minimum, maximum, and mean statistics from the Strengths and Difficulties Questionnaire scales*

Scale	Minimum	Maximum	Mean
Conduct Problems	0	2	1.16
Peer Problems	1	7	4
Hyperactivity	0	2	1
Prosocial Behaviour	9	10	9.5
Emotional Problems	1	6	2.33

*Note.* The mean score for each scale is within the normal range of the SDQ.



*Figure 1.* Overview of the relationships between themes and subthemes of participant experiences with role-playing games.

## Appendix A

### Demographics and Role-playing Habits Questionnaire

Participant ID:

- How old are you? \_\_\_\_\_
- What gender do you identify with?
  - Male
  - Female
  - Prefer not to say
- What is your highest level of education?
  - Currently in High School/GED
  - High school/GED
  - Some university education
  - University degree
  - Some graduate education
  - Other: \_\_\_\_\_
- What is your employment status?
  - Student
  - Employed full time
  - Employed part time
  - Other: \_\_\_\_\_
- How long ago did you begin to regularly play tabletop role-playing games? \_\_\_\_\_
- How often do you play tabletop role-playing games?
  - < 1 – 2 sessions a month

- 1 – 2 session a month
  - 3 – 4 sessions a month
  - 1 – 3 sessions a week
  - > 1 – 3 sessions a week
- When you play tabletop role-playing games, how many people do you play with?
  - 1 – 2
  - 3 – 4
  - 4 – 5
  - 5 – 6
  - > 6
- Do you have a regular group of people to play tabletop role-playing games with?
  - Yes
  - No
  - Other: \_\_\_\_\_
- Do you play tabletop role-playing games in person with a gaming group?
  - Yes
  - No
  - Other: \_\_\_\_\_
- Do you regularly play tabletop role-playing games through the internet using software like Skype or Google Hangouts?
  - Yes
  - No
  - Other: \_\_\_\_\_

- Do you regularly play computer role-playing games (e.g., Mass Effect, Dragon Age, World of Warcraft)?

- Yes
- No
- Other: \_\_\_\_\_

## Appendix B

### Strengths and Difficulties Questionnaire

#### Strengths and Difficulties Questionnaire

S<sup>17+</sup>

For each item, please mark the box for Not True, Somewhat True or Certainly True. It would help us if you answered all items as best you can even if you are not absolutely certain. Please give your answers on the basis of how things have been for you over the last six months.

Your Name .....

Male/Female

Date of Birth.....

	Not True	Somewhat True	Certainly True
I try to be nice to other people. I care about their feelings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am restless, I find it hard to sit down for long	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get a lot of headaches, stomach-aches or sickness	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I usually share with others, for example food or drink	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get very angry and often lose my temper	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I would rather be alone than with other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am generally willing to do what other people want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I worry a lot	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am helpful if someone is hurt, upset or feeling ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am constantly fidgeting or squirming	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have at least one good friend	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I fight a lot. I can make other people do what I want	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often unhappy, depressed or tearful	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people generally like me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am easily distracted, I find it difficult to concentrate	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am nervous in new situations. I easily lose confidence	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am kind to children	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am often accused of lying or cheating	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people pick on me or bully me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I often offer to help others (family members, friends, colleagues)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think before I do things	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I take things that are not mine from home, work or elsewhere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I get along better with older people than with people of my own age	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have many fears, I am easily scared	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I finish the work I'm doing. My attention is good	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Do you have any other comments or concerns?

Please turn over - there are a few more questions on the other side

Overall, do you think that you have difficulties in one or more of the following areas:  
emotions, concentration, behavior or being able to get along with other people?

No	Yes- minor difficulties	Yes- definite difficulties	Yes- severe difficulties
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If you have answered "Yes", please answer the following questions about these difficulties:

• How long have these difficulties been present?

Less than a month	1-5 months	6-12 months	Over a year
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Do the difficulties upset or distress you?

Not at all	Only a little	Quite a lot	A great deal
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Do the difficulties interfere with your everyday life in the following areas?

