A Study on the Use of Interactive Videos in Addiction Treatment for People with an Intellectual Disability

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ABSTRACT

People with a Mild or Borderline Intellectual Disability (MBID) who use substances have an increased chance of getting a Substance Use Disorder (SUD). Despite this, most addiction treatment is focused on people without an intellectual disability. Tactus Verslavingszorg has developed two SUD treatment protocols for people with MBID, which are still very text-based. We developed an interactive video in which users can choose how they would reply if someone offers them their substance of choice. The feedback of the test subjects was evaluated, and based on that we drew the conclusion that the concept has enough merit to warrant further research and development. We provided starting points for future research, amongst which a quantitative replication of this qualitative research, as well as research on how to proceed in the development of a treatment module containing interactive videos.

Keywords

Interactive video, MBID, SUD.

1. INTRODUCTION

This research is conducted under guidance of a psychiatrist at Tactus Verslavingszorg. Their goal is to make online addiction treatment more accessible for people with an Intellectual Disability (ID). This research aims to make a contribution towards that end.

An ID is a neurodevelopmental disorder which is characterized by deficits in for instance reasoning, abstract thinking and judgment [4]. This manual does not use the IQ score of an individual to determine the level of ID, but the adaptive functioning, seeing as it is just that which determines the level of support a patient needs. The same manual on mental disorders mentions three levels of Substance Use Disorder (SUD): mild, moderate and severe, based on the number of different criteria for the disorder a patient meets.

Van der Nagel et al. suggest that people with a Mild to Borderline Intellectual Disability (MBID) with some degree of Substance Use (SU) are at a higher risk of getting SUD than people without ID who use substances [14]. Despite this, most addiction treatment is not suitable for

people with ID, according to the same article.

To remedy this issue, Tactus Verslavingszorg has created a treatment protocol specifically for people with MBID. As of now, two protocols are in use: Minder Drank of Drugs (MDOD) and Cognitieve Gedragstherapie Plus (CGT+) [12, 13].

Tactus also offers online treatment protocols for people who are older than 16 [2]. These protocols are not limited to clients without MBID.

1.1 Problem statement

The online addiction treatment protocol is still highly text-based. It is generally assumed that people with an intellectual disorder have lower reading and comprehension skills [11]. As a result, the current online addiction treatment protocol is not suitable for people with MBID. Therefore, it is necessary to research non-text-based alternatives to the textual information.

1.2 Related work

To date, quite some research has been done on nontext-based strategies to teach certain skills to people with intellectual disabilities, albeit not in the domain of addiction treatment. For instance, Gül set out to teach certain skills to people with an intellectual disability through the use of social stories and video modelling. The target skills were learned with a 100% accuracy by all the participants in her research, and the participants retained the learned skills over time [9]. Taber-Doughty et al. studied the performance of children with an intellectual disability when executing simple recipes. They found that the amount of correctly executed steps increased significantly in their test subjects when using video prompting or video modeling, rather than textual descriptions of the recipes. In their test subject it differed which of the two methods was the most effective. [10]. Evmenova and Berhmann investigated a correlation between learning ability in people with an intellectual disorder and, amongst other things, interactive elements. They found that some studies even suggest that the performance of students might improve as the level of interactivity with the video-based program increase [7].

Gerritsen, a student at the University of Twente performed research on the implementation of relevant scenarios for people with an addiction, through the use of videos. The videos were aimed specifically to teach people with a substance addiction and MBID how to say "no" to substances. The test subjects praised the videos for being very recognizable to them. This amongst other observations led the conclusions of his research to be that the videos were indeed a useful tool, which is supported by Embregts [6]. Gerritsen also suggested that scenarios through the use of role-play could be an even more effective intervention

for people in the target group, because role-play could be more engaging to the client than videos [8]. Role-play can be seen as a form of serious game, and Brown et al. states that serious games have the ability to keep the user engaged for enough repetitions of the scenario to ensure that the user learns something [5], which supports Gerritsen's claim.

1.3 Research question

This research aims to continue where Gerritsen left. Based on the research of Gerritsen, Embregts and Brown et al. we formed the hypothesis that scenarios through the use of an interactive video - which we view as digital role-play - are a useful tool to help people with MBID learn how to say "no" to their substance of choice.

To the end of proving or disproving this hypothesis, this research aimed to answer the following research questions:

1. How do clients of Tactus Verslavingszorg evaluate interactive videos about saying "no" as an addition to the online addiction treatment protocol?

2. What alterations need to be made in the digital environment of Tactus Verslavingszorg to enable the use of interactive videos?

