



# The Use of Serious Games in Knowledge- and Skills-Based Digital Counselling: Applications to Trafficking in Persons in the War in Ukraine

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**Abstract.** This paper presents a serious game designed to help train child helpline counsellors in the detection and response to contacts by children risking conflict-related human trafficking and child sexual abuse and exploitation. It presents trainee counsellors with three stories following young people from Ukraine: Andriy, Olga and Ilya, who contact a child helpline to seek counselling for what are likely situations of trafficking or child sexual exploitation. In each story, the trainee takes on the role of counsellor and interacts with the child character through a branching narrative. The serious game is developed by Haunted Planet Studios and Child Helpline International, in partnership with Terre des Hommes Netherlands as part of their Emergency Ukraine Response, and is currently being tested as part of a larger training curriculum.

**Keywords:** Serious Games · Games for Learning · Soft Skills · Counselling

## 1 Introduction

Academics, as well as state and international organisations have warned of the heightened risk of child trafficking and sexual exploitation as a result of the full-scale invasion of Ukraine (Cockbain and Sidebottom 2022; EU Anti-Trafficking Coordinator 2022; EUROPOL 2022). Indeed, at the UN General Assembly 2022, the Director of UN Women warned “In Ukraine, the risk of Human Trafficking for Sexual Exploitation purposes has multiplied,” with the UN Special Representative for Violence Against Children adding that “too many children are left behind, at risk of becoming victims of trafficking [...] in the ongoing Humanitarian crisis, the War in Ukraine.”

In 2016, the UN’s Security Council Passed Resolution 2331, in which it officially recognised the links between human trafficking and armed conflict. As part of this

resolution, it encouraged member states to: implement robust victim, and possible victim, identification mechanisms and provide access to protection and assistance for identified victims without delay, also in relation to trafficking in persons in armed conflict, including where such victims are refugees and internally displaced persons (UN Security Council 2016)

In order to be able to provide such mechanisms, frontline workers must first be trained in victim identification and subsequent case management. Child helpline counsellors constitute one category of these frontline workers. Since the full-scale invasion of Ukraine began, national child helplines in Ukraine and Ukraine Crisis Response states such as Poland, Hungary, Slovakia, the Czech Republic, Bulgaria and Moldova have adapted their services to ensure children affected by the conflict can contact them to seek information and counselling. In order to assess the preparedness of their services for this new challenge, Child Helpline International, an umbrella organisation comprising 139 national child helplines, conducted a needs assessment in each of these states, finding that none had been trained in conflict-related child trafficking and exploitation.

In response to this finding, the organisation conducted seven in-country workshops to provide such training to child helpline counsellors. However, this training was only able to reach just over 200 counsellors, with many more working at the front lines requiring this training. In particular, since male Ukrainian counsellors aren't allowed to leave the country due to Martial Law, few were able to attend the in-person trainings. Online trainings were considered, however there are frequent power cuts and emergency air raid alarms prohibiting the provision of stable training.

As a result of these barriers, Child Helpline International began a partnership with Haunted Planet Studios, in partnership with Terre des Hommes Netherlands, to develop a serious game which could substitute interactive role-playing exercises involved in in-person training fora and have the capacity to reach a far broader audience.

## 2 Related Work

Serious games for educational purposes have been gaining traction in the last decade for their ability to make a more interactive, practical and entertaining learning experience (Zhonggen 2019; Checa and Bustillo 2020; Cameraman et al. 2020). Modern educational games are thought to be effective teaching tools for enhancing learning as they use action, encourage motivation, accommodate multiple learning styles, reinforce skills and provide an interactive and decision-making context (Charles 2004). Serious games with particular focus on interactive narrative have been proposed to help acquire and increase awareness of relationship skills, such as *Office Brawl* (Glock 2011), in which the player takes on the role of project manager for a team of two computer-controlled characters fighting over a development project, and *Green Acres High* (Bowen 2014), in which the player takes on the role of a friend of someone who has experienced a scenario of adolescent dating violence (ADV). Such experiences are intended to help the player learn about the characteristics of relationships, identify warning signs and consider appropriate courses of action.