	Not at all	Only a little	Quite a lot	A great deal
getting along with the people you are closest to (e.g. family, partner)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
making and keeping friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
work or study	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
hobbies, sports or other leisure activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

• Do the difficulties make it harder for those around you (family, friends, etc.)?

Not at all	Only a little	Quite a lot	A great deal
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Your Signature .....

Today's Date .....

**Thank you very much for your help**

## Appendix C

### Strengths and Difficulties Questionnaire Scoring Instructions

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#### Scoring the Strengths & Difficulties Questionnaire for age 4-17 or 18+

The 25 items in the SDQ comprise 5 scales of 5 items each. It is usually easiest to score all 5 scales first before working out the total difficulties score. 'Somewhat True' is always scored as 1, but the scoring of 'Not True' and 'Certainly True' varies with the item, as shown below scale by scale. For each of the 5 scales the score can range from 0 to 10 if all items were completed. These scores can be scaled up pro-rata if at least 3 items were completed, e.g. a score of 4 based on 3 completed items can be scaled up to a score of 7 (6.67 rounded up) for 5 items.

*Note that the items listed below are for 4-17-year-olds, but the scoring instructions are identical for the similarly-worded '18+' SDQ*

**Table 1: Scoring symptom scores on the SDQ for 4-17 year olds**

	Not True	Somewhat True	Certainly True
<b>Emotional problems scale</b>			
ITEM 3: Often complains of headaches... ( <i>I get a lot of headaches...</i> )	0	1	2
ITEM 8: Many worries... ( <i>I worry a lot</i> )	0	1	2
ITEM 13: Often unhappy, downhearted... ( <i>I am often unhappy...</i> )	0	1	2
ITEM 16: Nervous or clingy in new situations... ( <i>I am nervous in new situations...</i> )	0	1	2
ITEM 24: Many fears, easily scared ( <i>I have many fears...</i> )	0	1	2
<b>Conduct problems Scale</b>			
ITEM 5: Often has temper tantrums or hot tempers ( <i>I get very angry</i> )	0	1	2
ITEM 7: Generally obedient... ( <i>I usually do as I am told</i> )	2	1	0
ITEM 12: Often fights with other children... ( <i>I fight a lot</i> )	0	1	2
ITEM 18: Often lies or cheats ( <i>I am often accused of lying or cheating</i> )	0	1	2
ITEM 22: Steals from home, school or elsewhere ( <i>I take things that are not mine</i> )	0	1	2
<b>Hyperactivity scale</b>			
ITEM 2: Restless, overactive... ( <i>I am restless...</i> )	0	1	2
ITEM 10: Constantly fidgeting or squirming ( <i>I am constantly fidgeting...</i> )	0	1	2
ITEM 15: Easily distracted, concentration wanders ( <i>I am easily distracted</i> )	0	1	2
ITEM 21: Thinks things out before acting ( <i>I think before I do things</i> )	2	1	0
ITEM 25: Sees tasks through to the end... ( <i>I finish the work I am doing</i> )	2	1	0
<b>Peer problems scale</b>			
ITEM 6: Rather solitary, tends to play alone ( <i>I am usually on my own</i> )	0	1	2
ITEM 11: Has at least one good friend ( <i>I have one good friend or more</i> )	2	1	0
ITEM 14: Generally liked by other children ( <i>Other people my age generally like me</i> )	2	1	0
ITEM 19: Picked on or bullied by other children... ( <i>Other children or young people pick on me</i> )	0	1	2
ITEM 23: Gets on better with adults than with other children ( <i>I get on better with adults than with people my age</i> )	0	1	2
<b>Prosocial scale</b>			
ITEM 1: Considerate of other people's feelings ( <i>I try to be nice to other people</i> )	0	1	2
ITEM 4: Shares readily with other children... ( <i>I usually share with others</i> )	0	1	2
ITEM 9: Helpful if someone is hurt... ( <i>I am helpful is someone is hurt...</i> )	0	1	2
ITEM 17: Kind to younger children ( <i>I am kind to younger children</i> )	0	1	2
ITEM 20: Often volunteers to help others... ( <i>I often volunteer to help others</i> )	0	1	2

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**Total difficulties score:** This is generated by summing scores from all the scales except the prosocial scale. The resultant score ranges from 0 to 40, and is counted as missing if one of the 4 component scores is missing.

