

Transcript of the 2nd Brainstorming Session - June 28th, 2024

So, I'll leave it to [omitted for review] now to explain. So, the first screen is actually the login screen, which you'll actually need in the future .[omitted for review] and I log in to Consensus, and here we start with the patient's data, where you have to enter the name, surname, age, gender and the application data, which is the city, the neighborhood, the state and the date of the application as well. And since it can't be closed, we thought of making a personalized keyboard for the patient to type in, like "oh, what's your name?" and they go there and click here. Surname, too, and then there's this little button here that takes you to the other questions too, which all the pages have. Here, there's the age, which we don't quite know what the norm is for collecting data from minors, so we've left that screen like this for the time being. But, from what I've seen of the apps that [removed] went over, most of them put intervals between the ages, right?

So, also it would be a possibility for us to put the options by intervals between the ages as well. Here, as there are only two genders in the question, I've put as well, to make it easier for the child to understand. Here it says which country, the state, to ask the city and the place. It's also the same way I did with the names, surname, right? And here it starts to get a little different, which is which year it is, it also puts the numbers, and the month, I put the option of the button with the number of the month and the name of the month, so that the child knows, understands, so that they can enter a little bit and answer. And here's the object, right, you'll see the images of the objects, the other objects you just have to move to the side to see, here now, it's because you can simulate the screen, right? If I set it to simulate the screen, my computer will crash, unfortunately. But just drag and drop, see the objects and put the name here.

What day of the month too, there's the day to type in here, and the day of the week is also the same as the month, right? Only with the names and the child drags to put the little

block here. Here with the numbers, we kind of thought of putting the audio, of a person speaking, and the child typing in what the numbers are, right? But we also don't know if we're going to be able to put the audio or if the professional is going to speak, and here in reverse order it's also going to be the same thing, right? And here the child will have to remember the objects they had, questions before, and then they'll put the first object here, the second and the third. In this one, she will have to click where there's a nose, a foot, a knee, an ear, on the doll, right? That makes it easier for them to understand too. In the order of the paper, the child will pick up the sequence, so, like this, the first paper will drag here, folding the paper will drag here, and putting it on the floor will drag to the last one too. And here for her to say what she heard as well. And the last one, which is for her to draw the picture that's here on the side, to do it better. And then at the end of the test, comes to this screen and here is the table of the test score.

[omitted for review], that's great, isn't it? She's been working a lot these days, look, and she's not from [omitted for review] health area, so we just gave her a general overview of the test, she's already brought it back to us, very nice, very happy for her investment, for her work, for her production of the initial screens. Thank you. Can we go and talk about them one by one? How did you think, [omitted for review]?

I think it's better, right, [omitted for review]? We go through each of the questions and the answers and then... think about her objective in terms of suggestions and proposals, right? I think it's good. And then, [omitted for review], feel free, okay? We'll work through them one by one, but first I'd like to congratulate [omitted for review] on her work, on her commitment. So, let's get to the start of the test, [omitted for review], start there.

Let me ask you a question. The idea is this, you want everything to be registered so that the program can give an automatic score to the final , isn't that it? So, for example, just so I understand, it's going to be an automatic ... The test, it's going to be completely digitalized, the examiner, he's not going to make a qualitative assessment of the behavior, it has to be in some way, today how do we do it? We observe whether the person understands the command and is following it step by step, for example, the one who picks up the paper, folds it and puts it on the floor. The idea is that the app, in the end, has to be kind of self-applicable. The person, at the end, with the results, will already have a sum and there's the final result just by the commands given on the computer, in the program, isn't that it?

So we thought about doing this, but we don't know how it's going to work, right? I put

this table at the end so that, like, the program sees that the user didn't put in, didn't fill in that table, that question. So it's going to compute at the end, it's 1 if the user has filled it in and 0 if they haven't, right? But neither...

We haven't thought of automating it yet, because it's very, how do you say, I've forgotten the name, it's very abstract, because just like in the drawing, how is the algorithm going to know if the child has put it in, hasn't put it in, if they've put it in the right order. So, for the time being, it's only for the brutes, so to speak, right?

