

***BREAKAWAY: Combating Violence Against Women and Girls through  
Soccer Video Game and Youth Camps***

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**Highlights:**

- Adapting Sabido methodology in game design was effective for social change.
- *BREAKAWAY* educational game and youth camps in El Salvador were transformative.
- Campers gained knowledge and skills about violence against women/girls.
- Campers reported positive attitude and behavior change toward gender equality.
- Gameplay with facilitated group discussions can help address complex social issues.

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## Abstract

Violence against women/girls (VAWG) is a major global economic, health, and human rights issue and causes severe damages to individual victims and societies at large. Early interventions among youth are crucial for combating VAWG. *BREAKAWAY* is an online, narrative-based, role-playing soccer game purposefully designed to educate youth worldwide about VAWG. Its game design followed entertainment-education principles and is the first to apply the Sabido methodology in games for social change. In 2013, the *BREAKAWAY* team hosted two youth camps in El Salvador, a Central American country with one of the highest per capita rates of femicide in the world. Event-based time diary, participatory sketching, gamification strategies, and Facebook Insights were used for assessment. Overall, the game and camp experience had a profound impact on participants' awareness, knowledge, attitude, skill building, and initiation of behavioral change regarding VAWG. Through experiential gameplay with the main characters and dialogues in challenging situations, participants debated about different consequences of decision-making, wrote individual letters to the abusive character, co-constructed RESPECT acrostic poems that turned into rap songs, and formed their understanding of good qualities of sportsmanship. They were sympathetic to the characters that were mistreated in the game and supportive of the positive role models. They were also able to sketch out real-life bullying scenarios and demonstrate the VAWG strategies they learned from the game and camp activities. Our statistical analysis suggested potential empowerment for girls and openness to change for boys. The *BREAKAWAY* Facebook page also had a surge of traffic and user interactions during and after the camps.

Keywords: violence against women/girls, social impact games, evaluation, *BREAKAWAY*

## ***BREAKAWAY: Combating Violence Against Women and Girls through Soccer Video Game and Youth Camps***

### **1. Introduction**

Violence against women/girls (VAWG) has increasingly taken center stage in media due in part to: the abduction of more than 200 Nigerian school girls by the Boko Haram; the shooting of and subsequent advocacy work of Nobel winning Malala Yousafzai; actress Emma Watson's powerful UN speech launching the "HeForShe" campaign; and in the videogame sphere "GamerGate" the controversy arising out of misogyny within the gaming community and online harassment of female players epitomized in the death threats against researcher Anita Sarkeesian. VAWG is a major global economic, health, and human rights issue. It is prevalent and takes place in a wide range of forms. At least one out of every three females in the world will experience VAWG in her life time, be it physical, sexual, psychological, or in some other way (World Health Organization, 2013). Women and girls make up 80% of human trafficking victims each year; more than 100 million suffer from female genital mutilation; over 600 million live in countries where domestic violence is not even considered a crime yet (UNiTE, 2014). VAWG cuts across age, race, socioeconomic status, and the boundary of cultures, nations, communities, and families; it causes severe damages to individual victims and societies at large (Crowell & Burgess, 1996; National Center for Injury Prevention and Control, 2003). Exposure to VAWG and accepting violent gender-based norms at a young age can significantly increase the risk of an individual becoming a perpetrator or a victim later in life (García-Moreno, Jansen,

Ellsberg, Heise, & Watts, 2005). Therefore, early interventions among youth are crucial for combating VAWG.

*BREAKAWAY* is an online, narrative-based, role-playing soccer game purposefully designed to educate youth worldwide about the issue of VAWG and to change their attitudes and behaviors. Sponsored by the United Nations Population Fund (UNFPA), *BREAKAWAY* was developed by the Champlain College Emergent Media Center. The game design process involved over 100 students across three years. They also collaborated with international non-profit organization Population Media Center, known as a flagship institution in using entertainment-education strategies for social change. In particular, they applied the Sabido methodology of producing social drama on television and radio to developing the characters and dialogues in the context of video games. Moreover, the narrative is based on real-world issues of gender inequality and VAWG that escalate into a cumulating finale representative of abduction and trafficking.

Since its debut at the 2010 FIFA World Cup in South Africa, *BREAKAWAY* has reached players in over 140 countries to help raise awareness of gender inequality and reduce VAWG. In 2012, a youth camp model emerged from a student initiative aimed at bringing *BREAKAWAY* to his hometown in the divided West Bank city of Hebron in Palestine. The Champlain team trained local facilitators and organized three youth camps, enabling 120 participants to play the game and engage in social activities. Although no research was conducted to evaluate the impact of these camps, they made history by having boys and girls playing soccer together on the street for the first time.

In 2013, the *BREAKAWAY* team had the opportunity to work with the United Nations Development Programme (UNDP) and the University of Sonsonate to host two

youth camps in El Salvador. El Salvador is the most densely populated Central American country and has one of the highest per capita rates of femicide in the world. This study reports the design, implementation, and results of the evaluation of the *BREAKAWAY* game and youth camps in El Salvador.

Following a brief literature review on entertainment-education, the Sabido methodology, social impact games, and narrative engagement, we explicate our unique research design, procedures for data collection, and results of quantitative and qualitative analyses. In the closing section, we draw upon all the rich insights from this project to discuss the overall impact of the *BREAKAWAY* game and youth camps in El Salvador and summarize the lessons that can be learned for future endeavors.