**'Externalising' and 'internalising' scores:** The externalising score ranges from 0 to 20 and is the sum of the conduct and hyperactivity scales. The internalising score ranges from 0 to 20 and is the sum of the emotional and peer problems scales. Using these two amalgamated scales may be preferable to using the four separate scales in community samples, whereas using the four separate scales may add more value in high-risk samples (see Goodman & Goodman, 2009 *Strengths and difficulties questionnaire as a dimensional measure of child mental health. J Am Acad Child Adolesc Psychiatry* 48(4), 400-403).

### Generating impact scores

When using a version of the SDQ that includes an 'impact supplement', the items on overall distress and impairment can be summed to generate an impact score that ranges from 0 to 10 for parent- and self-report, and from 0 to 6 for teacher-report.

**Table 2: Scoring the SDQ impact supplement**

	Not at all	Only a little	A medium amount	A great deal
<b>Parent report:</b>				
Difficulties upset or distress child	0	0	1	2
Interfere with HOME LIFE	0	0	1	2
Interfere with FRIENDSHIPS	0	0	1	2
Interfere with CLASSROOM LEARNING	0	0	1	2
Interfere with LEISURE ACTIVITIES	0	0	1	2
<b>Teacher report:</b>				
Difficulties upset or distress child	0	0	1	2
Interfere with PEER RELATIONS	0	0	1	2
Interfere with CLASSROOM LEARNING	0	0	1	2
<b>Self-report report:</b>				
Difficulties upset or distress child	0	0	1	2
Interfere with HOME LIFE	0	0	1	2
Interfere with FRIENDSHIPS	0	0	1	2
Interfere with CLASSROOM LEARNING	0	0	1	2
Interfere with LEISURE ACTIVITIES	0	0	1	2

Responses to the questions on chronicity and burden to others are not included in the impact score. When respondents have answered 'no' to the first question on the impact supplement (i.e. when they do not perceive themselves as having any emotional or behavioural difficulties), they are not asked to complete the questions on resultant distress or impairment; the impact score is automatically scored zero in these circumstances.

**Cut-points for SDQ scores for age 4-17: original 3-band solution & newer 4-band solution**

Although SDQ scores can be used as continuous variables, it is sometimes convenient to categorise scores. The initial bandings presented for the SDQ scores were 'normal', 'borderline' and 'abnormal'. These bandings were defined based on a population-based UK survey, attempting to choose cutpoints such that 80% of children scored 'normal', 10% 'borderline' and 10% 'abnormal'.

More recently a four-fold classification has been created based on an even larger UK community sample. This four-fold classification differs from the original in that it (1) divided the top 'abnormal' category into two groups, each containing around 5% of the population, (2) renamed the four categories (80% 'close to average', 10% 'slightly raised', 5% 'high' and 5% 'very high' for all scales except prosocial, which is 80% 'close to average', 10% 'slightly lowered', 5% 'low' and 5% 'very low'), and (3) changed the cut-points for some scales, to better reflect the proportion of children in each category in the larger dataset.

*Note that these cut points have not been validated for use with the 18+ SDQ, so we suggest that it is safest to use continuous scores rather than categories for this measure*