What we had discussed here was that the idea was precisely for the patient with speech difficulties, a patient who is not oralized, who ends up losing points, we don't have any information about their cognition and we don't know if it's because of their speech difficulties or if, in fact, they don't have the cognitive understanding to be able to do it, right? He doesn't have the cognitive skills to be able to perform the tasks. So, the question of whether it was automated or not was a proposal that [omitted for review] put forward, but, at first, the idea was just to digitize, it wasn't even to automate. That would be a plus, if it's possible, I think we win, right? But it wasn't the idea

initial, no, [omitted for review], she's already brought up the idea that these children, these PCs with greater difficulties or these patients who can't verbalize, they can have the mini mental as a screening resource, right? And that we don't have this doubt. If, in fact, he didn't get the orientation grade because he couldn't speak [omitted for review] in the city or because he really can't orient himself in time and space, okay? That's not it, girls, is it, [omitted for review]? And then the idea of, in fact, it's going to be an adaptation, right? Which will turn the mini mental into a non-verbal instrument, right? And that can be very useful, even for other situations, including deaf people, right? I assessed this issue with a child who was misdiagnosed as autistic, but she's not autistic, she's deaf. And then I just re-did her assessment in pounds and saw that she's not autistic. So, really, it's important that we... So it's going to become a non-verbal tool. In fact, some commands are going to change and it's going to change the requirement of... how much memory we're recruiting, but then we're going to look at this issue, just so we understand. That's great. Thank you.

[omitted for review], shall we go to the initial screen there? I think the registration data is the basic data we discussed with her, right? To get this feedback. I think we can start with the test itself, when you start there. What's your name, right? That would be the first... the first task. First task, ahem. Then you give them the option of typing in their

name.

That's, like, putting a keyboard here for them to type in their name. I can't see any other possibility than typing, because otherwise we'd have to have options with lots of names, but a name is something that varies so much. I don't know girls, what do you think? [omitted for review], [omitted for review]?

I agree. Here I've applied it in the clinic with a child with ASD. She is verbal or non-verbal, and at the same time she uses alternative communication. And her typing went like this. She typed her name and that was the best way. There is a limitation, because we know that there are children who, as their age range is very wide, you know, from 3 to 14 years old, we're also going to have to do this validation by age later, [omitted for review]. So, like this, but let's think about boys here, let's think about a group that isn't literate at first? Why? Which is exactly what I was thinking. This issue with non-literate children, I think that by the age of five they already know their own name, at least, right, but even so they're going to have this difficulty with the non-literate, but there's no other option, right, which is like this, in this case, the non-literate, but who are oralized, right, they're going to do the conventional minimal, they can speak.

This is a kindness even for those who can't verbalize for some reason. I think that there will be difficulties there, which you won't be able to solve, no. It'll have to be digital anyway.

I'm in doubt about the following, because the first conversation would also be to be able to use it with children with level 3, 4, 5 CP, who would have difficulty with this motricity, right? But they're verbal children and their cognitive skills are mostly preserved. In this case, it's because now I'm getting a little confused about our population, because would it only be for then non-verbal children or would it also be for facilitation, because then I wonder, for example, the child who can verbalize the name, would we score or not score? You know? Who are we actually going to give this test to? Who is the population?

At first, when [omitted for review] and I talked, we thought about non-verbal PCs, right? But I believe, people, that a test like this can then be validated for different audiences, right, with adjustments for different audiences. The first proposed would be non-verbal, where we can't infer anything about their cognitive through speech. So we'd have that resource, right? But I think that opens up so many possibilities when we have such a wide range of diversity when we think about the child's difficulties, that then we do each study and it's a

specific validation. With a public with ASD, a public with hearing impairment, I think that afterwards we can cover this range, that would be the beginning. But that's what I thought, okay, [omitted for review]? Since [omitted for review] isn't here and this idea came up with her, that's what I had talked about with [omitted for review] and [omitted for review] too, right? But feel free to suggest [omitted for review] too.

That the option would also be to put, well, this way, that we take the child who is non-verbal, but underneath there is some question of punctuation, because then the applicator punctuates. For example, the child says 1, the non-verbal child says 0, because then it's on to the next question. I don't know, something like that, you know? If the child verbalizes or doesn't verbalize, there's an alternative. But it's just a suggestion too.

I also think there's this option, the child can verbalize the name, right, but they won't be able to type it. Maybe because they're not literate or they have some motor difficulty, right? So they can't type, but they can speak. So, I think it has to be, maybe, considered valid both options, either typed or oralized, verbalized, right? I think that perhaps the question of scoring should still remain with the examiner. The examiner scoring, right? And then the examiner will score. If you've spoken, that's OK. If you typed it, that's ok too. So, I think it should be both options.

And is it possible, [omitted for review], to put both options? Yes, it's possible. I'm even writing down the idea here, but it's possible to put it like this. I think it's interesting yes. And then I think... You can talk, you can't talk...