## **2. Literature Review**

### **2.1 Entertainment-Education**

“*Entertainment-education* is a theory-based communication strategy for purposefully embedding educational and social issues in the creation, production, processing, and dissemination process of an entertainment program, in order to achieve desired individual, community, institutional, and societal changes among the intended media user populations” (Wang & Singhal, 2009, p. 272-273). Entertainment has been used for educational purposes since ancient times, but to consciously combine entertainment and education in mass media and mediated communication is a relatively recent phenomenon (Singhal & Rogers, 1999). For almost four decades now, media producers, educators, and researchers around the world have worked together to develop entertainment programs that address important health and social issues such as family planning, domestic violence, and HIV/AIDs (Singhal & Rogers, 2004; Singhal, Wang, &

Rogers, 2013). Hundreds of programs have been produced in Asia, Africa, and Latin America primarily in the form of television and radio soap operas, and now increasingly in Europe and North America employing more diverse communication platforms and entertainment genres such as web *novellas* and digital games (Wang & Singhal, 2009).

Entertainment-education lies in the power of narrative persuasion (e.g., Kincaid, 2002; Slater & Rouner, 2002). Although people choose entertainment media rather spontaneously and mindlessly, they can quickly immerse themselves in a story and even imagine themselves as the media characters in the program, a phenomenon Cohen (2001) called *identification*, or imagine having dialogues with the media characters as if they were friends in real life, a phenomenon Horton and Wohl (1956) called *parasocial interaction*. Despite the fictional nature of such entertainment programs, the messages these media characters embody and the actions they take can dramatically influence audience members' knowledge, attitudes, and behaviors (Green, Chatham, & Sestir, 2012; Morgan, Movius, & Cody, 2009). Studies have consistently shown that entertainment-education programs are effective and empowering; when accurate information is seamlessly incorporated in the storyline and positive behaviors are modeled by appealing characters, they transform human communication and save lives (Jacoby, Brown, Kumar, Velu, & Rimal, 2013; Singhal, Cody, Rogers, & Sabido, 2004).

## **2.2 The Sabido Methodology**

Many mass-mediated entertainment-education programs have been inspired by the work of Mexican writer-producer-director Miguel Sabido (Singhal & Rogers, 1999). Drawing upon his production experiences and understanding of theoretical frameworks such as Bandura's social learning/cognitive theory, Bentley's work on dramatic theory,

and Jung's archetypes, Sabido formulated a methodology for the production of social dramas (Sabido, 2004). He is a trailblazer for creating a series of pro-social *telenovelas* in Latin America in the 1970s and early 1980s and changing the lives of millions (Singhal & Rogers, 1999).

Key elements in the Sabido methodology include: a *values grid* derived from the *moral framework* of a specific educational issue; *social modeling* through the protagonist, antagonist, and satellite characters; using *cliffhangers* to engage the audience, *epilogues* to spur discussions, and *infrastructure* and resources to provide accurate information and further assistance to change (Sabido, 2004). Among all of these key elements, the social modeling approach based on Bandura's social learning/cognitive theory is arguably the most critical part. For example, *similarity modeling* can evoke deep empathy and boost self-efficacy as the audience watches their favorite characters suffer, doubt, and ultimately triumph the obstacles and win the victory. In addition, *transitional modeling*, as often shown in the characters that contemplate about obstacles and eventually take actions to make the positive change can demonstrate the complexity of the cognitive, emotional, and communicative processes of social and behavioral change. The Sabido methodology has since been adopted and adapted globally over the past 30 years. To our knowledge, *BREAKAWAY* is the first to apply the Sabido methodology in video games.

### **2.3 Social Impact Games**

Video games are one of the largest and most profitable media industries and have a tremendous impact on its global community of consumers, especially among the younger generations growing up immersed in digital gameplay in their everyday life. Despite the negative stereotype of games being harmful and frivolous in the early days,

parents now accept gameplay with more positive attitudes (ESA, 2014). Video games are inherently fun; they are capable of simulating real world scenarios with multiple sensory stimuli; and interactive and experiential gameplay can take audience beyond the vicarious learning provided in traditional mass media programming (Wang & Singhal, 2009). The number of games addressing health and social issues has been increasing rapidly in the last 20 years (Ritterfeld, Cody, & Vorderer, 2009). A growing body of literature demonstrates that games hold great potential and can be highly effective for promoting public health and social justice (Ferguson, 2012; McGonigal, 2011; Peng, Lee, & Heeter, 2010; Rebolledo-Mendez, Avramides, de Freitas, & Memarzia, 2009).

Social impact games, also referenced as games for change, are designed to raise awareness, change attitudes, and advocate pro-social actions on a variety of topics such as poverty, hunger, global warming, and immigration (Ruggiero, 2013). The specific goals of the *BREAKAWAY* game and youth camps are to help players gain awareness and knowledge about the forms and consequences of VAWG as well as related gender-based norms and behaviors; encourage them to discuss these issues with their peers; and promote positive gender roles, values, attitudes, and actions.