In Section 2 we describe the methodology and the approach of the research. Section 3 provides the results that were gathered in the trials. A discussion of the research will be provided in Section 4. In Section 5 we draw conclusions to the research question, based on the results provided in Section 3. Finally, issues that still need resolving at the end of the research are discussed in Section 6.

2. METHODOLOGY AND APPROACH

In this section we describe how we answer the research questions. To answer the first research question, we developed a prototype of an interactive video and tested this with clients of Tactus. We drew our conclusion based on the outcome of these trials. In order to answer the second research question, information on the MindDistrict system was gathered from an interview.

2.1 Development of intervention

In this subsection we will describe the global design of the prototype, as well as the specific pages that the prototype had to contain.

2.1.1 Global design choices

We created a web application outside of the digital environment of Tactus, using of the Vue.js framework [3] and the Quasar framework [1].

The prototype consists of a static website. Only a front-end was built, since a back-end application is not needed to serve the goal. The prototype consists of multiple pages, mapped out somewhat like a tree. Figure 1 gives an example flow chart of the application. Appendix A provides a complete flow chart of all the possible courses of conversation in this application. In the following section we describe the different pages of the prototype.

2.1.2 Pages

The application contains three different templates of pages, some of which have been reused multiple times. Screenshots of the different pages, as well as a screenshot of the help-menu, are provided in Appendix B.

1. the home page as shown in Figure 2: a page containing two buttons. One is a 'start' button, which takes
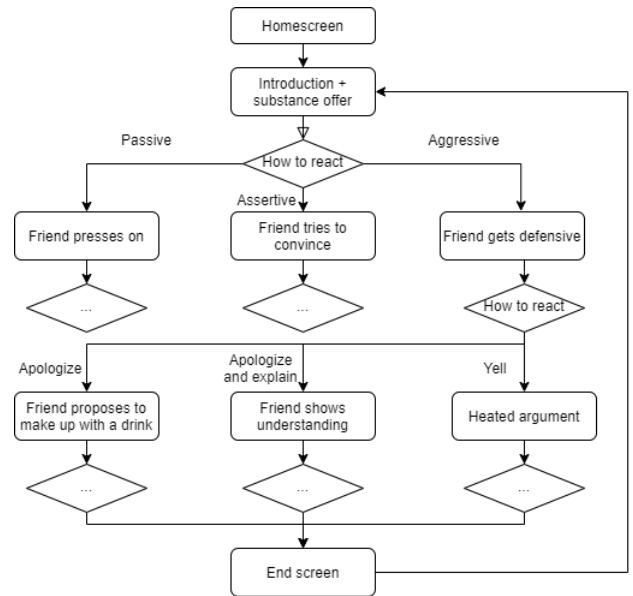

Figure 1. Example of the possible course a conversation can take when refusing substances in different ways

the user to the first video page. The other buttons triggers a pop-up dialog containing the help-menu as shown in Figure 3, showing information on how the application works;

2. the video page as shown in Figure 4: a page containing a framed YouTube video of a person pushing for the user to have a beer, 3 grey buttons displaying a speaker, and 3 orange buttons displaying an upward-pointing arrow. When clicked, the grey buttons play an answer to the person in the video. The three orange buttons take the user to the response of the person in the video on the answer that the arrow points to;

3. the end page as shown in 5: a page containing a framed YouTube video, like in the video page. This video shows the eventual response of the person to the conversation as the user chose it. The page also contains a grey button displaying a circular arrow. When clicked, this button takes the user back to the home screen, allowing them to start over.

We chose to provide the choices to the user in the form of audio files, rather than putting them in writing, as this keeps the system accessible to people with lower literacy. As is the case in Gerritsen's research, the answers the user can choose from are in line with one of the following response strategies: aggressive, assertive and passive.

In order to keep the project compact, and to stay within the time limit, the scope was limited to let the user choose a response only three times in the conversation. Since there are three options for every choice the user makes, every choice makes the number of videos needed grow almost exponentially with a factor three. *Almost*, because some combinations of responses lead to the same outcome, as can be seen in the flow chart in Appendix A.

2.2 Prototype testing

In order to gather the feedback needed to answer the research question, volunteers tested the prototype. Because of the short time frame, the scope only allowed for four test subjects. Table 1 states the encoding and type of test

subject for each volunteer. The testing procedure will be explained below.

	Encoding	Type of test subject
Test person 1	T1	Client
Test person 2	T2	Therapist in training
Test person 3	T3	Client
Test person 4	T4	Client

Table 1. Encoding and type of test subject

2.2.1 Approaching participants

A psychiatrist at Tactus Verslavingszorg recruited volunteers for the research. They received an information brochure, which explained the nature of the research, as well as the testing procedure, and the client was asked to help with this research. If the client decided to volunteer, a date and time was arranged for the trial.

