

## **Game-Based Intervention—A Technical Tool for Social Workers to Combat Adolescent Dating Violence**

**Emma Sorbring  
Anette Bolin  
Jennie Ryding**

**Abstract:** *The prevalence of dating violence is increasing, and effective prevention and intervention methods are needed to address this growing social problem. The use of online, game-based intervention programs opens up new possibilities for large-scale interventions through social work as well as individual outreach work. This study examined young people's experience of an online game-based intervention programme designed to address dating violence among youths. Swedish youths who took part in the intervention programme were interviewed in focus groups. The interpretation of the results was based on theories of learning through digital media; the results indicate that the use of a game as an intervention method for this socially sensitive topic was perceived as positive by the young people, who saw it as a new, engaging, and interesting method. The study indicates that young people's perception is that they are engaged by and learn about dating violence through online games. This only holds true, however, if the game is played in a school context and not outside the classroom, since the game was not perceived as a real game.*

**Keywords:** *Dating violence, social work methods, game-based, youth at risk*

Information technology offers new ways for social workers to reach out to large groups, and young people especially benefit from the use of information technology. In order to create a valid, high-quality intervention that is not only easy for social workers to use effectively but also has the ability to impact young people's behaviours, research that considers young people's experiences of the use of online tools is needed. In this study we gather qualitative information directly from the young people who have taken part in a game-based intervention programme regarding dating violence. This provides useful information about how young people themselves evaluate the game, information that can be used to develop the basic methods used by social workers to address social problems such as adolescent dating violence.

### **Adolescent Dating Violence**

Teenagers usually start to date when they are between the age of 13 and 15 years. Indeed, 72% of all 8th and 9th graders in the USA (Eaton et al., 2010), and 88% of teens 15 years or older in the UK report some sort of dating relationship (Barter, McCarry, Berridge, & Evans, 2009). Although dating is an important part of life, it can also cause a lot of pain (physical, emotional, and psychological).

---

Emma Sorbring, PhD in psychology, is the research director for Centre of Child and Youth Studies at University West, Trollhättan, Sweden. Email: emma.sorbring@hv.se. Anette Bolin, PhD in social work, is a senior lecturer in social work at University West, Trollhättan, Sweden. Email: anette.bolin@hv.se. Jennie Ryding is a research assistant at University West, Trollhättan, Sweden. Email: jennie.ryding@hv.se.

Abuse dynamics in adolescent relationships appear in a variety of forms, not limited to the more commonly recognised physical violence. According to Saltzman, Fanslow, McMahon, and Shelley (2002), dating violence can incorporate physical violence, sexual violence, psychological/emotional violence, and the threat of physical or sexual violence. Much of the published literature on dating violence subsumes the latter category—threat of physical or sexual violence—into either physical, sexual, or psychological/emotional violence (Leen et al., 2013), leaving three core categories. The first category is *Physical violence*, which is the intentional use of physical force with the potential for causing death, disability, injury, or harm. The second category is *Sexual violence*, which includes three elements: 1) the use of physical force to compel an unwilling person to engage in a sexual act (whether or not the act is completed), 2) an attempted or completed sex act involving a person who is unable to understand the nature of the act or to decline participation, and 3) abusive sexual contact such as intentional, unwanted sexual touching or intentional touching of a person of diminished capacity. The third and final category is *Psychological/emotional violence*, which involves trauma caused by acts, threats of acts, or coercive tactics. Such abuse can include, but is not limited to, humiliating the victim, controlling what the victim can and cannot do, withholding information from the victim, isolating the victim from friends and family, and denying the victim access to money or other basic resources.

In a recent literature review, Leen et al. (2013) observe that whilst data is difficult to compare due to methodological differences, 10-20% of all teenagers experience physical violence in adolescent dating relationship. Prevalence rates for other abuse categories have been reported to be significantly higher, with victimisation through psychological/emotional abuse as high as 77% in general populations (Tschann et al., 2009). Leen and colleagues (2013) concluded in their review article of North American and European studies that psychological dating violence is more prevalent than physical and sexual dating violence and prevalence rates are similar for girls and boys across all forms of violence in the majority of the reported studies. Gender differences, when they are present, mainly concern sexual abuse. Although prevalence rates vary greatly between studies, common themes are the ubiquity of abuse dynamics in adolescent dating relationships and that dating violence is a concern for a large proportion of young people (Leen et al., 2013). Due to the negative impact that adolescent dating-violence (ADV) has on the individual's short- and long-term health (such as low self-esteem, negative self-concept, anxiety, depression symptoms, suicide thoughts and attempts) as well as future negative relations (Molidor & Tolman, 1998; Muños-Rivas, Gámes-Guadix, Fernández-González, & Lozano, 2011; O'Donnell et al., 2006), there is a growing consensus about the importance of the development of effective, easy-to-facilitate, and large-scale intervention programs (Edelen, McCaffrey, Marshall, & Jaycox, 2009).