## **2.4 Narrative Engagement in Games**

Not all video games have a storyline or a main character, but a majority of the dramatic elements in game design have to do with narrative (Fullerton, Swain, & Hoffman, 2004). For example, *premise* helps situate a game in a specific setting of time and place; *character* and *story* provide the players a clear sense of mission and connection; and *conflict* creates a dramatic arc wherein the gameplay experience unfolds with exposition, rising action, climax, falling action, and resolution (Fullerton, Swain, &



Hoffman, 2004). The interaction between a game player and media characters can generate parasocial communication (Hartmann, 2008) and role-playing can enhance player empathy and promote positive outcomes (Peng, 2008; Peng, Lee, & Heeter, 2010). Not only are these dramatic narrative elements consistent with the Sabido methodology in traditional entertainment-education programs, but when they are used in video games, they can enhance the entertainment experience by making them more compelling and memorable (Wang, Shen, & Ritterfeld, 2009).

## **2.5 *BREAKAWAY*: Adapting Sabido Methodology in Game Design**

In *BREAKAWAY*, the premise is that the player has decided to try out for a soccer team in town. The player is presented with various challenges in the sequence of 13 game episodes, each with a cliffhanger ending meant to build player suspense and reflection. Other main characters include Tal, Zak, Hanna, and Reina. Tal is the team captain who is very competitive and controlling, can be a snob to others, and is willing to do anything to win. Zak is a veteran team member who is good at the sport but also has a warm heart to look out for everyone. Hanna is the player's younger sister who is an enthusiastic fan of the player and the team. She is also a target of bullying but learns to defend herself. Reina is a newcomer in town who is a talented soccer player and stands up for herself when she gets discriminated by her male teammates because she is a girl. Here, Tal represents a negative role model of abusive men and their cycle of abusive behaviors. Zak represents a positive role model of bystanders who intervene in bullying situations. Both Hanna and Reina are positive role models and victims turned champions of VAWG.

Building upon the Sabido methodology, in *BREAKAWAY* *identification*, *social modeling*, *cliffhangers* and *player as the transitional character* are key design

ingredients. The game features three major modes of play: *narrative events*, *tactical soccer*, and *skill-building training mini-games*. The player's goal is to become a winning soccer player. Gameplay is based on soccer performance and on navigating community-based relationships. *Narrative events* provide the story arc for each episode, creating a context in which the player is prompted to react to situations filled with gender inequity challenges that may lead to gender-based violence. Sabido role models supply the player with positive and negative choices; the female characters Hanna and Reina represent familial and external relationships. As the events unfold, the consequences of each decision are depicted for the player's consideration. Game players explore the issue of gender-based inequality through their actions, which in turn impact their relationships with teammates and impact the outcomes of the game. The *tactical system* ties together the rapid paced *mini-games*, which provide pure entertainment and appeal for the player, with thought-provoking narrative decisions, which hold the message and facilitate game learning. *Narrative events* have a direct influence over the difficulty of the tactical system by influencing the player's ability to improve his skills. It is in this interlocking design that players come to understand the outcome of their choices. Literally the player cannot win the game if they repeatedly choose negative behaviors towards the female characters in *BREAKAWAY*.

Based on the above literature review, participants of the *BREAKAWAY* youth camps in El Salvador were expected to demonstrate increased awareness of VAWG, learned strategies for handling situations specifically portrayed in the game episodes, positive attitudes and gender-based norms, and pro-social intentions and behaviors.

### 3. Methods

#### 3.1 Study Context

El Salvador is located in Central America and its official language is Spanish. Approximately 34% of its population is below the national poverty line and 43% is illiterate. The country has the highest rate of gender-motivated killing in the world but the impunity of femicide crimes is an astounding 77% (UN Women, 2013). Sonsonate, among the areas of top violence rates in El Salvador, was chosen for the *BREAKAWAY* youth camps due to the existing infrastructure and partnerships between local sponsors the UNDP, the University of Sonsonate, and the Network Municipalities of Sonsonate. All project materials were translated from English to Spanish for data collection and back translated for data analyses. The Champlain team worked with local staff to coordinate the recruitment of youth participants and ensure all the materials and procedures were culturally appropriate. Following a two-day training of local facilitators, the *BREAKAWAY* youth camps took place on November 21, 22, 26, 27, and 28, 2013, one camp in the morning session and the other in the afternoon. Each day at the camps was structured with a brief introduction, a gameplay session in the university computer labs, and subsequent group activities along with facilitated discussions.

#### 3.2 Research Design

Given the constraints of time, funding, and human resources, a pre-post evaluation plan was deemed impossible. All of the assessment efforts had to be focused while the *BREAKAWAY* team was on site in El Salvador. An experimental design was attempted but no sufficient data were able to be collected for the control group. Despite these complex challenges, our final evaluation combines the rich information gathered

through event-based time diary, with participatory sketching, gamification strategies, and a complementary post-hoc analysis of Facebook Insights.

Time diary is a research technique for collecting data through frequent self-reports on a person's activities for a short, manageable period of time (Robison, 2002). This method is useful for capturing the particulars of certain events and life experiences in an open-ended fashion (Bolger, Davis, & Rafaeli, 2003). Two versions of a custom playbook were developed, one for the youth participants and the other for the group facilitators. A time-diary journal was organized by the camp schedule with clear and specific instructions provided for each question. In the facilitator's version, detailed procedures were described for moderating group activities and discussions. Examples were also included for demonstration purpose to avoid confusion. Selected screen captures from the game were provided at the end to help highlight the character dialogues and facilitate participant recall.