### 3 Learning Objectives

The primary learning objective underlying all three mini-games is to put into practice the theoretical learnings taught under Child Helpline International's e-learning module on conflict-related child trafficking and sexual and gender-based violence through an immersive experience. More specifically, the learning objectives are distilled from UNICEF and the WHO's EQUIP (Ensuring Quality in Psychological Support) competencies framework, as applied to a remote child counselling context. These objectives include counsellors demonstrating:

1. Adequate verbal communication skills
2. Ability to build a rapport with the child
3. Demonstrating empathy, warmth & genuineness
4. Supporting the reframing of a child's negative thoughts & feelings
5. Ability to identify and understand the child's daily life problems or needs
6. Applies problem solving techniques for the child's daily life problems
7. Ability to safely identify child abuse, exploitation and violence.

### 4 Game Design

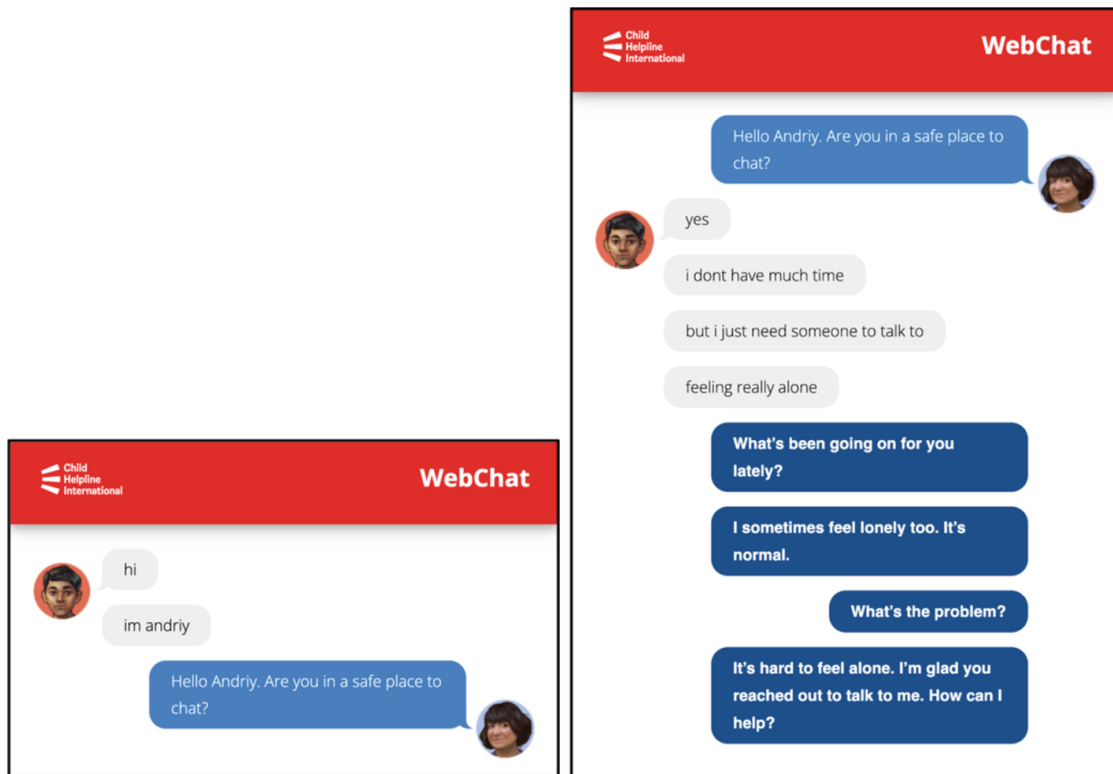
Each story in the game simulates a text chat with a child suspected of being victimised in one of three scenarios: a) sex trafficking; b) labour trafficking and c) online sexual exploitation. The counsellor-in-training must engage with each child's story by selecting from one of 3–4 answer prompts to progress the conversation. Once their interaction with the child concludes, the counsellor is "connected" to their in-game supervisor, who provides them with feedback as to their performance. In the present paper, we examine this game and its applications to counsellor training in more detail following its official completion on 31 May 2023.