### **Risk Factors and Intervention Programmes**

Extensive research on dynamic risk factors (i.e., those subject to change through intervention) has been conducted, particularly in the USA, revealing factors ranging from acceptance of rape myths (Maxwell, Robinson, & Post, 2002) to having friends who perpetrate dating violence (McDonnell, Ott, & Mitchell, 2010). Risk factors can be

grouped into four broad categories: peer influence, substance use, psychological adjustment and personal competencies, and attitudes toward violence (Leen et al., 2013). Attitudes play an important role in the occurrence of ADV; for example, attitudes that legitimize the use of violence are more common among individuals perpetrating ADV (Foshee, Linder, MacDougal, & Bangdiwala, 2001; Josephson & Proulx, 2008; McDonnell et al., 2010; Sears, Byers, & Price, 2007). The majority of prevention and intervention programs (especially in the U.S.) have aimed to change young people's attitudes and knowledge about ADV, thereby indirectly reducing its incidence. The success of these interventions has varied from improvements in adolescents' attitudes and behaviours that disappear at a six-month follow up (Taylor, Stein, & Burden, 2010) to sustained, positive change over a period of several years (Foshee et al., 2004).

### **From Traditional Intervention Programmes to Game-Based Interventions**

Interventions aimed at young people and intimate relations reported in the literature have, until now, mostly taken place in group-based programs conducted in a school context over several months, mostly during school hours (Adler-Baeder, Kerpelman, Schramm, Higginbotham, & Paulk, 2007; Gardner, Giese, & Parrott, 2004). There have also been intervention programs conducted outside school settings (Antle, Sullivan, Dryden, Karam, & Barbee, 2011; Wolfe et al., 2003), although there is a risk that these interventions can exclude students who do not participate in after-school activities. Consequently, the school setting provides a good environment to set up interventions since these types of programs reach most youth. Although there are many benefits from working in a group, such as establishing group attitudes, starting a broader discussion, and gaining from others' experiences, interventions on a group level may exclude youth who do not want to expose their own experiences. For example, in the study by Fox, Hale, and Gadd (2013), younger students reported feeling uncomfortable and anxious during group sessions and in role-play. Moreover, findings from some intervention programmes have reported negative effects on abuse behaviour, potentially linked to peer influence (Wolfe et al., 2003). Dishion, McCord, and Poulin (1999) argue that group interventions with deviant adolescent populations may be hampered by negative peer influence. Given that general populations will presumably include some deviant tendencies, group-based interventions in primary settings will also possibly suffer from negative peer influence. The potential for individual engagement with an attitudinal and behavioural change intervention, as within a serious game-based intervention, reduces the risk of negative group effects identified by Dishion et al. (1999).

Although some intervention programmes have demonstrated success in reducing risk factors and curtailing abusive behaviours, several concerns have emerged about these programmes. These concerns have precipitated the present design for a game-based approach. Game-based learning include the use of "serious games" (learning games), which, unlike games created only for pleasure, are designed to achieve clearly stated learning objectives (Michael & Chen, 2006). Young people see the digital world in which they have grown up as an everyday arena for knowledge improvement. Consequently, game-based learning can appeal to the needs, expectations, and frames of reference for this group (Felicia, 2009). For example, in the UK 100% of 6-10 years olds consider

themselves to be gamers, and similar trends can be seen in the rest of Europe (de Freitas, 2006). Game-based learning has the ability to increase motivation and can thus create motivation levels necessary to maintain youths' involvement and improve the chances of reaching expected learning objectives (Wastiau, Kearney, & Van den Berghe, 2009). Game-based learning has been used for promoting knowledge and changing behaviours among young people in relation to relational and sex issues, as well as other health-related issues (Connolly, Boyle, MacArthur, Hainey, & Boyle, 2012). Jouriles and colleagues (2009) have recognized that virtual reality appears to be a promising tool to change women's attitudes towards sexual harassment. Furthermore, Arnab et al. (2013) have shown that game-based learning has a positive impact on adolescents' understanding of personal risk and the consequences of coercion.

### **Green Acres High-An Online Game-Based Intervention**

Overall, a game-based approach potentially provides a more easily implemented and scalable intervention, better able to be tailored to the circumstances of regions or countries, in addition to the benefits theorised for game-based learning more generally (Connolly et al., 2012). In light of this, the present project designed and developed Green Acres High, a digital game for addressing adolescent dating violence. Green Acres High was created, designed and developed in the European project CAVA (Changing Attitudes to dating Violence in Adolescents). In summary, Green Acres High was constructed as a learning game-based intervention for school settings, with the aim of addressing risk factors in adolescents' attitudes to abusive relationship dynamics and empowering adolescents to both take action within their own relationships and support peers' actions in reducing abuse. The study targeted adolescents between 13–19 years of age. The lower ages of the age span is when most European teenagers start dating (Eaton et al., 2010). The upper limit is not firm, but after the age of 19 young people start to move in together and ADV becomes domestic violence.