Time diary typically relies on text-based responses. Participatory sketching was chosen to serve as an another way of data collection, using pencils and drawings as non-textual tools of creative expressions. Researchers have found this method to be effective and insightful among participants with low literacy, high language barrier, and of silenced and marginalized population groups (Rattine-Flaherty & Singhal, 2009; Singhal & Rattine-Flaherty, 2006). Therefore, youth campers were asked to sketch out their answers to certain questions in addition to articulating their thoughts, feelings, and personal experiences in words.

Furthermore, gamification strategies were used to motivate campers to engage in research activities and provide maximum feedback. Gamification is often referred to as

the approach of using game-like thinking, elements, and processes for non-game contexts and common strategies include points, badges, and leader boards (Zichermann & Cunningham, 2011). To accompany the *BREAKAWAY* playbook for the camp participants, a set of custom stickers were designed and printed. These stickers included images of male and female soccer players with each assigned 10 points. Additional images included other soccer related objects such as the soccer ball, goal, flag, and trophy, with each assigned 5 points. At the end of each day, facilitators graded the journal entries with points and participants were invited to redeem these points for stickers of their own choice. Four badges were offered to honor “the best story,” “the most elaborate (writer),” “the most creative (answer),” and “the most artistic (sketching).” With the assumption that campers will stay in the same group for facilitated activities and discussions, a leader board was created with instructions about how points could be calculated for each group over the five days by converting to colored blocks of the *BREAKAWAY* game logo with the winning team being rewarded the *BREAKAWAY* wristbands.

The Champlain team members also kept self-reflections while running the camps. One of the most outstanding observations was the surge of activities on Facebook with many more users liking the *BREAKAWAY* page and commenting on camp related photos and videos. Therefore, a post-hoc analysis was conducted on the Facebook Insights data to supplement the self-reports from the playbooks.

### **3.3 Participants**

A total of 83 campers (38 in the morning camp and 45 in the afternoon camp) played the *BREAKAWAY* game and participated in facilitated group activities and

discussions during the camps. An additional 33 youth from other camps at the University of Sonsonate volunteered to play the first game episode and complete the playbook without any facilitation. Unfortunately, a majority of their answers were incomplete or illegible so their data could not be used as a control group for between-subjects comparisons. Table 1 presents a summary of the descriptive statistics of the analytical sample with a breakdown of morning and afternoon camps.

**Table 1**  
Descriptive Statistics of Analytical Sample.

	<b>Analytical sample</b>	<b>AM camp group</b>	<b>PM camp group</b>
<i>N</i>	83	38	45
<i>Age</i>			
Range	7-18	7-15	8-18
Median	12	12	12
Mode	12	12	12
<i>M</i>	11.94	11.50	12.29
<i>SD</i>	2.30	2.56	2.05
<i>Sex</i>			
Boys	40	20	20
Girls	29	11	18
Unknown	14	7	7

### 3.4 Game Episodes, Group Activities, and Data Collection Procedures

Upon arrival for the first day of *BREAKAWAY* camps, participants were provided with the study information both on a written document and verbally explained by the staff in Spanish. They were ensured clear understanding of the research purpose, procedures, and their rights and protection as human subjects before granting assent to participate in the study and signing off on the media release form.

Five out of the 13 game episodes were selected for the youth camps in El Salvador. Episode 1 introduced the main characters to the players in the context of a soccer team tryout. In the group discussions, participants were asked to talk about the

way Tal treated Zak and Hanna and explain why they like or dislike these characters and their behaviors. A fact sheet was provided about VAWG in El Salvador, in the United States, and at the global scale. Participants were then asked to choose an adjective to describe each character, draw any number of smiley or frowning faces to indicate the degree of liking or disliking the characters as well as the way they treated each other. In addition, they were asked if they had met or heard about people like Tal and describe what happened.

Episode 2 presented two scenarios where in one scenario Tal was mean to Hanna, demanding her to stay out of the soccer field because the sport is for boys, and in the second scenario Tal started a rumor to manipulate a former teammate Will who is moving away. Participants were asked to draw a picture of Hanna and Will respectively to show how the character might feel in that situation and add a bubble to show what might be going through their mind. They were also asked to write a letter to Tal from the perspective of his veteran teammate Zak.

In Episode 3, Tal continued to bully Hanna. The group activity focused on having participants role play different characters and they discussed various forms of VAWG. They were asked to draw a disrespectful behavior they had seen before in real life and write a RESPECT acrostic poem.

In Episode 4, Reina was recruited to the team for her talent but her male teammates were threatened and resented her for being a girl who plays soccer. A celebrity soccer player Samuel Eto'o paid a surprise visit and encouraged the team to discuss the meaning of sportsmanship. The group activity was a great debate about having girls on a soccer team and the participants were subsequently asked to articulate

their personal opinion, and pick their favorite character or quality of good sportsmanship to make word art from.

Finally, in Episode 10, Zak intervened as a bystander while the bullying situation exacerbated between Tal and Hanna. In the group activity, participants discussed established strategies for dealing with bullying situations and they were then asked to draw an example of bullying (verbal, physical or psychological) that they learned from the *BREAKAWAY* game and demonstrate how to deal with it. The final writing assignment was a 5-point star rating of the camp experience, camp facilitators, and other camp participants. They were given space to elaborate on what they learned from the camp experience, describe their most memorable moments, and share how the *BREAKAWAY* game had changed them or their lives.