2.2.2 Procedures

First a connection was established with the test subject on some calling platform of their choice. The test subject was asked if they consented to the session being recorded. If they did not, then the session would end. If they consented, the recording would be started and the test subject was asked if they had read the entire information brochure, and if not, the brochure was reiterated verbally. Then the test subject was asked whether they wanted to participate in this trial, based on the information in the information brochure, which all the participants did.

The test subject received a URL to a website containing the prototype. The test subject did not receive any specific directions, but any questions they had were answered. They were asked to try out the video at least one time, and encouraged to think out loud during the process. Afterwards they chose themselves whether or not they wanted to try it again.

A questionnaire was prepared before the trials, containing questions about the opinion of the test subject. The questions were arranged like a semi-structured interview, and they were based on the question in the paper of Gerritsen, on which this research is based. People with MBID often have some extent of trouble verbalizing their thoughts, so at times, a more extensive answer to a question could be provoked by asking for more elaboration, giving examples or rephrasing the question. The following questions were included in the questionnaire - albeit in Dutch:

1. You just saw a video in which you chose what should happen. What did you think about this?

2. Did you think it was clear how the system worked?

3. You constantly had three different choices. Can you tell me something about the differences between the three choices?

4. What way of answering do you think works the best?

5. How do you say no to someone when you need to?

6. Did you learn anything from the video?

7. Do you think such a video could help in the addiction treatment?

8. What would you think about it if such a video was used in the addiction treatment?

9. Now that you have tried out the video: do you have tips that I can use to make such a video better?

10. Do you have any other questions, or things you want to say?

Some test subjects already answered some of the questions in the process of thinking out loud, in which case the question was skipped when asking the questions.

The recordings of the conversations were transcribed, and the recordings were deleted within 5 working days to protect the privacy of the test subjects. The results of the trials can be found in the next section. The transcripts of the conversations were retained for evaluation.

2.2.3 Data extraction

To make some sense of the feedback gathered in the trials, the feedback should be categorized. Since the first research question was formulated to discover how people with MBID respond to the concept of interactive videos, the concept itself is one of the three categories. This feedback, either positive or negative, will be used to answer the research question.

The other feedback that was collected in the trials was not on the concept, but on the prototype itself. Within this feedback, we make a distinction between comments on the system, and comments on the media files. This because the issues on these two different parts of the prototype need different approaches and experts to solve them.

The content of the audio files and videos was created without consultation of an expert in the field of either MBID or SUD. Therefore any comments on the content of the media files will be bundled under the category of media.

The comments on the system of the prototype, without the media files, reflect issues that exist with the way that the concept was implemented. The feedback that is gathered on the system can be used to determine user requirements that need to be taken into consideration when furthering the development of interactive videos in addiction treatment.

2.3 Answering RQ2

The second research question was "What alterations need to be made in the digital environment of Tactus Verslavingszorg to enable the use of interactive videos?" In order to answer this question, some insight into the functioning of MindDistrict was required.

Two peers who worked on the same assignment - the improving of online addiction treatment for people with MBID - came up with another issue to research. In order to answer their research questions, they conducted an interview with an employee of MindDistrict, the online platform of Tactus Verslavingszorg, in which they inquired about the functioning of the platform. They provided access to the transcript of this interview.

We analyzed the transcript, specifically for components that might prevent an interactive video as it is in the trials from being implemented. Section 3.2 provides an overview of the issues that were found.

3. RESULTS

In this section we will provide the results of the research we gathered in the research explained in Section 2.

3.1 Feedback on the prototype

The feedback was categorized by the type (on the concept, system and media files). Based on this information we will

draw an overall conclusion on the viability of the system, and if the system is found to be viable, we will summarize the parts of the system that need improving.

3.1.1 Concept

Overall, the test subjects indicated a positive opinion on the concept of the system. Every single test subject reacted positively to the idea, although some were able to put it into words more concisely than others. Comments went from relatively simple, such as "This idea seems curious. New in a good way. It is nice for people to be able to practice refusing alcohol.", by T3, to more elaborate, such as "for clients it is often very difficult to refuse a substance in the moment itself. The rehab and the detox generally goes well or good, but when they come back they don't have a grip on how to say no, and they don't know what to do. I think this video could help with that. Of course it is even more difficult in real life, but in this way, at least you can prepare people for what will come", by T2. T4 went so far as to say that he felt like using this system only once already seemed to have a positive effect on him. He indicated that he felt it gently forced him to really think about choices he might have to make in such a situation, as in his words, it will happen eventually. Naturally we can not claim that these are reliable effects of the system, as this research was only exploratory, and qualitative.

