

# DEVELOPING ADOLESCENTS' RESISTANCE TO SEXUAL COERCION THROUGH ROLE-PLAYING ACTIVITIES IN A VIRTUAL WORLD

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## ABSTRACT

This paper explores the use of a three dimensional virtual world (3-DVW) to delivery assertiveness training to young adolescents. The case study aims to understand how a sense of presence in VWs facilitates and affect the performance of students role-playing activities to enhance their ability to resist sexual coercion. The results indicate that a sense of presence had a modest influence on participants' verbal interactions while role-playing.

## KEYWORDS

3D Virtual Environments, Adolescents, Sexual Coercion, Assertiveness, Role-Play

## 1. INTRODUCTION

Adolescence (10-19 years) is a period of development marked by the emergence of romantic relationships. Over 20% of all adolescents have experienced either psychological or physical coercion from an intimate partner (Centers for Disease Control and Prevention, 2012). When adolescents lack belief in their efficacy to assertively express wishes or initiate discussions around safer sex, they are likely to be coerced in their sexual relationships and be at risk of negative outcomes of sexual behaviour such as HIV/ STIs and unintended pregnancies (Wolfe et al; 2012). Individuals who have experienced sexually coercive behaviour experience considerable traumatic health consequences such as physical and mental health problems, substance misuse, self-harm, antisocial behavior, and sexual behavior problems (Lehrer et al;2013). Victims may also feel violated, vulnerable, confused, betrayed, guilt and shame (DeGue & DiLillo, 2005). Young and Furman (2008) reported that after an early incident of sexual coercion, adolescents' risk for subsequent incidents increased more than sevenfold. Programs focus on reducing vulnerability to sexual coercion by training people on how to protect themselves. Self-protection strategies including communication components aimed at improving the ability of participants to communicate assertively have been found to have some success (Gidycz et al; 2001).

Role-playing is an approach to help individuals develop strategies for dealing with complex social situations (Jouriles et al; 2009). However, it typically involves learning the skills in a classroom setting resulting in an unrealistic and disengaging experience (Sognure, 2004). Students find the scrutiny of the group confronting, and performing in front of their peers frightening and embarrassing (Arnold & Koczwara, 2006). Consequently, behavioral inhibition can impact on the content, style and quality of verbal interactions between individuals practicing role-plays (Hamilton et al; 2014).

### 1.1 3D Virtual Worlds (3DVWs): Virtual Presence and Virtual Realism

3DVWs are computer generated spaces with affordances for communication activities (Mennecke et al; 2011). Avatars represent the user in the VW and it is the user avatar that actually interacts with the world and other users via a range of synchronous and asynchronous verbal communication channels. These communication and exchange mechanisms in VWs create a sense of 'being there' at the same time and in a 'place' with other avatars (Minocha, 2010).

Presence, the subjective sense of being in a place, is a defining feature of the learners' experience that mediates the nature of communication in VWs (Mennecke et al; 2011). It is encouraged by the layers of sensory information which enable users to transcend the real world to see, hear and feel as if they are actually inside these environments (Blascovich & Bailenson, 2011). Presence is the combination of the technical capabilities of the medium, which encourages user immersion, and the level of psychological sense an individual has of being in the VW. Presence affects verbal interactions in role-plays. For instance, students in VWs take additional turns in conversations and have shorter exchanges in each turn than those in the Face-to-Face (Gao et al; 2008). Also, a sense of presence contributes to the argumentative knowledge construction by participants while role-playing in Second Life (Jamaludin et al; 2009).

The extent to which the realism of the environment enhances role-play interaction has been contested by arguing that imitating reality is not particularly helpful to learning (Dillenbourg; 2008). However, the context of the learning is relevant particularly in the case of role-play pedagogy. For instance a program to reduce sexual victimization among adolescent girls, which used virtual reality headsets, found the medium provided a realistic setting for participants to practice the skills needed to resist sexual coercion since it allowed them to experience a heightened sense of anxiety similar to how they would feel in a real-life sexually coercive situation (Rowe et al; 2015). Similarly, the graphical realism of VWs has been successfully applied to practice role-plays in social situations that individuals may find difficult in the real world such as job interview simulations (Bell & Weinstein, 2011) and teacher training (Gregory & Masters, 2012). Notwithstanding the previous, limitations of VWs such as lack of visual features: facial expressions and subtle movements; may detract from a sense of presence and hence reduced verbal interaction and engagement. Nonetheless, Schroder (2002) argues users are able to cope well with the absence of certain features in the real world or face-to-face. Furthermore, it can be anticipated that advances in technology will generate progress in higher avatar realism to allow the transmission of similar social cues of face-to-face communication.

This exploratory case study aims to develop a more in-depth understanding of how physical presence and sense of realism in a VW is perceived by students to influence their verbal performance while enacting role-plays.

## 2. METHOD AND RESULTS

17 students (10 male and 7 female) aged 13-14 years, attending a Social Health and Personal Education class participated in the study. None had experience of using Second Life and two students had experience of role-playing. Prior to initiating the study ethical research clearance was gained.