### **3.5 Content Coding and Data Analysis**

The qualitative data were coded by the last two authors, with an agreement of at least 85% across all questions. Participants' responses regarding to how *BREAKAWAY* has changed their lives and the learning experiences during the camp were coded respectively based on types, duration and level of change (i.e., attitudinal or behavioral, long term or short term, individual or group) as well as the learning objective of the game (i.e., awareness/knowledge of VAWG, attitudes, behavior). Other open-ended textual responses were first codified based on the nature of each thought unit and later evolved into different themes following the general procedure for content analysis (Neuendorf, 2002). Drawings were coded and analyzed per graphic unit and a database of all the drawings was established and the most revealing and representative images were selected



for the final reporting. All answers were also coded with numerical values for quantitative data analysis in SPSS using frequency distributions and *t*-tests.

## 4. Results

### 4.1 Overall Ratings

Based on a 5-star rating scale, on average, participants rated 4.90 about the overall camp experience, 4.66 about the camp facilitators, and also 4.66 about other campers. The camps left participants with numerous memorable moments, especially the group activities, making friends, playing the game, and interacting with the facilitators. Participants claimed that “the camp is the best thing that has happened to me;” they learned that “the abuse of women is bad,” “do not react to violent situations in a violent way because it can make things worse so it is best to remain calm.” They reported that *BREAKAWAY* changed them in many ways. One said, “It opened my mind that girls can do the same things as boys.” Another said, “*BREAKAWAY* changed me morally in terms of respect to others.” Not only were changes noted in awareness and attitudes, but some also indicated their behavioral change. For example, one said, “before I liked to bug the shit out of other people and now I have changed and I am not like that anymore.” Another said, “Now I play more with girls.”

### 4.2 Response to Game Characters

A great majority of the participants were able to correctly identify with the main characters in Episode 1: 93.4% associated negatively with Tal, describing him as “bad,” “selfish,” and “rude;” 96.4% associated positively with Zak, describing him as “kind,” “nice,” and “helpful;” and 95.7% also associated positively with Hanna, highlighting her “happy” and “cheerful” character. They all marked frowning faces to indicate that they

disapproved of the way Tal treated Zak and Hanna. There were no significant differences between boys and girls.

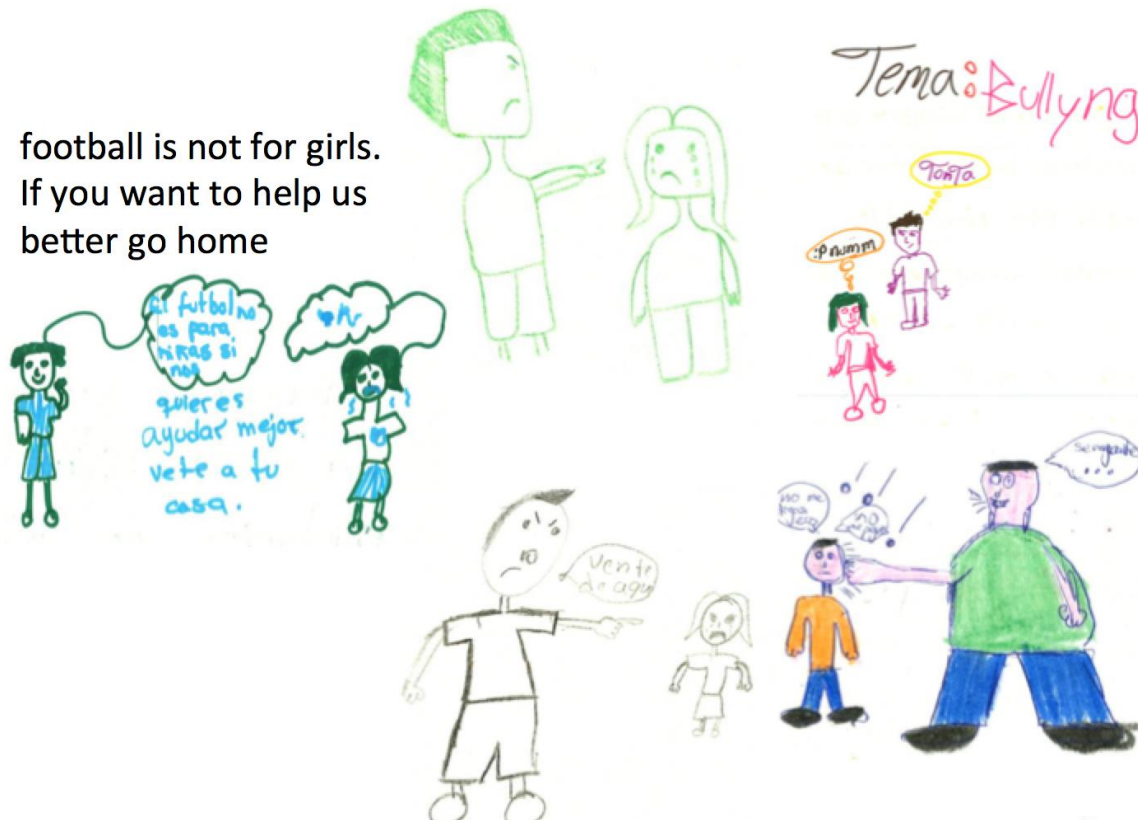
When asked to sketch out how Hanna and Will might feel and think about the situation when they were mistreated by Tal, participants demonstrated considerable empathy and sympathy through their sketching (see examples in Figure 1). Among them, 93.7% correctly identified Hanna's feelings and thoughts and 81.3% correctly identified Will's feelings and thoughts; there was no significant difference between boys and girls. And in the letter to Tal, a total of 136 statements were made, of which 100 suggested Tal to change his behavior (e.g., stop bullying, discriminating girls, being rude), 25 described participants' observations of Tal's negative personality (e.g., you are rude), 8 specified the harmful consequences if Tal remains a snob (e.g., hurting people's feelings, losing friends), and 6 explained their rationale for recommending Tal to change (e.g., importance to respect girls).

