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Addressing Bullying and Cyberbullying in the Digital Age: Insights from *Narrative Heroes,* an Online Counter-Narrative Serious Game

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ABSTRACT

Bullying and cyberbullying are major global concerns for adolescents (UNICEF, 2018; 2019). As forms of violence, they are rooted in cultural dynamics and shared social norms that shape group narratives and individual attitudes (Andrews, 2002; Salmivalli & Voeten, 2004).
Research indicates that Information and Communication Technologies (ICTs) and virtual environments are effective contexts for prevention (Nocentini et al., 2015; Serritella et al., 2025).

The present doctoral research was structured around three major phases, all focused on the prevention of bullying and cyberbullying and on the use of emerging technologies.
The first study consisted of a **systematic review**, conducted according to PRISMA guidelines (Moher et al., 2009; Page et al., 2021), of the literature on technology-based interventions aimed at preventing bullying and cyberbullying among adolescents. The review identified both fully digital and hybrid interventions (combining online and face-to-face components), and highlighted a recent increase in the use of interactive tools such as **Serious Games**.

The second phase examined research and intervention paradigms related to attitude change in online contexts. Specifically, the second study explored the transformative potential of the **counter-narratives approach** (Bamberg & Andrews, 2004; Lueg & Lundholt, 2020) **in changing attitudes and behavioral intentions**, as the ultimate aim was to applying it to the prevention of bullying and cyberbullying.
Overall, the findings supported the potential of counter-narratives to influence attitudes and behavioral intentions,

The third phase focused on the **development and testing of a new online serious game for the universal prevention of bullying and cyberbullying, which employs the counter-narrative approach** as a mechanism for change, *Narrative Heroes: Playing to Rewrite the Bullying and Cyberbullying Script.*
Specifically, the present poster summarizes the results of the mixed-methods pilot study conducted to evaluate both the game user experience and the effectiveness of the intervention in modifying attitudes and behaviors related to bullying and cyberbullying.
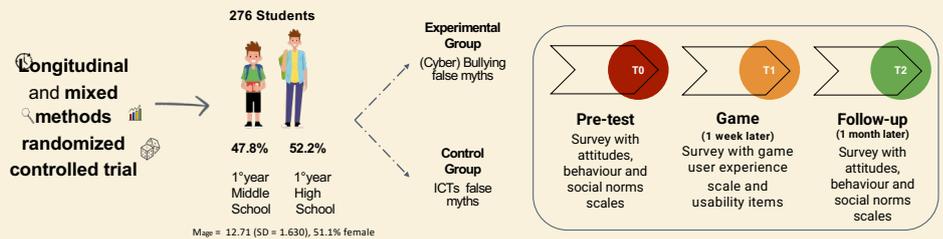
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7. UNICEF. (2018). *Half of world's teens experience peer violence in and around school.* Available at: https://uni.cf/end-violence

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AIMS

- To evaluate the **user experience** of the *Narrative Heroes*, including perceived strengths and weaknesses.

- To **analyze the narratives** generated during gameplay discussions, identifying main and counter-narratives.

- To **assess the intervention's effects on attitudes, perceived social norms, and behaviors** related to bullying and cyberbullying (victimization, perpetration, defending, and passive bystanding).
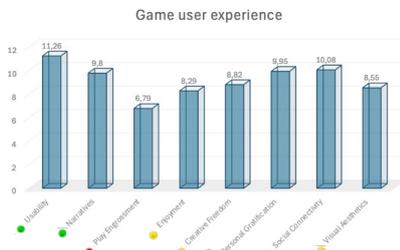
METHODS

In an online **forum-style interface**, the game allows **4 anonymous students** to interact around **three false myths** and c**ompete with other game teams**.

Longitudinal and mixed methods randomized controlled trial

276 Students

47.8% 1°year Middle School
52.2% 1°year High School

M age = 12.71 (SD = 1.630), 51.1% female

Experimental Group (Cyber) Bullying false myths

Control Group ICTs false myths

T0 — Pre-test Survey with attitudes, behaviour and social norms scales

T1 — Game (1 week later) Survey with game user experience scale and usability items

T2 — Follow-up (1 month later) Survey with attitudes, behaviour and social norms scales

Descriptive analyses to assess the game experience; **Inferential analyses** (Linear Mixed Models T0–T2) to preliminarily test the intervention's effectiveness; **Qualitative analyses** (Inductive Thematic Analysis) to identify strengths and weaknesses and examine students' narratives.

RESULTS

Game user experience

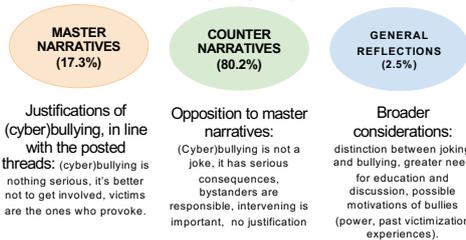| Usability	Narratives	Play Engagement	Enjoyment	Creative Freedom	Personal Gratification	Social Connectivity	Visual Aesthetics
11,26	9,8	6,79	8,29	8,82	9,95	10,08	8,55

Main strengths:
- Interaction & socialization: **41.1%**
- Online setting (freedom, anonymity): **23.5%**
- Technical design & gamification elements: **9.3%**
- Overall positive experience (fun, creativity): **8.3%**
- Learning & reflection: **5.3%**
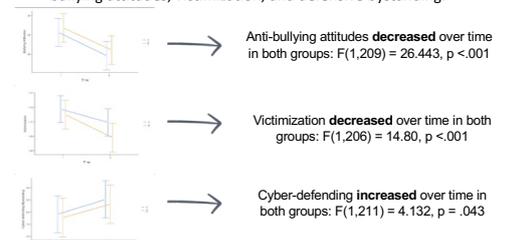- Unsure: **12.4%**

Main drawbacks:
- No negative aspects: **39.7%**
- Low participation / weak interaction: **22.8%**
- Game structure & content issues (too long, boring topics, few threads): **16.1%**
- Technical/login problems: **13.4%**
- Other minor issues (design, anonymity, comment rules): **<10%**

THEMES

MASTER NARRATIVES (17.3%)
Justifications of (cyber)bullying, in line with the posted threads: (cyber)bullying is nothing serious, it's better not to get involved, victims are the ones who provoke.

COUNTER NARRATIVES (80.2%)
Opposition to master narratives: (Cyber)bullying is not a joke, it has serious consequences, bystanders are responsible, intervening is important, no justification

GENERAL REFLECTIONS (2.5%)
Broader considerations: distinction between joking and bullying, greater need for education and discussion, possible motivations of bullies (power, past victimization experiences).

The linear mixed models identified significant time effects only for anti-bullying attitudes, victimization, and defensive bystanding.

Anti-bullying attitudes **decreased** over time in both groups: $F_{(1,209)} = 26.443$, $p < .001$

Victimization **decreased** over time in both groups: $F_{(1,206)} = 14.80$, $p < .001$

Cyber-defending **increased** over time in both groups: $F_{(1,211)} = 4.132$, $p = .043$

DISCUSSION and CONCLUSION

Narrative Heroes, though still preliminary, is a **feasible and engaging peer-based game t**hat promotes reflection and the co-construction of narratives and counter-narratives.
Qualitative evidence shows its potential to foster anti-bullying and anti-cyberbullying positions, but **a single brief exposure was not sufficient to produce measurable short-term group differences**.

Overall, *Narrative Heroes* offers a promising and scalable approach for leveraging counter-narratives to influence social norms.

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