The one negative comment that was made about the concept of the system was the fact that it might be experienced as triggering to some users. In the video, a person is pushing quite persistently for the user to accept a drink. This might evoke negative emotions in some users. Therefore the concept, which was experienced as having a positive influence in the trials, might not be suitable for every client, as was expressed by T2.

3.1.2 System

While we can now tentatively say that the concept might have enough merit to warrant further research or development, the execution of the system is not where it needs to be yet, as is shown in the feedback that the test subjects expressed. An issue that occurred in two of the four trials was the sound of the media files not working, namely for T1 and T3. Seeing as we could not access the device of the test subjects, it is hard to determine where the error was, and therefore difficult to suggest a solution to this problem. However, we do now know to test the functioning of the sound in different settings.

The biggest issue, which manifested itself in different ways, was the fact that the system was not understandable enough. While there was information available in the "help" menu, not one of the test subjects opted to inspect this menu before starting the video, nor did they decide to visit the "help" menu as soon as they realised that they did not fully understand what they had to do. This implies that the system should either be more self-explanatory, or the information on the functioning of the system should be less bypassable, which T2 suggested.

Another issue that arose was the fact that the system is not robust enough. In the trial with T4 it turned out that one can unintentionally navigate to the wrong web page, simply by double clicking. This was very confusing for T3. As the system is intended for people who have issues such as lower comprehension as a result of their affliction, robustness issues like these should be prevented as much as possible. This issue lies in the extension of the understandability of the system.

A last big issue that was mentioned was perceived futility of the choices. T2, after trying out the video several times, mentioned that it seemed to her that regardless of their choices, the outcome of the video was mostly the same. Inspecting the flow chart for all the possible courses of conversations in Appendix A shows us that this is not the case. However, there are quite some combinations of choices which, in the prototype, lead to the same result. The fact that this led test subjects to feel like their choices were futile implies that the courses of conversation should be re-evaluated.

3.1.3 Media

The most prevalent complaint was that the quality of the media files was not good enough. This manifested in four main problems:

1. bad sound quality;

2. unrealistic content;

3. confusing recommended videos at the end of the video;

4. confusing video titles.

The first problem was admittedly to be expected. The videos and audio files were created making use of a cell phone camera and microphone. Technology has come a long way in cell phone cameras, but the truth is that most cell phone cameras and microphone simply can not compete with proper cameras yet.

The second problem was a result of every video being shot in a way that was as neutral as the surroundings permitted, so as to not distract watchers from the relevant content. T3 indicated that this rigidness in the videos caused them to feel unrealistic.

The third and fourth problems both result from the same issue: the fact that the videos were framed from YouTube. This was done as it was the easiest way to timely get the videos up and running in the prototype. This resulted in confusion for T3 and T4.

3.1.4 Necessary improvements

While the concept of the interactive video in online addiction treatment for people with MBID seems to have merit, it is clear that there are issues with the system as it is which need to be improved before implementation in the online treatment module can be considered, the most prevalent of which are:

1. media quality;

2. perceived futility of choices;

3. understandability of the system.

3.2 Answering RQ2

The system, as it was during trials, consists solely of static web pages containing videos, audio files and buttons. In the interview, the MindDistrict employee indicated that there is no issue with using audio and video files on the MindDistrict platform. They make use of media conversion software which formats the files properly for use on the platform. This would also eliminate the issues that were created by using framed YouTube videos for the system. One problem did turn up: MindDistrict is created in such a way that learning modules can only be implemented linearly, meaning that one can create a page and add content, but no buttons can be created to direct the user to another page. This means that the system, as it was during the trials, can not be implemented in MindDistrict.

4. DISCUSSION

The paper proposed an intervention that could help in making online addiction treatment more accessible to people with MBID, which is no unnecessary luxury in the time of a global pandemic, as people with an intellectual disability benefit from having a clear structure.

While an interactive video on the subject of refusing one's substance of choice is no addiction treatment on its own, it can complement a treatment module, and the practice of using interactive videos could be used to cover other themes in the MDOD method, such as habits. Literature leads us to believe that interactive elements such as role-play can be a useful tool in the guidance of people with MBID, and this research does not refute that.