**Table 3: Categorising SDQ scores for 4-17 year olds (not validated for 18+)**

	Original 3-band categorisation			Newer 4-band categorisation			
	Normal	Borderline	Abnormal	Close to average	Slightly raised (/slightly lowered)	High (/Low)	Very high (very low)
<b>Parent completed SDQ</b>							
Total difficulties score	0-13	14-16	17-40	0-13	14-16	17-19	20-40
Emotional problems score	0-3	4	5-10	0-3	4	5-8	7-10
Conduct problems score	0-2	3	4-10	0-2	3	4-5	6-10
Hyperactivity score	0-5	6	7-10	0-5	6-7	8	9-10
Peer problems score	0-2	3	4-10	0-2	3	4	5-10
Prosocial score	6-10	5	0-4	8-10	7	6	0-5
Impact score	0	1	2-10	0	1	2	3-10
<b>Teacher completed SDQ</b>							
Total difficulties score	0-11	12-15	16-40	0-11	12-15	16-18	19-40
Emotional problems score	0-4	5	6-10	0-3	4	5	6-10
Conduct problems score	0-2	3	4-10	0-2	3	4	5-10
Hyperactivity score	0-5	6	7-10	0-5	6-7	8	9-10
Peer problems score	0-3	4	5-10	0-2	3-4	5	6-10
Prosocial score	6-10	5	0-4	6-10	5	4	0-3
Impact score	0	1	2-6	0	1	2	3-6
<b>Self-completed SDQ</b>							
Total difficulties score	0-15	16-19	20-40	0-14	15-17	18-19	20-40
Emotional problems score	0-5	6	7-10	0-4	5	6	7-10
Conduct problems score	0-3	4	5-10	0-3	4	5	6-10
Hyperactivity score	0-5	6	7-10	0-5	6	7	8-10
Peer problems score	0-3	4-5	6-10	0-2	3	4	5-10
Prosocial score	6-10	5	0-4	7-10	6	5	0-4
Impact score	0	1	2-10	0	1	2	3-10

Note that both these systems only provide a rough-and-ready way of screening for disorders; combining information from SDQ symptom and impact scores from multiple informants is better, but still far from perfect.

## Appendix D

### Interview Guide

Participant ID:

Thank you for agreeing to participate in this study about experiences with tabletop role-playing games. This interview will last about one hour and we will be audio recorded. If there are any questions that you do not want to answer, or if you want to stop the interview at any time that is okay. Although this is being recorded and will later be typed up, your name and that of anyone else you mention will be removed before sharing any of the findings with others. If you are unsure what I am asking in a question, please just tell me and I will reword the question. Are you ready to get started?

1. Why did you start playing tabletop role-playing games?

Probes:

- What was the first game that you played?
- Who did you play with?
- What was your first impression of role-playing?

2. Which three games do you play the most?

Probes:

- Why do you play these games the most?
- Do you have different gaming groups for each game?

3. Which three games are your favorites?

Probes:

- (If there is a discrepancy with previous question) Why don't you play your favorite games more often?

Now I am going to ask you a few questions about each game that you mentioned.

1. What do you like about playing \_\_\_\_\_?

Probes:

- Is there anything you dislike about playing \_\_\_\_\_?
- Why do you like/dislike these parts of the game?

2. What is the group you play \_\_\_\_\_ with like?

Probes:

- Do you spend time with any group members outside of gaming sessions?
- What is the atmosphere of the group like?

3. When you play \_\_\_\_\_ are you usually a Game Master/Dungeon Master or a player?

Probes:

- Describe the type of character that you tend to play as when you play \_\_\_\_\_.
- Describe the type of GM/DM that you tend to play as when you play \_\_\_\_\_.

4. Describe your approach to playing/running a game when you play \_\_\_\_\_.

Probes:

- Why would you approach the game in this way?
- How do other players react to your approach?

5. If you played as [the opposite of their previous answer] instead of [their previous answer], how would you approach the game?

Probes:

- (If there is a discrepancy with previous answer) Why would you play differently as a GM/Player than as a GM/Player?
- Why would you approach the game in this way?
- How do you think other players would react to your approach?

6. How do you feel when you play \_\_\_\_\_?

Probes:

- Why do you think you feel this way?
- What usually makes you feel this way?
- Is there any time you feel [opposite type of feeling] while playing?

7. Why do you continue to return to this/these group(s) to play \_\_\_\_\_?

Probes:

- How has your life changed since you began playing \_\_\_\_\_?
- What do you gain from playing \_\_\_\_\_?
- What do you lose from playing \_\_\_\_\_?