The game has been designed to emulate the look and feel of an online web or mobile chat, which has become a globally familiar interface pattern, one used by remote counsellors worldwide. The counsellor and their responses appear on the right of the chat, and the other participant - either the child or supervisor - and their responses appear on the left as shown in Fig. 1 (left). The counsellor can progress the game by clicking or tapping their preferred response when multiple options are presented as shown in Fig. 1 (right).

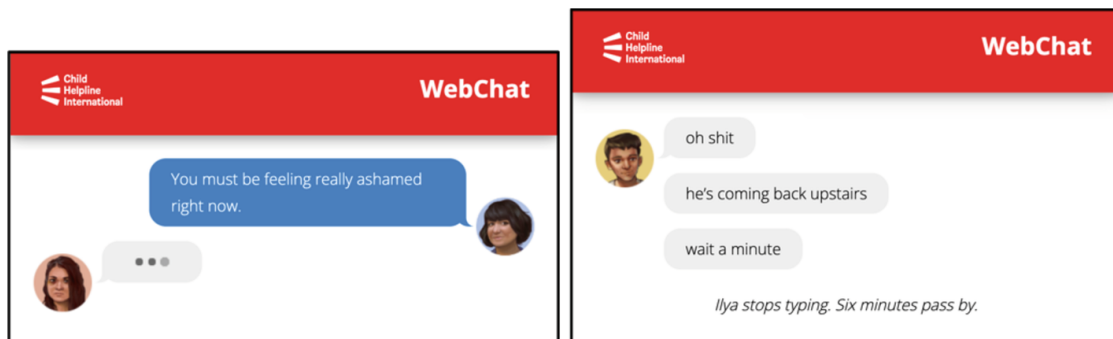
As the game attempts to simulate an authentic conversation, it incorporates pauses and delays in the responses of the child to add a level of realism. For this it employs the use of an animated "typing indicator" ellipsis, as in Fig. 2 (left). For instance, to imply hesitancy or uncertainty on the part of the child, the typing indicator will animate and vanish a number of times before the child's response actually appears.

### 5 Narrative Design

The basic narrative structure of each story has been designed around the following model for a counselling contact:



**Fig. 1.** The game's web chat style interface (left) and selecting from multiple potential responses (right).



**Fig. 2.** The typing indicator ellipsis (left) and the description of action within the game (right).

1. Building Rapport - connecting to and establishing trust with the child.
2. Exploring Feelings - discovering and understanding the child's story and current situation.
3. Exploring Options - collaborating with the child to progress their situation constructively.
4. Breaking Confidentiality - only if necessary to protect the child from serious harm.
5. Good Endings - ending the conversation in a positive and productive way for the child.

Throughout each conversation, the counsellor is given numerous opportunities to demonstrate and practise their competencies in the learning objectives listed in Sect. 3.

They may for example select a response with language at a level appropriate for the age and ability of the child, rather than a more factually correct but overly formal reply; they might answer in a way that helps the child reframe their situation, instead of with a kind but unhelpful platitude; or they may demonstrate empathy by acknowledging and validating the child's experience without judgement; etc. In general, the response prompts presented to the counsellor have been designed not to be either self-evidently correct or incorrect - indeed, often there can be multiple satisfactory answers.

The goal of the counsellor in each story is to assist the child in charting a positive and constructive way forward for their individual situation adherent to their level of risk. The responses the counsellor chooses impacts how the branching narrative of the story progresses: will the child engage with the counsellor to reach a satisfactory conclusion, or will they become frustrated and give up on the chat before that can happen? The following sections briefly detail the narrative for each child's story.