However, we must observe that the sample size of the group of test subjects was far too small to create statistical significance. It was decided to use such a small sample because, as a result of the time constraints on this project, using a bigger sample was outside of the research scope. In addition, the tentative research on this intervention lent itself better to qualitative research rather than to quantitative research. Based on the outcome of this research, follow-up research should be conducted, some of which quantitative, to truly test the hypothesis that an educational, interactive video is a useful addition to an online addiction treatment module.

We did not collect personal data, such as sex or age, from the participants. In hindsight, it could have been useful to have some insight in what kinds of feedback was given by what demographic, such as male vs. female, younger vs. elder participants. However, since the sample size of this research was thusly small, we had no certainty that the small number of participants was an accurate representation of their respective demographic. In a quantitative replication it could be useful to collect personal data of the participants, as some demographics might respond better to certain aspects - for example, people with more experience with electronic devices might need less guidance to understand the system, although this is merely an assumption.

One of the participants was not a patient at Tactus Verslavingszorg, but rather a therapist in training. They participated as a test subject, as insufficient Tactus clients volunteered. However, we do not consider this to have been a drawback. This test subject was able to both give feedback from the perspective of a person with MBID, as well as from the therapist's point of view. This resulted in some more in-depth feedback on the prototype, as this person had less trouble with verbalizing their thoughts than the other test subjects.

This research intended mainly to test whether an interactive video is an interesting medium to convey important information in addition treatment to people with a disability. Because of the short total time frame available for the project as a whole, only two weeks were available for the entire design and development and testing of the prototype. Since the inspected literature suggested that heavily text-based elements would be likely to deter potential users, it was decided to present the choices of the user through the means of audio files. Therefore it was a priority to create a prototype in which this was working properly. The time needed to create the first version of this prototype exceeded the amount that was anticipated, which left too little time to further inspect literature for adequate ways to create an application for people with a disability. As a result, the developed prototype never moved past a polished version of the first prototype, and the research was conducted with that version. This has now resulted in more research still needing to be done, where we would have preferred to include that in this research.

Something that limits the impact of this research on the practical environment is the fact that it was developed outside of MindDistrict, the online platform of Tactus Verslavingszorg. The first priority of this research was to test whether the concept had enough merit to warrant further research and development, and to this end, as previously described, a prototype was developed, though there was no abundance of time to do so. There was no previous experience with building an application in MindDistrict, and so to prevent delay later on in the project it was decided to build a simple proof-of-concept application outside of MindDistrict. As a result, we did not encounter an issue in the development of the prototype that will be encountered when implementing it in MindDistrict: the modules in MindDistrict are linear in a way that one can only add content to a page, and the only buttons are "previous" and "next". This means that the system as-is can not be implemented in MindDistrict. Therefore, it could be possible that the concept needs to be rethought in a way that is possible to implement in MindDistrict.

Another issue that inhibited the progress of the project was the current pandemic. Test subjects had to be gathered without being able to visit them, or meet them in person. All the trials were conducted through calling platforms; either WhatsApp calling or Microsoft Teams. As one test subject indicated: the interview would have been easier on his part if it had not been online. Test subjects had to divide their attention between the calling program and the system they set out to test. We can not say this with absolute certainty, but this division of their attention might have impaired their comprehension of the system, as they could not fully focus on it.

5. CONCLUSION

As this research has been qualitative, rather than quantitative, we can not say with any significance that the intervention that has been developed for this research has a predominantly positive effect on the users. However, the existing literature indicated that an approach like this might have merit for addiction treatment with people with MBID, and the results seem to tentatively support that hypothesis. A side note is that while this intervention could have merit for some clients, it is possible that it is not suitable for all clients.

It is clear that the concept has quite some need for more research and development. The four main issues that were found as a result of the trials are stated in Section 3.1.4. However, there are likely many more issues which have not yet been encountered, because they are not quite as obvious as the aforementioned issues, or because the sample size of the trials was simply not sufficient to have the diversity of the group cover all the improvements that are still needed. In the Section 6 we will explore literature suggesting ways of remedying the issues that we encountered in the trials. Based on that, we will make recommendations for future researches further explore the possibilities for this intervention.

6. FUTURE WORK

As was mentioned in section 3.2, the system as it is can not be implemented in MindDistrict. Therefore, if Tactus Verslavingszorg would choose to continue the research

into the use of interactive videos in online addiction treatment, the entire system would need to be rethought in a way that would make this possible. Beside that, there are still the four main issues that arose in the trials with the test subjects. While we can now not really say that they need to be improved in the current prototype, they are still important issues that should be taken into consideration. We will therefore propose specific work that can be executed to remediate these issues.

