

WhistleBot

DEVELOPING A CONVERSATIONAL CHATBOT TO PROMOTE WHISTLEBLOWING AGAINST DOPING IN SPORT

A collaborative research project

UK Anti-Doping (UKAD)

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Introduction

In 2023, UKAD received over 180 reports through its Protect Your Sport channels. Despite this, many athletes and support personnel - such as coaches, medical staff, and team officials - may still be reluctant to report suspected doping. To address this, we explored the potential of a behavioural science-led digital solution that can provide 24/7, confidential support and guidance on the reporting process.

This project aimed to develop and evaluate a behaviour change intervention delivered through a chatbot utilising conversational artificial intelligence (AI). We asked athletes and athlete support personnel (ASP) for their insights on the challenges in sharing information about suspected doping and the desired features of a digital tool designed to encourage reporting. WhistleBot was then created to target prioritised barriers and enablers of whistleblowing behaviour within a conversational flow designed to support and encourage users to report their concerns of doping misconduct.

1

IDENTIFYING BARRIERS & ENABLERS OF WHISTLEBLOWING

- Scoping review identified 16 barriers and 17 enablers, mapped against prominent behaviour change models (COM-B/TDF)
- Survey asked 53 athletes and 114 ASP to rank the barriers and enablers, in order of importance, by how they influenced the decision to report doping misconduct
- Focus groups discussed receptiveness to using a chatbot and defined desired/essential features

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CO-DEVELOPMENT OF WHISTLEBOT

- Participatory design approach was used, engaging UKAD experts, athletes and ASP to co-develop the content, conversational flow and functionality
- A series of core topics were identified and bespoke chatbot content developed to address the main concerns about reporting doping
- The chatbot's design was deliberately rule-based to maintain strict control over content accuracy and the flow of the conversation within the intended topics
- Generative AI was not selected due to concerns about unsupported user queries and the challenges of effectively handling complex, domain-specific knowledge

3

PILOT EVALUATION

- Prototype tested by 40 athletes and ASP, with feedback captured through an online survey
- Follow-up focus groups discussed feedback and recommendations for refinement and future development

1

The top 5 barriers and enablers to whistleblowing, as identified by athletes and support personnel

Barriers:

- Uncertainty of what/how to report
- Evidence sufficiency concerns
- Distress from suspecting/ knowing doping happened
- Fear of being revealed as informant
- Fear of retribution/retaliation

Enablers:

- Trust/confidence in the process
- Confidence in what, how, to whom to report
- Having knowledge and skills about reporting
- Having received support (what, where, how to report)
- Having been exposed to awareness-raising initiatives promoting whistleblowing

2

Athletes and ASP were willing to use a chatbot that supported whistleblowing



- Focus groups confirmed a chatbot would be helpful for guiding and supporting people in deciding whether to report doping issues to UKAD
- Key features of what a chatbot should and shouldn't do were described

3

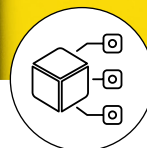
Overcoming a lack of trust and confidence in the reporting process is critical



- Concerns over anonymity and confidentiality were significant and common amongst athletes and ASP
- Assurance of the absence of real-time human monitoring would encourage athletes to use a chatbot
- Ensuring that the chatbot is hosted on UKAD's website would enhance the reliability and credibility of its content and the resources it signposts
- The protective mechanisms offered to a whistleblower should be described to the chatbot user

4

The key features of an effective and helpful chatbot were determined



- Careful consideration of the user's experience of the chatbot is essential: high quality information, delivered simply and efficiently, with good use of multimedia resources
- Given the strict rules and procedures in anti-doping, the chatbot must deliver accurate and reliable information, which may initially limit its scope despite interest in a more natural, conversation experience covering broader anti-doping topics

5

Evaluation of prototype chatbot proved effective in addressing barriers and enablers



40

athletes and ASP pilot-tested the chatbot

53%

said that they would feel confident making a whistleblowing report after using the chatbot

58%

said they were satisfied with the quality of the information provided on reporting doping misconduct



User experience, functionality and trust/security of the tool were prioritised for future development

Recommendations

Based on the findings of the research, the following recommendations are proposed:

1. Iterative development of content and behavioural change techniques to address the barriers and enablers identified

- Produce high quality audio-visual assets to embed within the content of the chatbot, including videos describing the reporting process, how to remain anonymous when reporting and the benefits of enabling two-way communication with UKAD.
- Develop more tailored content to increase user engagement, user experience and perceived trustworthiness and credibility.

2. Adopt an empathetic and understanding tone to the chatbot's persona

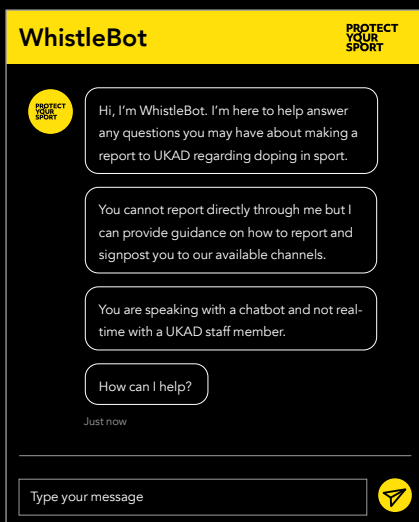
- Design conversational flow to show empathy and understanding of the user's situation, acknowledging sensitivities.
- Reduce stigma and emotional burden of whistleblowing while providing reliable information on how to report safely.
- Employ natural language and avoid jargon to ensure accessibility and build trust.

3. Deploy the chatbot on UKAD's Protect Your Sport webpage

- A creative marketing and communication strategy is needed to promote awareness.
- An evaluation period is recommended to monitor and assess user engagement, feedback and effectiveness of the tool in supporting users to report their doping concerns.

4. Embed evaluation and education components

- Develop and embed evaluation components within the chatbot to capture useful metrics of user engagement, feedback and interactions in order to guide future iterative development of content and user experience.
- Incorporate educational aspects into the content to develop users' skills and competencies in their anti-doping responsibilities and promote trust and engagement with the reporting process.



WhistleBot PROTECT YOUR SPORT

Hi, I'm WhistleBot. I'm here to help answer any questions you may have about making a report to UKAD regarding doping in sport.

You cannot report directly through me but I can provide guidance on how to report and signpost you to our available channels.

You are speaking with a chatbot and not real-time with a UKAD staff member.

How can I help?

Just now

Type your message