### **5.1 Andriy**

Andriy is a 16 year old Ukrainian boy brought to the UK with promises of a job that would lead to a better life for himself, and the ability to help provide for his family at home in Eastern Ukraine. However, he now finds himself working long construction shifts, has no access to his earnings, is staying in a dormitory with other workers, and has no way to leave.

Andriy is worried about his situation and has reached out for help, but he is slow to trust others after his recent experiences. He blames himself for the situation he is in, and feels anxious and hopeless.

The counsellor must earn Andriy's trust to learn about his situation, and then work with him to find a solution - in this case to have him contact a direct crisis line for young people affected by labour trafficking.

### **5.2 Ilya**

Ilya is a 13 year old Ukrainian boy who moved to Germany with his mother, as part of a programme pairing Ukrainians escaping the war with homeowners willing to offer a roof. Initially their life in Germany was normal, however, for the last few months their home situation has degraded significantly. Their landlord has become more and more demanding as time goes on, threatening to call the police and accuse Ilya's mother of stealing if she doesn't do his domestic chores. He has "confiscated" Ilya's mother's mobile phone, and has also recently begun sexually exploiting her.

Ilya is reaching out via his mobile phone which he has kept hidden from the landlord. On the surface he puts on a brave face, but beneath this facade he is anxious and traumatised. He is desperate for some help to change his situation.

Over the course of the conversation the counsellor must establish if Ilya is physically safe, then work with Ilya to help him understand what his options and next steps might look like. The counsellor can then connect him with a local domestic violence shelter who are able to assist in his case.

### 5.3 Olga

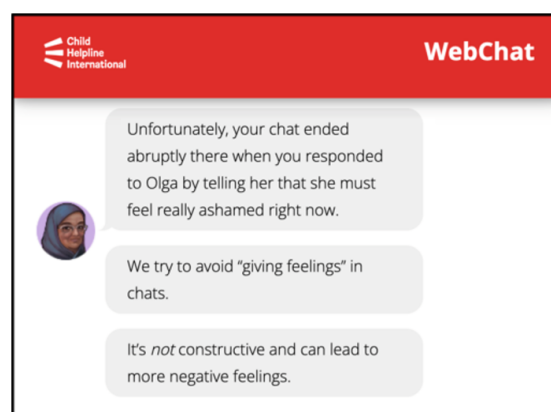
Olga is a 15 year old Ukrainian girl, who has gotten in touch with the helpline to talk through her problems with her “boyfriend” abroad. Olga met Mike online playing a video game, although they have never met in person. He was kind to her and flattered her at first, sending small amounts of money to help out her family who are struggling in the ongoing war. Olga sent Mike nude photos in the past, however, now he is pressuring her to send more photos - and she doesn’t want to. She feels deeply ashamed of sending the original images to him. He is threatening to show them to her family and school if she does not acquiesce to his demands.

Olga feels like she should be able to handle this situation herself, but she is frightened of Mike and of the consequences if her family finds out. She blames herself, and feels stuck and unsure of herself and of what to do. She is grateful to the counsellor for listening to her and trying to help her.

During their conversation the counsellor will discover that Olga’s mother can likely be relied on to support her. The counsellor can let Olga know that Mike is exploiting her, and reassure her that it’s not her fault. They can encourage her to talk to mom about her situation, and can also - with Olga’s agreement - arrange for her to connect with local police about her situation.

### 5.4 The Supervisor

Once the counsellor has concluded their conversation with the child, they are “connected” to an in-game supervisor, who offers feedback on their responses during the chat. While the child’s immediate reactions to a response can offer some limited direct feedback, the supervisor provides a more structured and instructional analysis of the counsellor’s conversation, e.g., as in Fig. 3.



**Fig. 3.** Supervisor Feedback

Through repeated intentional practice in a simulated environment such as the one examined here, counsellors can develop or refresh their skills at will without fear of harmful consequences for a real child. The intent of such a system is not to replace, but rather to supplement or augment additional learning.