6.1 Media quality

The first of the four pressing issues we encountered was bad media quality, which mostly manifested itself in four problems, being bad sound quality, confusing titles and recommended videos, and unrealistic content. As was mentioned in Section 3.1.3, the first issue is a result of recording the audio and video fragments with a smartphone. No research is warranted to solve this problem, as a clear solution can be presented, namely to use professional equipment to record high-quality video and audio fragments.

The second and third issue are both a result of the same origin, namely fact that the videos are framed YouTube videos. There is no way to remove either the video titles nor the recommended videos when embedding a YouTube video in a website. The solution is similarly clear as the solution to the previous issue. For a next iteration of the system, the videos should not be framed YouTube videos. They should be hosted locally, and as the MindDistrict employee indicated, this should not be a problem.

An issue that does warrant further research is the fact that a test subject perceived the content to be unrealistic. The test subject mentioned that more realistic feeling content might make it feel more like he is actually in a situation where someone offers him his substance of choice. First of all, it should be researched whether more realistic content increases the learning effect on the users. In extension of this, possible negative effects the more realistic content might have on the users should also be studied. If, based on this research, the conclusion can be drawn that more realistic content has sufficient merit for the users, without carrying unnecessary risks, research should be conducted on how to make the content more realistic for the target group, without making it too busy or distracting.

6.2 Perceived futility of choices

The system that was developed for this research intends to help users change their behaviour by letting them try out different ways to refuse their substance of choice. However, as it was, it was not immediately clear to all the users that different choices have a different outcome in this system. That could give users the impression that consequences do not really rely on their own choices, which is counterproductive. Therefore, the script of the conversations should be rehashed, preferably by a group containing at least one professional in working with people with MBID and SUD.

6.3 Understandability of the system

The system in itself was generally not experienced as easy to understand or self-explanatory. Suggestions made by a test subjects were, for example, to make the tutorial a mandatory part of the system, or to have the choices of the user displayed in another way, namely to show them consecutively after the video of the other person. The user could then choose for option 1, 2 or 3. However, since that solution was not tested in this research, we cannot speak for the efficacy of it. Research needs to be conducted on ways to make a sy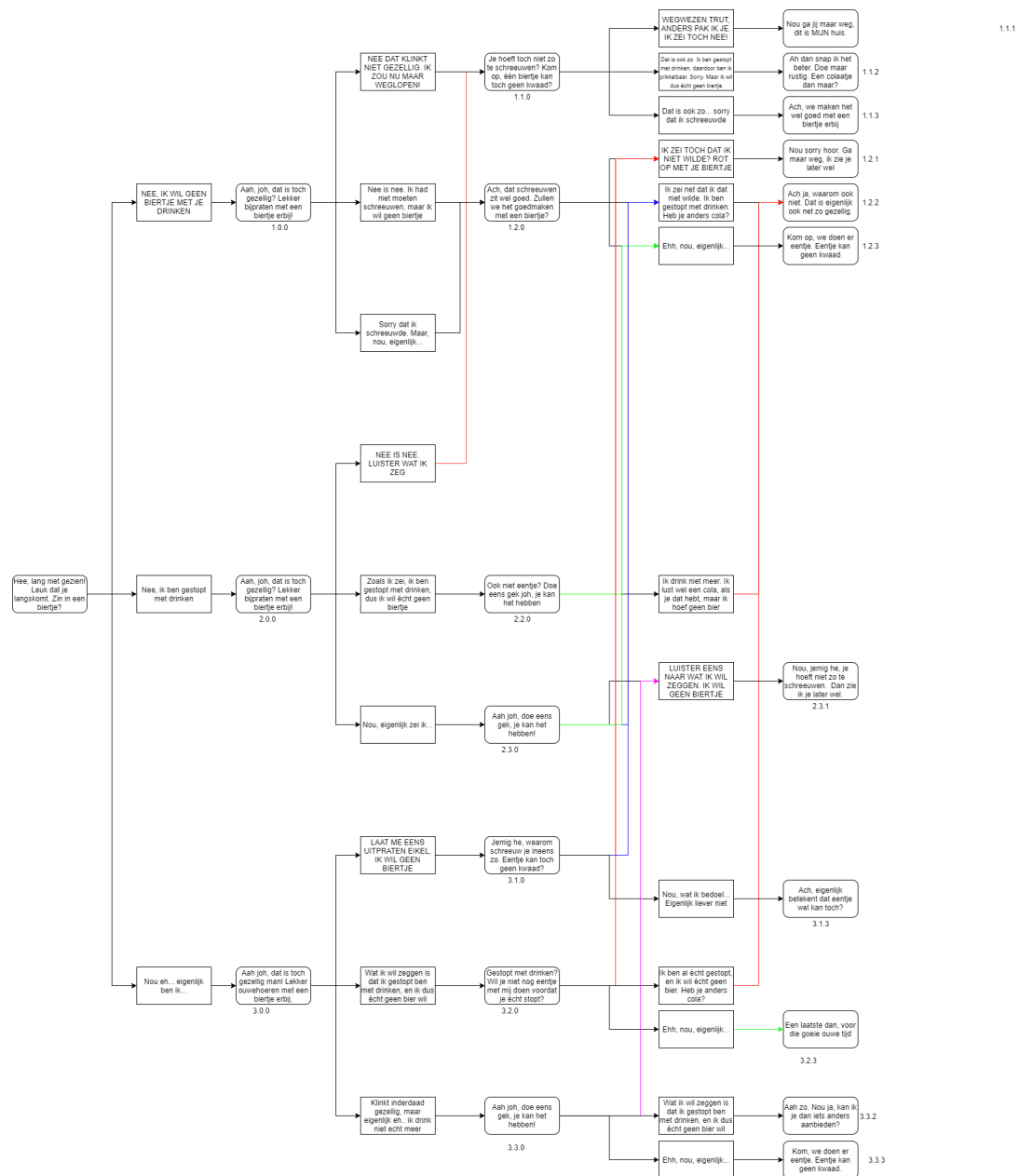stem like this easier to understand for the target group. It should then be tested whether users still experience problems like accidentally navigating to the wrong page, or whether that issue has been remedied by making the overall system easier to understand.