Green Acres High is divided into five chapters of ADV-related content. Each chapter focuses on a different element of the intervention programme. The five chapters can be played one by one or several at a time; however, the intervention is designed so that all lessons have to be played and in the right order. When the player advances in the chapters, the game incorporates increasingly complex content to build the player's awareness of key ADV dynamics. Players sequentially engage with content about "Healthy Relationships," "Abuse and warning signs," "Risk factors," "Achieving healthy relationships," and "Safely seeking help." The game includes different types of tests, tasks, links, and videos in order to capture as many aspects of e-learning as possible. After completing tests and tasks, the player is given feedback presenting the correct answers as well as an explanation of why the wrong answers are incorrect, for the purposes of motivating him or her and guaranteeing that the player is learning as much as possible when playing the game. The intervention programme was set up by social work students from a university in West Sweden. The entire game—all five lessons, which take about 20-25 minutes to complete—was designed so it could be played over a period of weeks, either one lesson at a time or 2-3 lessons simultaneously. The game was in English.

An American research group (Elias-Lambert, Boyas, Black, & Schoech, 2015; Schoech, Boyas, Black, & Elias-Lambert, 2013) has developed a school-based primary-intervention serious game called “Choices & Consequences” (C&C). Green Acres High and the C&C game have many similarities, such as exposing teenagers to different virtual situations and asking their opinion regarding safety. But there are also some differences: Green Acres High takes place in a school setting but C&C takes place during leisure time, and Green Acres High is played individually whereas C&C is played in groups. The evaluation of the C&C game shows that students playing the game liked the fact that it was interactive and, although the debriefing discussions with the group was perceived as one of the most positive elements with the game, some of the more quiet students requested the possibility to play the game as an individual.

### **The Present Study**

The aim of the present study was to examine Swedish adolescents’ attitudes towards the online game-based intervention for ADV called Green Acres High Focus group interviews were conducted with the aim of gaining insight into the participating adolescents’ thoughts and ideas with regard to the usefulness of the game.

## **Methods**

### **Participants**

Three groups together totalling 12 participants were recruited, by one of the authors, from trial sessions of the Green Acres High game-based intervention that were conducted as part of the CAVA project during the fall of 2012. Participants offered to voluntarily and anonymously sign up for a focus group interview. The participants were all students at upper secondary schools (i.e., high school) and between the ages of 16 and 18. The first focus group had three participants (two females and one male), the second group had five (all young women), and the third group had four (two females, two males), for a total of 12 participants: three young men and nine young women. Three people were 18 years old (two young women, one young man), three were 17 years old (two males, one female), and six were 16 years old (all female). Ten of the 12 participants (seven females, three males) had been in a relationship.

### **Procedures and Data Collection**

Three upper secondary schools in the western parts of Sweden agreed to take part in the study. Third year university students studying social work carried out the serious game intervention at the schools over two separate occasions each lasting 1.5 to 2 hours. The sessions were held two to three weeks apart. During each occasion, the students each used a computer to play two or three lessons from Green Acres High. After the last of the five lessons, the students who wanted to be part of the focus group interview met with one of the authors.

The focus group interviews were semi-structured with a set of questions determined in advance, allowing the participants to express their own thoughts and experiences

during the interview. The interviews were conducted in Swedish and the quotes used in the result below were translated by two persons. All of the interviews took place at the participating students' schools. The length of the interviews varied from 29 to 44 minutes. Prior to the interviews the participants were informed about the purpose of the study, the use of the material, the voluntary nature of their participation, and that they could stop or leave the interview whenever they wanted. The participants were given a cinema ticket for their participation, although this was announced after the focus group interview had ended.

### Analysis

The focus group interviews were recorded using a Dictaphone and transcribed verbatim. The transcriptions were coded using inductive thematic analysis in accordance with the procedures outlined by Braun and Clarke (2006). The three authors scrutinized the transcripts after completion of the transcriptions. A top-to-bottom, data-driven method was used, wherein the material itself generates concepts and themes. The analysis was first and foremost inductive, where the data itself gradually led to themes. The first step of the thematic analysis is to get to know the data and to gain familiarity with it. This was done when transcribing, reading, and re-reading the data. The second step was to generate initial codes, which involves a systematic coding of interesting features of the data and the collection of data relevant for each code. The different codes were later organized into potential themes. A process of determining and naming the themes took place to refine the specifics of each theme. The themes selected captured important and relevant information given by the respondents, representing the meaning of the data or a pattern in responses in relation to the research question. The purpose of the themes that emerged is to encapsulate the content of the dataset. The themes created needed to be reviewed in order to see whether they worked in relation to the coded extracts, as well as the dataset as a whole (Braun & Clarke, 2006). Excerpts from the data were selected from the transcripts in order to highlight participants' thoughts and expressions in relation to specific themes. Ongoing discussions helped reduce potential disputes that occurred during the analytical process. The study has strong empirical roots, and an inductive approach was used with the intention of establishing conclusions based on empirical data. The study is therefore empirical-data driven (Langemar, 2005).