**Figure 1.** Participatory Sketching of Hanna and Will.  
(note: 2-column fitting, color on the web)



### 4.3 Identification of Disrespectful Behaviors

**Figure 2.** Participatory Sketching of Identified Disrespectful Behaviors.  
(note: 2-column fitting, color on the web)



Based on the gameplay in Episode 3, 90.0% of the participants were able to correctly identify disrespectful behaviors and reflect their understanding through their drawings (see examples in Figure 2); there was no significant difference between boys and girls. In addition, they were inspired by *BREAKAWAY* to write beautiful RESPECT acrostic poems and some even worked as a group and turned them into rap songs. Below are two selected poems that have been translated from Spanish into English:

Respecting that girls can play  
Is our responsibility, along with  
Discipline and Safety on the field  
Passion during training  
Working as a team being proud of ourselves  
That will lead us to victory

Responsible members of society  
 Understand that we are all equal  
 Always together and strongly united  
 We always think before we act  
 We are tired of the lack of equity working together  
 Equity we will achieve  
 We are always proud of equality

#### **4.4 Good Sportsmanship and the Gender Equality Debate**

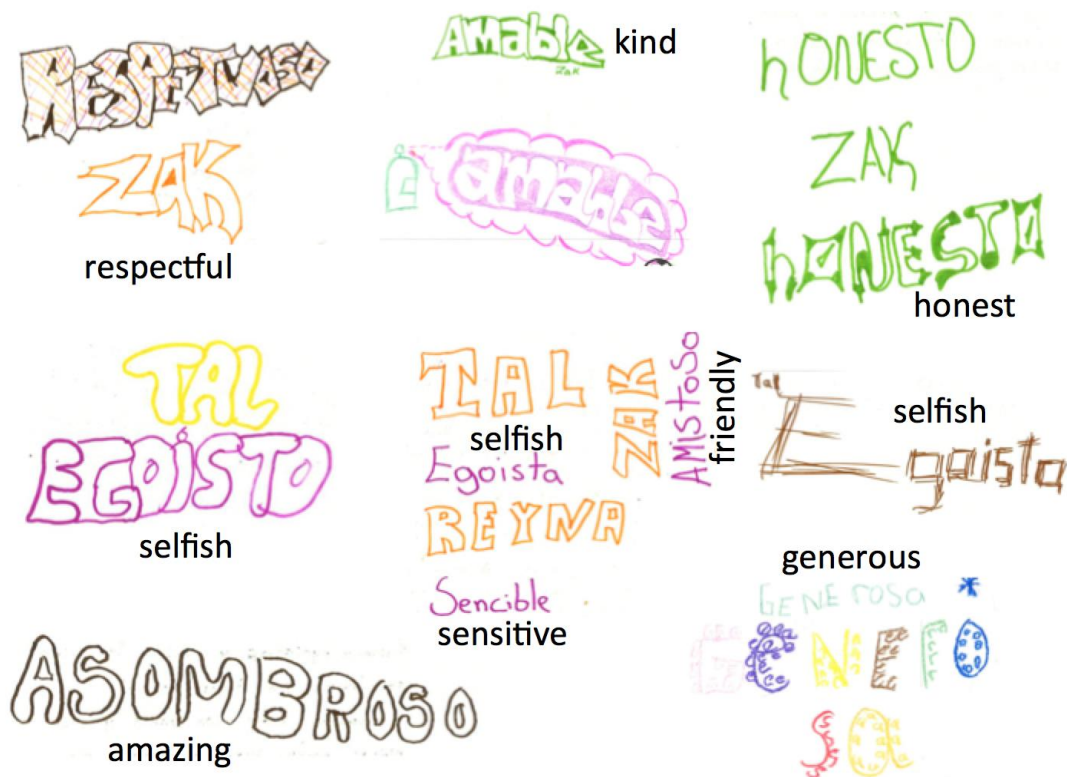
When asked to pick a favorite character and discuss the qualities of good sportsmanship as presented in Episode 4, participants' answers were closely associated with the characteristics of the main characters including both the positive ones such as honest, generous, kind, respectful, and friendly, as well as the negative ones to avoid such as selfish (see examples of the word art in Figure 3).

When articulating their personal opinions about having girls on a soccer team, 87.7% of the participants completely agreed that girls should have equal rights to play on a soccer team; there was no significant difference between boys and girls. However, two boys, one girl, and one camper with unknown sex (10.5%) agreed contingent upon certain conditions such as them not getting hurt; and one boy (1.8%) still disagreed that "soccer isn't for girls."