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APPENDIX

A. POSSIBLE COURSES OF CONVERSATION WITHIN THE INTERACTIVE VIDEO

Hee, lang niet gezien! Leuk dat je langskomt. Zin in een biertje?

Branch 1: NEE, IK WIL GEEN BIERTJE MET JE DRINKEN

Aah, joh, dat is toch gezellig? Lekker bijpraten met een biertje erbij! — 1.0.0

- NEE DAT KLINKT NIET GEZELLIG. IK ZOU NU MAAR WEGLOPEN!
  → Je hoeft toch niet zo te schreeuwen? Kom op, één biertje kan toch geen kwaad? — 1.1.0
  - WEGWEZEN TRUT, ANDERS PAK IK JE IK ZEI TOCH NEE! → Nou ga jij maar weg, dit is MIJN huis. — 1.1.1
  - Dat is ook zo. Ik ben gestopt met drinken, daardoor ben ik prikkelbaar. Sorry. Maar ik wil dus écht geen biertje → Ah dan snap ik het beter. Doe maar rustig. Een colaatje dan maar? — 1.1.2
  - Dat is ook zo... sorry dat ik schreeuwde → Ach, we maken het wel goed met een biertje erbij — 1.1.3

- Nee is nee. Ik had niet moeten schreeuwen, maar ik wil geen biertje
  → Ach, dat schreeuwen zit wel goed. Zullen we het goedmaken met een biertje? — 1.2.0
  - IK ZEI TOCH DAT IK NIET WILDE? ROT OP MET JE BIERTJE → Nou sorry hoor. Ga maar weg, ik zie je later wel — 1.2.1
  - Ik zei net dat ik dat niet wilde. Ik ben gestopt met drinken. Heb je anders cola? → Ach ja, waarom ook niet. Dat is eigenlijk ook net zo gezellig. — 1.2.2
  - Ehh, nou, eigenlijk... → Kom op, we doen er eentje. Eentje kan geen kwaad — 1.2.3

- Sorry dat ik schreeuwde. Maar, nou, eigenlijk...
  → NEE IS NEE LUISTER WAT IK ZEG

Branch 2: Nee, ik ben gestopt met drinken

Aah, joh, dat is toch gezellig? Lekker bijpraten met een biertje erbij! — 2.0.0

- Zoals ik zei, ik ben gestopt met drinken, dus ik wil écht geen biertje
  → Ook niet eentje? Doe eens gek, je kan het hebben — 2.2.0
  - Ik drink niet meer. Ik lust wel een cola, als je dat hebt, maar ik hoef geen bier

- Nou, eigenlijk zei ik...
  → Aah joh, doe eens gek, je kan het hebben! — 2.3.0
  - LUISTER EENS NAAR WAT IK WIL ZEGGEN. IK WIL GEEN BIERTJE → Nou, jemig he, je hoeft niet zo te schreeuwen. Dan zie ik je later wel. — 2.3.1

Branch 3: Nou eh... eigenlijk ben ik...