I think the same suggestion applies to all the questions there, which are oriented, right? Name, surname, country, state. I think it goes for all of them. I think so too. And then, another question we also had in mind, and even we looked at some of the apps [omitted for review] gave us, is the question. Do we just leave in text format or do we also put it in audio?

In this first moment, I think that when we test with the children, we'll always have the evaluator by our side, right? So the assessor plays this role of reading to the child if they can't. And then we can think about the future. And then we can think in the future about complete automation, which doesn't depend on the assessor. But I think that at this point it's important to have the assessor, not least because of the questions the girls have already asked, right? Sometimes he verbalizes, sometimes not. Always have the assessor there giving the grade. So I think he can read it at that first moment. Okay, well then, good.

I think you can continue, [omitted for review].

So, age as well, we were left with this question of the LGPD, that.

I don't understand, [omitted for review], but the age I think is one that he's going to type too, right? Or speak, or verbalize. But, like the LGPD, I don't think you can, like, take sensitive data from child, like age. I, like, from what Sandra and I talked about, right?

That's what the LGPD says is sensitive data, right? Providing age. So I was afraid to put the exact age there. And then I think we need to look at these issues, because health applications have a lot of security issues, right? Information security. So we need to take a look at that.

I don't understand, people, what is this?

The data protection law, [omitted for review], but it's for healthcare. What law is that?

But it's not our concern, because, for example, now, what are we going to do in this second stage? We're going to send the project to an ethics committee. At the time we validate it, so it's a survey, the parents sign a consent form authorizing their children to take part. And one of the ethical requirements is confidentiality of the data. We don't disclose it, but there's no problem asking in the health sector. It's super common practice, okay?

So, ok, good. - Perfect.

I think it's important to think about the following: it's not going to be... Children this public, I don't think it can be self-applicable. When we think about the future, in reality, there's going to be a responsible adult there, right? With that child. So, like this, the adult... The idea is to know, we're asking how old you are, that the child can answer there, 80. Understand? So, actually, it's not real data. What is the child's perception of their age?

That the child knows their age, right? That the question...

- I see the point of the question.

- Got it? It's to find out... In fact, we don't really want to know the child's age. We'll already have the child's age. So, to find out if the child is aware is a question about adopting guidance. Time orientation. If they know how old they are. Understand? So it's a cognitive question. It's not, in fact, real data.

- Ah, ok.

- I think we can keep this screen the same, right?

- Yes.

- Yes, I think so, [omitted for review].

- Ah, come on, ok.

- You're back, [omitted for review].

So, here, I think that gender can also continue like this, right? I have a question for [omitted for review] about this, about gender today, because with so much change going on, [omitted for review], we're... I confess I don't know if I say gender, if I say gender, what can happen now, because things have changed too much. What has psychology done?

So, I was going to say this, I think it's very outdated, right? That when we think about the instrument, we validated it, it's more than 10 years old, so, today, I think it's a very different world. Actually, this question also wants to know if the child, at the time, okay? If the child had a notion of their gender identity, if they were of the same gender, in fact, the question is what is your gender? To find out if semantically, clearly, they know what gender is. Nowadays, this is very complex. If you ask, are you a girl or... Even even if you're a child, asking if you're a girl or a girl, it's still complex, right? Honestly, maybe we're talking about a standardization, a new validation of this instrument, I think we need to think about changing this question. I don't know whether to remove it or add it, because, look, if we add another option, we're going to have problems too. Why? Parents will say that we're influencing them, another gender identity, imagine. If we put like this, you're a boy, a boy or someone else, you can be sure that we're going to have problems with the ethics committee or with the parents themselves. It's not going to be easy, is it? Because today we're even talking about inter gender, so I think it's an area that's too complex to deal with. Maybe, I think it would be worth us excluding this question, since our aim isn't to investigate gender identity, we're not studying gender identity here, it's an extremely complex area of psychology, extremely. So, if there were millions of gender identities, I think we could even exclude it. Or you'd have to put it like this: if you consider yourself a boy or a girl, we could still have problems with the parents. When the parent is next to you, you could say, "What do

you mean by that?” in relation to my child, you’re inducing my child. So maybe, as we are already doing a new validation, I think it would be worth excluding it. I don’t know what you think, [omitted for review]?