## 6 Implications for Learning for Counsellors

This current solution is developed against a backdrop of the emergence of disruptive innovations in the conception and delivery of counselling and psychological services, both in terms of digital modes of service delivery and associated psychological and counsellor training (McLeod 2015). Disruptive innovation refers to a process whereby a new product or service (e.g. a technology) disrupts existing provision by providing a new and more convenient solution to an existing problem (Christensen 1997). The current solution is an important innovation in terms of its potential to support the delivery of potentially disruptive, real-time, accessible counselling assistance in a scalable manner, while mitigating against risks associated with more direct physical modes of intervention in unstable and potentially high-risk humanitarian settings. Moreover, it delivers inherent potential as an approach to evidence-based counsellor training with similar application value in decentralised, dynamic and sometimes volatile humanitarian situations.

While digital innovations and disruptions in practitioner training have been extended into technology-enhanced learning environments (e.g. ‘Telehealth’ (McLeod 2015)), less attention has been paid to the development of evidence-based approaches to mental health practitioner training. Technological innovations such as chatbots, whilst not singularly disruptive to the practice of counselling and mental health intervention, have demonstrated some efficacy in the delivery of mental health supports (e.g. He et al. 2022) but empirical understanding of their potential role and function in the delivery of mental health interventions is limited (Bendig et al. 2021). Therefore, notwithstanding its specific application context, the current solution holds the potential to extend the existing evidence base on the potential for chatbot-based solutions in the delivery of mental health and counselling supports, as well as offering inherent promise as a standalone modality for counselling and mental health practitioner training.

## 7 Conclusion

This paper has presented the development of a new online learning tool for counsellors receiving contacts from children at risk of conflict-related trafficking and sexual exploitation, in the form of an interactive game. The tool focused on a specific set of learning objectives, but there are of course many others that could be addressed in future versions of the tool, or in other experiences of a similar type. For example, the tool in its current form does not attempt to address aspects of collaboration and coordination between the child helpline counsellors and law enforcement authorities or the reporting procedures, which differ between countries. Also, while the game features a supervisor whose function is to encourage reflection, the supervisor character is limited to this single function. In a real-life setting, the supervisor serves a much more comprehensive role (e.g., in relation to the counsellor’s well-being and professional development) and these types of functions are not captured by the experience in its current form.

Nevertheless, the game illustrates a promising supplementary approach to traditional forms of training, allowing counsellors to role-play realistic scenarios with children at risk, to ensure that they have the relevant skillset and knowledge to detect, prevent and refer cases of trafficking and sexual exploitation, while applying a trauma-informed

lens to their conversations with children. Haunted Planet Studios and Child Helpline International launched the game on 31 May 2023, and in will be reviewing its impact as it is rolled out to the 159 child helplines in the global Child Helpline International network.