Aah joh, dat is toch gezellig man! Lekker ouwehoeren met een biertje erbij. — 3.0.0

- LAAT ME EENS UITPRATEN EIKEL IK WIL GEEN BIERTJE
  → Jemig he, waarom schreeuw je ineens zo. Eentje kan toch geen kwaad? — 3.1.0
  - Nou, wat ik bedoel... Eigenlijk liever niet → Ach, eigenlijk betekent dat eentje wel kan toch? — 3.1.3

- Wat ik wil zeggen is dat ik gestopt ben met drinken, en ik dus écht geen bier wil
  → Gestopt met drinken? Wil je niet nog eentje met mij doen voordat je écht stopt? — 3.2.0
  - Ik ben al écht gestopt, en ik wil écht geen bier. Heb je anders cola?
  - Ehh, nou, eigenlijk... → Een laatste dan, voor die goeie ouwe tijd — 3.2.3

- Klinkt inderdaad gezellig, maar eigenlijk eh.. ik drink niet echt meer
  → Aah joh, doe eens gek, je kan het hebben! — 3.3.0
  - Wat ik wil zeggen is dat ik gestopt ben met drinken, en ik dus écht geen bier wil → Aah zo. Nou ja, kan ik je dan iets anders aanbieden? — 3.3.2
  - Ehh, nou, eigenlijk... → Kom, we doen er eentje. Eentje kan geen kwaad. — 3.3.3

B. PAGES OF THE APPLICATION

Figure 2. Home page

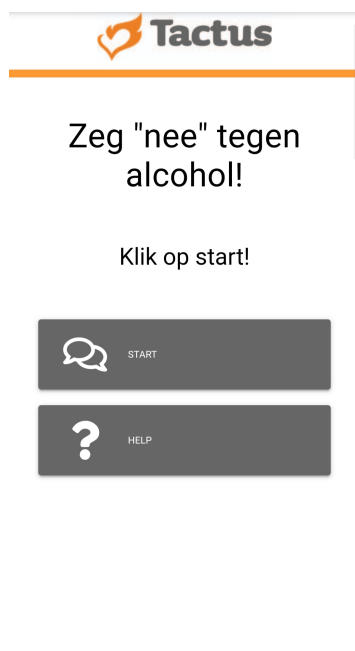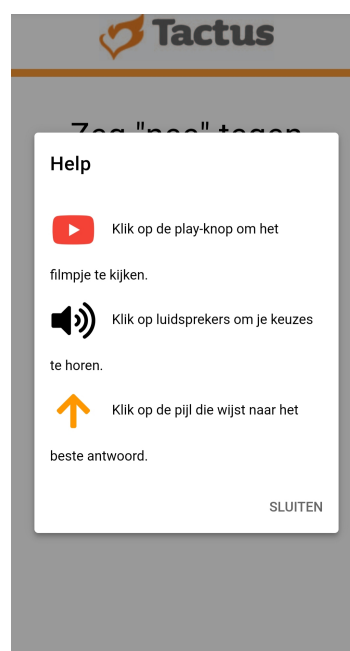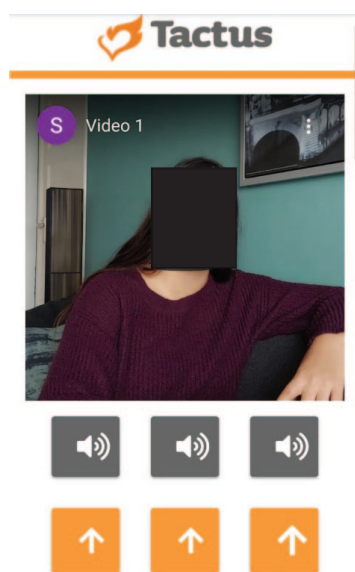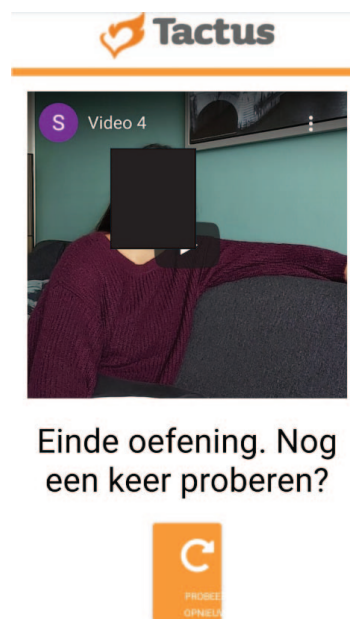**Figure 3. Help menu**

Figure 4. Video page

Figure 5. End page