### Results

The thematic analysis resulted in three different themes. Themes 1 and 2 had one or two subthemes (see Table 1).

THEMES	SUBTHEMES
1. Game-based intervention: a new and appreciated method	1.1 A game to be used in school but not otherwise 1.2 Game + Discussion = reflection upon ADV
2. Not a "real" game, but still ok	2.1 Technical aspects of the game
3. Impact of the game—increased awareness of dating violence	

### **Theme 1: Game-Based Intervention: A New and Appreciated Method**

The respondents were well aware of the increasing use of computers: “the concept [of a game-based intervention] feels right since the use of computers is more popular than ever. Today it is natural to do everything on the computer” (young man/group 1). However, this participant also argued that computers are still perceived as something fun and entertaining, which can have a negative impact on how seriously the players view the game. Some students may find it easier to listen to ordinary lectures than digital ones: “...you are not given the opportunity to play around as when you are doing it on the computer.” The idea of using a game as a tool for raising awareness and changing attitudes about a particular topic is, according to several of the respondents, fantastic, although they highlight the importance of the game being engaging and of high quality. If this were not the case, it would probably affect the players’ attention span and interest in the game: “the game has to be fun, but still educational, and with that you have succeeded” (young woman/group 2). The respondents felt that using a game for learning is a more enjoyable way of learning than listening to someone talking, since it allows for players to act individually: “This allows for the individual to take in information in a different way compared to traditional lessons” (young woman/group 2). Some of the respondents believed that more enduring knowledge could be created through the medium of a game since players remember where the knowledge came from and, consequently, it becomes more tangible and lasting: “Yes, you remember ‘when we played that specific game’ and that game was about this and that... I think you learn and remember better with any type of game, the game might make it easier to understand the context” (young woman/group 1).

**Subtheme 1.1: A game to be used in school, but not otherwise.** The participants thought that if they, or other students, were asked to play the game at home, it would probably not be taken as seriously as when playing it during school hours. They thought that the interest in the game would decrease if it were played in the home since there are other distractions in the home environment: “There is so much else you want to do when at home” (young man/group 3). Participants also thought that the attention given to the game and its topic of dating violence would probably decrease in comparison to when playing it at school, and players would probably try to play it in the fastest manner possible: “No, I don’t think you would have taken it seriously. You would probably just be clicking your way through the game to be done with it” (young woman/group 2). At school, there is not much else to do, and players’ engagement with the game would therefore probably be different: “At school we are all doing the same thing... it’s a little bit more focused” (young woman/group 2). Participants also presumed that many students would ignore the game if it was given as homework, something that would also affect the subsequent discussions: “I think a lot of people would skip playing the game at home. They might not feel that they need to discuss it anyway and that they can listen during the discussions without really discussing it and will therefore not take it as seriously” (woman/group 2). Another positive aspect of playing it at school is that the support of both social workers and peers can be sought: “I think it’s better to play it at school so that you can be given help if needed and you can talk about it more” (woman/group 2).

**Subtheme 1.2: Game + Discussion = reflection upon dating violence.** The adolescents highlight the need for discussions about both ADV and the use of the game. They believe that discussions are an important part of using the game and should be included to achieve the best possible results. According to the respondents, discussing the content of the game provides the possibility of venting thoughts and questions that had arisen when playing the game. A young man in group 3 says: “It is better to use the game than not using it at all,” meaning that the game could be the starting point of a more widespread discussion about the topic. Some of the respondents commented on the need for interactive discussions when addressing a serious issue such as ADV: “I don’t think that the teacher should be talking in front of the class (about ADV) but instead we should do it in groups, discuss it in the groups and so on. Or that we have a discussion in the whole class, with each other” (young woman/group 2). The respondents believed that discussions can also promote a greater and more active engagement from the students while actually playing the game, since they know that the content will be discussed later and therefore they need to pay attention to the game: “I think that could do a lot [playing the game first and then discussing the topic]. And doing it directly afterwards and not waiting because then you will probably forget a lot” (young man/group 1).

## **Theme 2: Not a Real Game but Still OK**

Although they found the game intervention to be useful in drawing attention to ADV, several of the respondents commented that they did not experience it so much as a game, but more as a tool for sharing information and knowledge: “I didn’t really perceive it as a game, more as reading a book or something” (young woman/group 1). They did not perceive it as a game because it did not contain any of the gaming features common to digital games. According to the respondents the players’ task was mostly about going from one place to another and clicking through the game. They pointed out that since players have few opportunities to act autonomously, a true gaming experience was lacking: “The idea itself [a game about ADV] is really important, but there was a lot of “click here and click there” so it didn’t really feel like a game, more like reading a book or something” (young woman/group 1). Had players been allowed to act more independently, the game would, according to one of the respondents, have been more interesting and more interactive: “It would have been positive if you as a player were allowed to do more by yourself. It got very...you were shown what to do all the time” (young woman/group 1). While the game was perceived as interesting, there was no great feeling playing it: “It was ok. Nothing that came out of it was extraordinary, no wow directly...” (young woman/group 2).