## References

- Bendig, E., Erb, B., Meißner, D., Bauereiß, N., Baumeister, H.: Feasibility of a Software agent providing a brief Intervention for Self-help to Uplift psychological wellbeing (“SISU”). A single-group pretest-posttest trial investigating the potential of SISU to act as therapeutic agent. *Internet Interv.* **24**, 100377 (2021). <https://doi.org/10.1016/j.invent.2021.100377>
- Bowen, E., et al.: It’s like you’re actually playing as yourself”: development and preliminary evaluation of ‘Green Acres High’, a serious game-based primary intervention to combat adolescent dating violence. *Psychosoc. Interv.* **1**(23), 43–55 (2014)
- Caserman, P., et al.: Quality criteria for serious games: serious part, game part, and balance. *JMIR Serious Games* **8**(3), e19037 (2020)
- Charles, D., McAlister, M.: Integrating ideas about invisible playgrounds from play theory into online educational digital games. In: Rauterberg, M. (ed.) *Entertainment Computing – ICEC 2004. Lecture Notes in Computer Science*, vol. 3166, pp. 598–601. Springer, Heidelberg (2004). [https://doi.org/10.1007/978-3-540-28643-1\\_79](https://doi.org/10.1007/978-3-540-28643-1_79)
- Holland, W., Jenkins, H., Squire, K.: Theory by design. In: Perron, B., Wolf, M. (eds.) *Video Game Theory*, pp. 25–46. Routledge, New York (2003)
- Checa, D., Bustillo, A.: A review of immersive virtual reality serious games to enhance learning and training. *Multimedia Tools Appl.* **79**(9), 5501–5527 (2020)
- Christensen, C.M.: *The Innovator’s Dilemma: When New Technologies Cause Great Firms to Fail*. Harvard Business School Press (1997)
- Cockbain, E., Sidebottom, A.: The war in Ukraine and associated risks of human trafficking and exploitation. Insights from an evidence- gathering roundtable, p. 14 (2022). <https://www.antislaverycommissioner.co.uk/media/1801/ucl-iasc-2022-roundtable-report-the-war-in-ukraine-human-trafficking-and-exploitation.pdf>
- EU Anti-Trafficking Coordinator: A Common Anti-Trafficking Plan to address the risks of trafficking in human beings and support potential victims among those fleeing the war in Ukraine (2022). [https://ec.europa.eu/home-affairs/system/files/2022-05/Anti-Trafficking%20Plan\\_en.pdf](https://ec.europa.eu/home-affairs/system/files/2022-05/Anti-Trafficking%20Plan_en.pdf)
- EUROPOL: Early Warning Notification. War in Ukraine – refugees arriving to the EU from Ukraine *at risk of exploitation as part of THB* (2022). [https://www.europol.europa.eu/cms/sites/default/files/documents/Early\\_Warning\\_Notification\\_\\_War\\_in\\_Ukraine\\_refugees\\_arriving\\_to\\_the\\_EU\\_from\\_Ukraine\\_at\\_risk\\_of\\_exploitation\\_as\\_part\\_of\\_THB.pdf](https://www.europol.europa.eu/cms/sites/default/files/documents/Early_Warning_Notification__War_in_Ukraine_refugees_arriving_to_the_EU_from_Ukraine_at_risk_of_exploitation_as_part_of_THB.pdf)
- Glock, F., et al.: “Office Brawl”. A conversational storytelling game and its creation process. In: *Proceedings of the Eighth International Conference on Advances in Computer Entertainment Technology (ACE 2011)*, Lisbon, Portugal
- He, Y., et al.: Mental health chatbot for young adults with depressive symptoms during the COVID-19 pandemic: Single-Blind, three-arm randomized controlled trial. *J. Med. Internet Res.* **24**(11), e40719 (2022)
- McLeod, R.: *Disruptive Innovation in the Practice of Psychology*. Minnesota Psychological Association (2015). [https://www.mnpsych.org/index.php?option=com\\_dailyplanetblog&view=entry&year=2015&month=11&day=29&id=1:disruptive-innovation-in-the-practice-of-psychology](https://www.mnpsych.org/index.php?option=com_dailyplanetblog&view=entry&year=2015&month=11&day=29&id=1:disruptive-innovation-in-the-practice-of-psychology)



- UN Security Council: Resolution 2331 (2016) Adopted by the Security Council at its 7847th meeting, on 20 December 2016 (2016). <https://documents-dds-ny.un.org/doc/UNDOC/GEN/N16/451/58/PDF/N1645158.pdf?OpenElement>
- Wang, Y., Lukosch, H.K., Schwarz, P.: The role of serious gaming in assisting humanitarian operations. *Int. J. Inf. Syst. Crisis Response Manag. (IJISCRAM)* **11**(1), 20–34 (2019)
- Zhonggen, Y.: A meta-analysis of use of serious games in education over a decade. *Int. J. Comput. Games Technol.* (2019)