Also, 90.7% of the 118 participants' statements were supportive, of which 43 were about girls' capability (e.g., "girls have the same ability as boys"), 34 were about girls' rights (e.g., "they have the right to be respected," "no one can deny girls the right to play"), 18 were about gender equality (e.g., "girls and boys are equal" and "everyone has value"), 5 were about discrimination (e.g., "no reason to exclude a girl"), 4 were about opportunity (e.g., "girls need to be given the opportunity to play"), and 3 were about

respect (e.g., “women deserve respect”). The other 9.3% seemed to be contingent upon certain conditions (e.g., “Yes, they can but girls can get hurt”) and only one participant said “soccer isn’t for girls.”

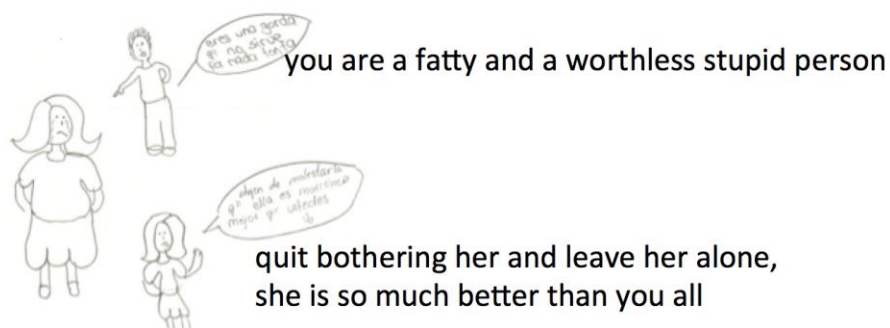
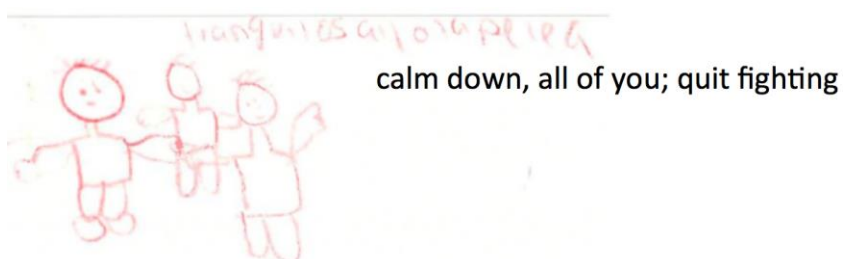
**Figure 3.** Word Art of Positive and Negative Sportsmanship.  
(note:2-column fitting, color on the web)



## 4.5 Learning Practical VAWG Strategies

In Episode 10, participants were asked not only to identify bullying situations but also to demonstrate the strategies for handling the situation based on what they learned from *BREAKAWAY*. During the group activities, they discussed the concept of FLOAT (Forget about it, Leave, Openly express yourself, Apply strong words, and Tell somebody). About 90.0% of the participants were able to illustrate their correct understanding through their creative sketching along with the added character dialogues (see examples in Figure 4); there was no significant difference between boys and girls.

**Figure 4.** Participatory Sketching of Learned VAWG Strategies. (note: 2-column fitting, color on the web)





yeah, she's such an ugly girl.  
 oooh, so gross. this girl –  
 don't talk to her

because she looks nice.  
 what's more, quit bothering her,  
 She doesn't even hang out with  
 you or do anything to you.

nobody likes me



we stop violence and leave discrimination in the past!!!!

"Why you say that?"



"You are ugly!"

I will try to ignore her

*yo trataria de ignorarla*

"don't bother her"

"shut up"



#### 4.6 Sticker Sheets and Gender-Based Choices

The most successful gamification strategy implemented during the camps was the stickers. They quickly became popular among participants and their choices of female versus male soccer player stickers were particularly useful for reflecting their perceptions and attitudes toward gender equality. The research team had the coding of 56 campers' sticker sheets for statistical analysis. Participants were given opportunities to choose various stickers as rewards to decorate the soccer field worksheet in the playbook. The total number of stickers they earned ranged from 1 to 29 ( $M = 17.86$ ,  $SD = 6.25$ ). On average, there were more female player stickers ( $M_F = 8.11$ ) than male player stickers ( $M_M = 7.64$ ) chosen by the participants in the entire sample although the difference was not statistically significant,  $t(55) = .57$ ,  $p = .57$ . This pattern was consistent across the two camps. However, what is even more interesting is that girls chose significantly more female soccer player stickers ( $M_F = 10.65$ ) as compared to male soccer player stickers ( $M_M = 5.70$ ),  $t(22) = 4.81$ ,  $p < .001$ ; while boys chose significantly more male soccer player stickers ( $M_M = 10.04$ ) but still asked for a substantial number of female soccer player stickers ( $M_F = 6.64$ ),  $t(27) = -3.83$ ,  $p = .001$ .

The badges also provided participants a sense of reward. Among all campers, only two earned three badges, seven earned two badges, and 12 earned one badge. Unfortunately, the groups had to be changed from day to day to keep the energy flowing so the leaderboard was not able to be implemented for group competition. In the end, every participant was given a *BREAKAWAY* wristband at the “graduations” to bring home as well as the game on CDs.