**Subtheme 2.1: Technical aspects of the game.** Some of the respondents commented that it was sometimes difficult to complete tasks due to a lack of knowledge about the nature of dating violence. Because of this they all expressed a wish for a function enabling them to go back in the game to tasks and simulations already carried out: “It was a little bit annoying that you were not able to go back to previous chapters to see what has been said or the content in case you missed reading something or didn’t understand a certain part” (young woman/group 2). The respondents did find it useful that information was shared both through text and sound, although some found this rather annoying: “To

hear the information is of course good, and in the English language and so on, but I think it would have been enough to read it because you will still understand what you are supposed to do and if you are supposed to do things differently” (young woman/group 1). Some of the dialogues from “The Messenger” (the avatar delivering the information) were considered to be a little too long, containing too much information, and that it would have been better if the information had been divided into several, smaller dialogue boxes: “It was a little bit annoying that you couldn’t skip the dialogues. You read all the text and then you were done but you still had to sit and listen to him (the Messenger)” (young woman/group 1). Overall they considered the Messenger a useful feature of the game. Some of the respondents also commented that they wished the game had contained some real-life video clips instead of animation, since it would have made the game more serious and closer to reality: “It (the game) should perhaps contain a reality video clip. Like an introduction or something, something real (young man/group 1). The animation, some respondents claimed, detracted from the seriousness of the game and made the players perceive it as only a game and ADV as something that doesn’t exist in reality: “Something I feel in regards to this game, it was sort of, I think that it wasn’t really taken in a serious way, or how should I put it, it felt like it’s only a game, it doesn’t happen in reality, although, when you think about it, it does really happen in reality, after you have played the game, but at the moment it didn’t feel like it, it only felt like a game...” (young woman/group 2). The respondents were also positive towards the feedback given when playing the game because it facilitated an understanding of what was right or wrong and why. The respondents expressed that the feedback in the game enabled further knowledge to be gained. It was useful, for instance, to know why a certain answer was right and why another one was not correct: “Yes, otherwise you would have been sitting there, clicking your way through the game and not really able to understand, and if you clicked the wrong one then you wouldn’t have known why it was wrong” (young woman/group 2).

### **Theme 3: Impact of the Game–Increased Awareness of Dating Violence**

When discussing the impact that this game-based intervention had on their views about ADV, all of the respondents agreed that the game had at least opened their eyes to the issue. They also believed that it had raised their awareness and understanding both about the nature of ADV, as well as the different signs and risk factors. However, participants could neither define nor concretize more specifically what they had learnt: “You knew that it existed, dating violence, but not like that” (young woman/group 2). Some of the respondents expressed that even though they already knew about ADV, they still did not consider it to be a serious matter. After playing the game, however, they changed their mind:

“ don’t really know whether I learned something. I don’t know... Maybe you will notice when you are in a situation like that and that you back off a little bit” (young woman/group 1)

“But just the fact that it is eye-opening and gets you to think about it is erudition in itself... that’s enough I believe” (young man/group 1).

The game, according to the respondents, has enabled them to develop a different and more conscious awareness of ADV, even though they admitted that the phenomenon might nevertheless occur:

“Perhaps you look upon it differently now. Maybe you are more, maybe you didn’t think it was as bad as it sounded but after (playing the game) it was actually as bad...” (young man/group 1).

### **Discussion**

The purpose of this study was to examine adolescents’ subjective experiences of a game-based intervention addressing ADV. The results show that the respondents perceived Green Acres High as an innovative intervention, although not really as a game, since a true game feeling was missing in that it did not contain very much actual gaming. Nevertheless, the participants believed that, compared to using traditional teaching methods, using a game for an ADV intervention could enhance changes in attitudes and knowledge about dating violence. Other attempts to address the issue within school curriculums also show students gain an increased ability to identify unhealthy relations including dating violence (Adler-Baeder et al., 2007). In this sense teaching about dating violence is one way to combat the phenomenon. At the same time, research also shows that pupils can feel uncomfortable learning about dating violence through traditional methods such as role-play and in-group sessions (Fox et al., 2013). In light of an increasing awareness of the prevalence of dating violence (Leen et al., 2013), there is a need for approaches that are both more effective and which minimize students’ experiences of discomfort (Fox et al., 2013). In that games can impact attitudes and bring about changes in behaviour on relational and sex issues (Connolly et al., 2012), Green Acres High can in this sense be regarded as a useful digital tool in outreach social work with young people. However, as the students in this study quite clearly state, this is a game they would not play outside of the classroom and, were they asked to do so, they would not treat the subject seriously. This result emphasises the importance of using computer games to address dating violence in a school context.