Participants completed a four week assertiveness training course with two components: a) Theory: covering the concepts of assertiveness, aggressiveness and passiveness; and b) Practical: focused on role-plays to teach assertive strategies to resist pressure to engage in negative sexual behaviours. Assertive strategies covered included: assertive responses (speaking clearly, honestly and confidently, saying no, making requests and dealing with aggression). To support the students, an actor of similar age to the participants assisted by demonstrating the skills. Initially, students were provided with eight partially scripted role-plays and asked to respond with what they would say in a similar situation using the communication strategies they observed. Skill prompts in the form of sentence starters were also provided. On completion of the assertiveness course the students participated in the VW component of the study.

The VW sessions took place in a computer lab over 6 weeks and each session lasted 40 minutes. During the first session, the students learnt how to navigate the VW and customised the appearance of their avatars as research indicates identifying closely with one's avatar is a significant element in how an individual interacts with others (Ducheneaut et al; 2009). Once acquainted with the VW, participants role-played the assertiveness techniques learnt, in pairs or groups of three or four. For instance, a scenario for two required students to assertively refuse to kiss somebody they had just met at a party, while a group activity asked participants to convince an individual to send an explicit image of themselves on their mobile phone. The students took turns being the persuader and the person being persuaded. The aim of these scenarios was to practice assertive refusal skills which refer to the ability to effectively communicate through verbal (clarity of expression, tone of voice, inflection and volume, response latency) and non-verbal (body orientation, posture and gestures) an unwillingness to engage in negative sexual practices.

After the VW sessions, the students completed a survey exploring the participants' engagement with the role-plays while in the VW. Users' experience of presence and realism while in the VW was measured by a scales from Slater et al; (1998) and Witmer & Singer (1998) which required participants to rate statements on a five-point Likert scale regarding the participants' perception of how the features of presence and sense of realism helped them enact the role-plays.

Regarding the sense of Presence, the questionnaire results indicated that (n=6) students felt *Much* physically present and a similar number *Somewhat* physically present, while (n=3) students reported they felt *A Little* and (n=2) responded *Not Much*. Concerning how a sense of presence affected their verbal interactions during the role-plays, the numbers were similar. This would be expected as those who reported they did not feel physically present or stated *A little* would not perceive the environment affected them in the same way as those who felt physically present. However, from our data, it is not possible to discern whether the complete lack of physical presence reported by two participants occurred due to a lack of interest in learning in the VW or to the VW itself. While no student reported feeling *Very Much* physically present, (n=2) felt physical presence helped them to speak *Very Much* with confidence, indicating that perhaps it is not necessary to feel completely present in the environment. Regarding how presence helped the students express themselves, (n=4) students indicating *Very Much*, five *Much*, (n=5) *Somewhat*, (n=2) *A little* and (n=1) student indicating *Not Much*. Being in the VW helped several of the students (n=7) to respond quicker during the role-plays. This may be due to several factors: students could practice as often as they felt necessary having plenty of time to work out how to respond during the role-plays; also, face-to-face discussions can present pressures on individuals to respond that perhaps can be managed better in a VW. Concerning how presence influenced tone of voice, (n=7) students reported a sense of presence helped them vary their tone of voice during the role-plays. Communication experts point to the role that anxiety can have on our speech patterns so it may be the case as has been suggested by Vallance et al (2014) that role-playing as an avatar reduces the anxiety experienced in face-to-face role-playing. However, the notion that the employment of avatars in role-plays influences an individual's involvement in the interaction (Bailenson et al; 2006) may also be a contributing factor as speech patterns such as tone of voice are influenced by how engaged individuals are in the conversation.

The findings of this study relating to the participants' sense of realism while in the VW revealed that several students (n=8) felt the environment was *Somewhat* real, although this contrasted with the affect a sense of realism had on their verbal interaction. For instance, while (n=8) students found it *Somewhat* real (n=1) student found the sense of realism helped them speak *Very Much* with confidence. (n=6) students also felt the sense of realism contributed *Much* to speaking with confidence while (n=7) felt it *Somewhat* helped. A sense of realism did not have the same influence on tone of voice as reported with the same question in the presence section with only (n=2) students reporting *Very Much* compared to (n=7) students in the Presence section. Similarly, a sense of realism helped only (n=2) students use a moderate tone of voice compared to (n=6) students in the presence section. All of the students reported feeling engaged with the role plays to varying degrees with (n=6) students reporting they were *Very Much* engaged and (n=6) reporting that feeling engaged helped them express themselves well in the role-plays.

### 3. CONCLUSION

Teaching sexual coercion prevention strategies to adolescents requires innovative approaches. This study provides preliminary support for the efficacy of 3DVWs for role-play to teach assertiveness skills. We found that a sense of presence coupled with a sense of realism had a modest influence on participants' verbal interactions while enacting the role-plays. While role-playing in VWs may not be better than face-to-face they are certainly comparable. This was an exploratory study with several limitations including a relatively small student cohort and reliance on self-reported data. In addition, while the current work is an initial insight into adolescents' experience of VWs for teaching assertiveness skills, incorporating qualitative data in future studies will strengthen the evidence that a VW is an appropriate intervention for adolescents.

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