#### **4.7 *BREAKAWAY* Facebook Insights**

From mid-November 2013 to the end of February 2014, the *BREAKAWAY* team posted a total of 60 messages regarding the El Salvador youth camps on their Facebook page. In particular, when the team was in the field from November 18 to 30, 51 posts from the camps were shared via photos and short videos and there was a spike in the daily number of page likes. Some of these posts reached not just hundreds but thousands of Facebook users ( $Max = 2,333$ ;  $M = 379.47$ ). The most popular video was played almost 100 times. Altogether in 3.5 months, the *BREAKAWAY* camp posts gained 1,308 likes, 177 shares, and 198 comments; engaged 4,420 Facebook users, on a daily basis, engaged an average of 77 Facebook users (including 60 from Latin America/El Salvador); and some of the trained local facilitators became the most enthusiastic fans on *BREAKAWAY* Facebook page.

### **5. Discussion**

#### **5.1 Summary of Findings**

*BREAKAWAY* is the first attempt adapting the Sabido methodology of using entertainment media for social change in video games. Centered on role modeling through game characters, message delivery via carefully designed character dialogues, and decision points for deliberate choices, this study used a combination of event-based time diary, participatory sketching, gamification strategies, and post-hoc Facebook Insights analysis to assess the impact of the *BREAKAWAY* game and youth camps in El Salvador. Our results suggest that they were a great success. The experience had a profound impact on the campers in terms of awareness, knowledge, attitude, skill building, and initiation of behavioral change regarding gender inequality and VAWG.

Participants debated about different consequences of decision-making, wrote individual letters to the abusive character, co-constructed RESPECT acrostic poems that turned into rap songs, and formed their understanding of good qualities of sportsmanship. They showed empathy and sympathy to the characters that were mistreated in the game episodes and admiration and approval for the positive role models. They were also able to sketch out real-life bullying scenarios and demonstrate some of the VAWG strategies they learned from the game and camp activities.

The gamification strategies, especially the soccer player stickers, were proved to be engaging for the youth participants. The result of participants voluntarily choosing more female than male soccer player stickers suggested that the *BREAKAWAY* game and youth camps indeed opened the participants' eyes and transformed their perceptions of gender roles and norms. The sex specific sub-analyses also revealed that girls chose significantly more female soccer player stickers, indicating a sense of empowerment; and boys chose a substantial number of female soccer player stickers as well, showing the potential for openness to gender equality. The Facebook Insights also suggested that the *BREAKAWAY* youth camps in El Salvador attracted a global audience and initiated a vibrant online community that allows for continued communication and collaboration for future endeavors.

Taken together, our evaluation demonstrates that purposefully designed video games like *BREAKAWAY* hold great potential for addressing complex social issues such as gender inequality and VAWG. Youth camps organized around the gameplay can be an effective form of early intervention for changing negative gender-based norms and behaviors through social modeling, narrative engagement, and peer discussions.

## 5.2 Implication of Findings

VAWG has deep cultural roots discriminating the sex with less power. While social impact games have been studied in various contexts (Peng, Lee, & Heeter, 2010), our research extended the body of this literature by taking into account the social learning element through narrative engagement. In particular, we demonstrated the importance of role modeling and peer influence on raising awareness, increasing knowledge, building practical skills, and changing attitude and behavior (Bandura, 1977; Topping, 2005; Vygotsky, 1978). It proved to be fruitful and effective in adapting the Sabido methodology from traditional entertainment media to video games. Social connection is a critical component in the social change process in terms of providing necessary motivation and support for carrying out the desired action (Bandura, 2004).

Despite the social norms against gender equality in El Salvador, our participants obtained useful knowledge about VAWG, strategies against bullying, favorable attitude and behavioral tendencies toward women's rights at the end of a 5-day camp. Our findings demonstrated how the media and social networks complement each other and produce desirable social change outcomes. In particular, participants were able to first learn about the gravity and consequences of VAWG through interactive and experiential gameplay. Such heightened awareness was then reinforced by group discussions led by trained facilitators and allowed the participants to observe and learn from each other in a guided manner. Results of this study are informative for future intervention design.

## 5.3 Limitations and Directions for Future Research

Designing and implementing an assessment of a real intervention like the *BREAKAWAY* game and youth camps can encounter great challenges with scheduling,

budgeting, logistics, and team coordination. We were not able to employ an experimental design with a control group for between-subjects comparison or a pre-post assessment for within-subject comparison. Therefore, as rich and insightful as the results are in this study, we cannot make a strong causal claim about the findings.

The combination of text-oriented time diary approach and the non-textual participatory sketching was effective in capturing participants' perceptions. The qualitative data accomplished the breadth and depth of the participants' experiences. However, more quantitative measures may be creatively incorporated into the journal to obtain repeated measures over time for inferential rather than descriptive statistical analysis.

In addition, this evaluation mostly relied on self-reports. Future research may consider including systematic observations to record actual behaviors and increase the objectivity of the data. Similarly, tracking a subset of participants on social media during and after the camps can also leverage on longitudinal data for analysis of causality.

Though the camp model focused on and scheduled for five chapters, the youth, due to their own interest, made time pre-and post sessions to play all of the episodes and made sure to complete the entire game by the end of the camps. Also, the participants concluded the camp with a soccer game that included both male and female participants on the final day of the camps. The current study only focused on the planned content. Future research should account for these unpredictable factors and incorporate additional methods for data collection and analysis.

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