We propose that the combination of using an online computer game on a large-scale basis, together with more individualized small-group sessions of reflection and discussion, offers a new digital tool for outreach social work for young people and can constitute an innovative device in a toolbox that, traditionally, has been dominated by face-to-face interactive communication (Adams, 2005; Andersson, 2013; Smith, 2005). Outreach work is targeted at individuals and groups who otherwise are hard to reach and who need easily accessible linkage to support (Andersson, 2013). Indeed, this sort of digital intervention can be the answer to the call made by O’Donnell et al. (2006) for social work interventions that, both at an individual level (for those who may have experiences of violence either from being abused or being an abuser), and on a group level, can lower the prevalence of dating violence.

It appears that using the game in a school setting can enable social workers to reach and engage young people in a context where learning is in focus. The results clearly indicate that the young people will engage with the game during class. In line with

previous research, one conclusion to draw is that the game appears to have the ability to increase motivation and increases the chances of reaching expected learning goals (Wastiau et al., 2009), which can result in changed attitudes to dating violence. By being directed at a wider group of individuals, not just individual victims or perpetrators, knowledge can be shared. It can in this way become possible to reach young people who previously might not have reflected much upon the topic of dating violence. According to the respondents, knowledge about dating violence mediated by a digital game has greater chances of being remembered. This result accords well with other research, which indicates that the design of digital games is based on the principle that, in order to progress further in the game, players need to learn, to memorize, and to obtain additional information (Felicia, 2009). In this way, cognitive processes of learning about dating violence can be enhanced. The young people in the focus group also highlighted the need for interaction and discussions with peers to be considered an important part of handling a socially sensitive topic such as dating violence. In light of this finding, interaction with peers and social workers, in the types of debriefing sessions that Felicia (2009) proposes, would function as way to solidly link the game with the anticipated learning outcomes. In addition, looking at the prevalence of dating violence (Leen et al., 2013), there is the likelihood that some young people in the debriefing sessions would also have experiences of violence, either as victims or as abusers. Consequently, social workers need to develop an awareness of individual young people's potential vulnerability and, in line with the objectives of outreach social work (Andersson, 2013), work actively to link them to other sources of support.

### **Conclusions and Limitations**

Using a serious game method in a school setting offers social workers an effective method of working with dating violence, both from the perspective of prevention and intervention. It is clear that young people today belong to the digital-gaming generation. New methods need to be used to attract their attention and to make social learning possible in an interesting and interactive way. Social workers can use games to increase the motivation of players so that, through motivation, knowledge can be acquired and attitudes be changed (Wastiau et al., 2009).

Since the use of game-based interventions by social workers is relatively new, further research into the effectiveness of this type of intervention is needed; longitudinal studies can identify long-lasting changes in attitudes, knowledge, and behaviour. Since ADV has proven to be an increasing, it is also important to find effective tools that can have a positive impact on young people's behaviours and, in the long term, can decrease the prevalence of ADV. It is important for social workers to listen to young people themselves to create tools that are interesting enough for young people to want to pay attention to them. The present study was limited with regard to the number of respondents and offers no generalization possibilities. It still provides valuable insights into adolescents' subjective thoughts about a game-based intervention. More respondents would have given the study more depth. Since this study was qualitative, it focused on examining subtle interactive processes taking place in specific contexts that are difficult to generalize, something important to remember when discussing the validity of a

specific study (Smith, 2008).

### Implications for Practice

In practice, it is recommended that Green Acres High be used in outreach social work with young people, with the aim of targeting dating violence from a preventative perspective as well as targeting individuals who may have experiences of violence either from being abused or being an abuser. For example, the finding that the young people indicated that they did not think dating violence was as bad as it sounded until after playing the game can enable social workers to work effectively with young people impacted by dating violence. The result also indicates that while the young people would not engage seriously with the game and the topic outside of a school environment, as the game is not a “real” game, it nevertheless works in a school environment “as there is not much else to do in a lesson” (young woman/group 2). Subsequently, Green Acres High can function as an effective tool for outreach social work in a school context. In this sense social workers, in order to use Green Acres High, need to collaborate with school authorities to use class time for this purpose. As research indicates, collaboration between schools and social work can be problematic (Farmakopoulou, 2002). For example, addressing issues of dating violence may not have the same priority for school authorities as for social workers.

A further implication is that the suitability of a serious game targeting dating violence is age dependent. Felicia (2009) recommends that the activities and types of skills in serious games be suitable for the target age group. In our view the targeted age group for Green Acres High should be contextually determined, depending upon the young people’s experiences of dating and intimate relations. In Sweden, for example, the majority of fifteen-year-olds do not have experiences of dating and/or intimate sexual relations, and generally dating is more common in upper secondary school (16- to 19-years-old) (Tikkanen, Abellson, & Forsberg, 2011). With regard to the cognitive and emotional element of being able to link the game to one’s own or peers’ experiences during the process of reflection in the debriefing session, we believe that the game would not, in a Swedish context, be suitable for a younger age group as it would be too far removed from the young people’s day-to day lives. The risk would be that learning about dating violence would not be meaningful and may be even harmful, as young people may get a feeling of disillusionment about intimate relations before they even have had a chance to gain their own experiences.

### References

- Adams, R. (2005). Working within and across boundaries: Tension and dilemmas. In R. Adams, L. Dominelli, & M. Payne (Eds.), *Social work futures: Crossing boundaries, transforming practice* (pp. 99-114). New York: Palgrave Macmillan.
- Adler-Baeder, F., Kerpelman, J., Schramm, D., Higginbotham, B., & Paulk, A. (2007). The impact of relationship education on adolescents of diverse backgrounds. *Family Relations*, 56, 291-303.

- Andersson, B. (2013). Finding ways to the hard to reach—considerations on the content and concept of outreach work. *European Journal of Social Work, 16*(2), 171-186. doi:10.1080/13691457.2011.618118
- Antle, B., Sullivan, D., Dryden, A., Karam, E., & Barbee, A. (2011). Healthy relationship education for dating violence prevention among high-risk youth. *Children and Youth Services Review, 3*(1), 173-179.
- Arnab, S., Brown, K., Clark, S., Dunwell, I., Lim, T., Suttie, N. ...de Freitas, S. (2013). The development approach of a pedagogically-driven serious game to support Relational and Sex Education (RSE) within a classroom setting. *Computers & Education, 69*, 15-30.
- Barter, C., McCarry, M., Berridge, D., & Evans, K. (2009). *Partner exploitation and violence in teenage intimate relationships*. London, UK: National Society for the Prevention of Cruelty to Children.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*, 77-101.
- Connolly, T., Boyle, E., MacArtur, E., Hainey, T., & Boyle, J. (2012). A systematic literature review of empirical evidence on computer games and serious games. *Computer & Education, 59*, 661-686.
- de Freitas, S. I. (2006). Using games and simulations for supporting learning. *Learning, Media, and Technology, 31*, 343-358.
- Dishion, T. J., McCord, J., & Poulin F. (1999). When interventions harm: Peer groups and problem behavior. *American Psychologist, 54*, 755-764.
- Eaton, D., Kann, L., Kinchen, S., Shanklin, S., Ross, J., Hawkins, J. ...Weschler, H. (2010). Youth risk behavior surveillance — United States, 2009. *Morbidity and Mortality Weekly Report, 59*(SS-5), 1-142.
- Edelen, M. O., McCaffrey, D. F., Marshall, G. N., & Jaycox, L. H. (2009). Measurement of teen dating violence attitudes: An item response theory evaluation of differential item functioning according to gender. *Journal of Interpersonal Violence, 24*, 1243-1263.
- Elias-Lambert, N., Boyas, J. F., Black, B. M., & Schoech, R. J. (2015). Preventing substance abuse and relationship violence: Proof-of-concept evaluation of a social, multi-user, tablet-based game. *Children and Youth Services Review, 53*, 201-210. doi:10.1016/j.childyouth.2015.04.007
- Farmakopoulou, N. (2002). What lies underneath? An inter-organizational analysis of collaboration between education and social work. *British Journal of Social Work, 32*, 1051-1066.
- Felicia, P. (2009). *Digital games in schools: A handbook for teachers*. European Schoolnet. Retrieved April 4, 2013, from [http://games.eun.org/upload/GIS\\_HANDBOOK\\_EN.PDF](http://games.eun.org/upload/GIS_HANDBOOK_EN.PDF)

- Foshee, V. A., Linder, G. F., MacDougal, J. E., & Bangdiwala, S. (2001). Gender differences in the longitudinal predictors of adolescent dating violence. *Preventative Medicine, 32*, 128-141.
- Foshee, V., Bauman, K., Ennett, S., Linder, F., Benefield, T., & Suchidran, C. (2004). Assessing the long-term effects of the Safe-Dates program and a booster in preventing and reducing adolescent dating violence victimization and perpetration. *American Journal of Public Health, 94*(4), 619-624.
- Fox, C., Hale, R., & Gadd, D. (2013). Domestic abuse prevention education: Listening to the views of young people. *Sex Education, 14*(1), 28-41. doi:10.1080/14681811.2013.816949
- Gardner, S. P., Giese, L., & Parrott, S. M. (2004). Evaluations of the connections: Relationships and marriage curriculum. *Family Relations, 53*, 521-527.
- Josephson, W. L., & Proulx, J.B. (2008). Violence in young adolescents' relationships: A path model. *Journal of Interpersonal Violence, 23*, 189-208.
- Jouriles, E. N., McDonald, R., Kullowatz, A., Rosenfield, D., Gomes, G. S., & Cuevas, A. (2009). Can virtual reality increase the realism of role plays used to teach college women coercion and rape resistant skills? *Behavior Therapy, 40*(4), 337-345.
- Langemar, P. (2005). *Att låta en värld öppna sig: Introduktion till kvalitativ metod i psykologi* [To let the world open itself: Introduction to qualitative methods in psychology]. Stockholms Universitet: Psykologiska institutionen.
- Leen, E., Sorbring, E., Mawer, M., Holdsworth, E., Helsing, B., & Bowen, E. (2013). Prevalence, dynamic risk factors and the efficacy of primary interventions for adolescent dating violence: An international review. *Aggression and Violence Behaviour, 18*, 159-174.
- Maxwell, C. D., Robinson, A. J., & Post, L. A. (2002). The nature and predictors of sexual victimization and offending among adolescents. *Journal of Youth and Adolescence, 32*(6), 465-477.
- McDonnell, J., Ott, J., & Mitchell, M. (2010). Predicting dating violence victimization and perpetration among middle and high school students in a rural southern community. *Children and Youth Services Review, 32*(10), 1458-1463.
- Michael, D., & Chen, S. (2006). *Serious games: Games that educate, train and inform*. Canada: Thomson Course Technology PTR.
- Molidor, C., & Tolman, R.M. (1998). Gender and contextual factors in adolescent dating violence. *Violence Against Women, 4*, 180-194.
- Muños-Rivas, M. J., Gámes-Guadix, M., Fernández-González, L., & Lozano, M. P. G. (2011). Validation of the Attitudes About Aggression in Dating Situations (AADS) and the Justification of Verbal/Coercive Tactics Scale (JVCT) in Spanish adolescents. *Journal of Family Violence, 26*, 575-584. doi:10.1007/s10896-011-9391-3

- O'Donnell, L., Stueve, A., Myint-U, A., Duran, R., Agronick, G., & Wilson-Simmons, R. (2006). Middle school aggression and subsequent intimate partner physical violence. *Journal of Youth and Adolescence, 35*, 693-703.
- Saltzman, L., Fanslow, J., McMahon, P., & Shelley, G. (2002). *Intimate partner violence surveillance: Uniform definitions and recommended data elements*. Centers for Disease Control and Prevention. Retrieved from <http://www.cdc.gov/violenceprevention/pdf/ipv/intimate-partner-violence.pdf>
- Schoech, D., Boyas, J. F., Black, B. M., & Elias-Lambert, N. (2013). Gamification for behavior change: Lessons from developing a social, multiuser, web-tablet based prevention game for youths. *Journal of Technology in Human Services, 30*, 197-217.
- Sears, A., Byers, S. E., & Price, L. (2007). The co-occurrence of adolescent boys' and girls' use of psychologically, physically, and sexually abusive behaviours in their dating relationships. *Journal of Adolescence, 30*, 487-504.
- Smith, J. A. (2008). *Qualitative psychology: A practical guide to research methods* (2nd ed.). London: Sage.
- Smith, M. K. (2005). Detached, street-based and project work with young people, [Online]. Retrieved March 14, 2015, from <http://www.infed.org/youthwork/b-detyw.htm>
- Taylor, B., Stein, N., & Burden, F. (2010). The effects of gender violence/harassment prevention programming in middle schools: A randomized experimental evaluation. *Violence and Victims, 25*(2), 202-223.
- Tikkanen, R. H., Abelsson, J., & Forsberg, M. (2011). UngKAB09 [Young people and sexual relations] Skriftserien 2011:1, Report from Gothenburg University.
- Tschann, J. M., Pasch, L. A., Flores, E., Marin, B. V., Baisch, E. M., & Wibbelsman, C. J. (2009). Nonviolent aspects of interparental conflict and dating violence among adolescents. *Journal of Family Issues, 30*(3), 295-319.
- Wastiau, P., Kearney, C., & Van den Berghe, W. (2009). *How are digital games used in school? Complete results of the study*. Retrieved April 4, 2014, from the European Schoolnet website [http://games.eun.org/upload/gis-full\\_report\\_en.pdf](http://games.eun.org/upload/gis-full_report_en.pdf)
- Wolfe, D., Wekerle, C., Scott, K., Straatman, A. L., Grasley, C., & Reitzel-Jaffe, D. (2003). Dating violence prevention with at-risk youth: A controlled outcome evaluation. *Journal of Consulting and Clinical Psychology, 71*, 279-291.

#### **Author note**

Correspondence can be addressed to Emma Sorbring, emma.sorbring@hv.se, University West, SE-461 86, Trollhättan, Sweden.

This project was supported by an EC Daphne III Transnational Action Grant number JUST/2009/DAP3/AG/1068 — 30-CE-0386806/00-15.