No, I think it’s also a very complex issue. I think that if we exclude we’ll have fewer problems, we’ll be guided by the other issues, you know? Because it could be like this, you see yourself as you are and you put the two pictures up, but it’s what you said, the father will think it’s bad, someone thinks it’s bad. I’m in favor of it. It’s because, gender, gender is all this that we’re seeing, isn’t it? It’s various and everything. Gender is whether you’re female or male. You can be a trans person, but you’re a female trans person. I don’t see that it would be controversial because it’s a question that anywhere you go to a doctor’s appointment, anywhere, it’s determined. Could change it? It could, but I don’t see that much of a problem, you know? At least like this, I’ve collected a lot of children, I still collect a lot of children, and I ask this kind of question, look, what’s the sex of the child? Female, male, that’s it. I honestly don’t see that it would be a problem, the whole problem is, like, it’s not gender, we’re asking what sex it is, is it female or male, there are only two. There are only two genders.

But then... You put ”mark”, which is ”mark” or identify yourself and you put just the two figures and don’t write it down?

Yes, I think we have to think about what the objective of the question is, right? Because, for us adults, we know what sex and gender are, but children don’t. And so, within psychology, it is an extremely controversial area. Maybe, [omitted for review], you’re in, within psychology, the war is intense. And so, in groups of mothers, also conservative, I don’t know, I have, I live in [omitted for review], it’s a very conservative city. So every now and then there are terrible situations in schools because of any little question. I’ve seen very complex things. So, think about it like this, what is the objective of the question? The objective of this question, at the time it was created, was to know if the child knew what the concept was, what sex is, if it’s a boy or a girl. Really, I’ll put it more simply, right? Now, if you see yourself, if you identify yourself, that’s another complex concept of gender identification. I don’t know, really. Or, you can just put it really, you, mark it as you are, there put there, just a little sticker, a little boy or a little girl. Which also has to do with some question of representation. So I don’t know if, in fact, this question will bring the necessary answer for the objective of the instrument.

Would there be another question we could replace it with, [omitted for review]?

So, but it's because, if we really think about these cognitive issues, the other questions already talk about orientation, they'll ask about age, name. I don't know, the question about boy or girl has to do with how you see yourself, right? Or, how you see yourself, how you are, right. Mark, or mark the little doll that looks most like you. Boy or girl, I don't know, I'm a little worried about what we're really evaluating in this question. If it's really necessary, you know? You think like that, okay? Today, is it necessary to ask if it's a boy or a girl? I don't know, I think maybe we have to think a little about this question there, which is a question that is theoretically so simple, right? But it can lead to something more complex. I'll tell you, honestly, I think I have to think. I don't know if I should answer like that. At the time we thought about the instrument, I didn't think about it being a problem, no, it was completely fine. Today, ten years later, I'm already worried about this question.

Let's mature it, we'll discuss it a little more, read it, okay? At first, let's do it, I don't suggest you mess with it like that at this moment. I think maybe the text, right? This option, mark as you are, instead of you are a boy or a girl, mark as you are. It's more neutral. And I don't know if you agree, mark as you are and we'll mature about the need to keep it or not in the future. Is that okay, guys? So let's continue. It's okay, it's okay. Let's mature. Let's go.

And in terms of country, location, country, state and where it is, it couldn't be more objective, right? Because, like, sometimes the child doesn't really know what a state is, what a city is, country, everyone, almost every child knows from the school story, right? Since they were little, people say that it is in Brazilian, but state, state is a little more complex, like city too. Because, like, even when I was a child I confused state with city.

Hey [omitted for review], I was thinking, I don't know what the girls think, for example, when we put country, it's an initial prototype that we're going to validate in the Brazilian population. Couldn't we have, sometimes to make it easier, including not only the non-verbal, right? But for those who have difficulty typing, also multiple choice options, of country names, we think about them, what do you think, girls? To have Brazil among some other options?

But then you induce the answer and facilitate the concept of what a country is, understand?

So the best thing to do is to leave it like this, just to see if he will answer São Paulo, right? And then we will know that he does not know the concept of country. So it is better to leave it open for him, for us to identify, because if you put country options, state options, city options, you are already, you are not recruiting, because semantically we want to know if he knows the concept, right? Bringing the memory, he knows what a country is, which is a common exchange, almost the country, the person says, Xique-Xique, then the city, they exchange. So you really have to know the concept of country, the concept of city, the concept of state, I think it is better to leave it as it is, because then you really recruit the concepts. Without giving clues, because you end up favoring a lot, making it much easier.

I had thought about it that way, but not just putting the country, you know? Putting your country there, but I think that might be more confusing, you're absolutely right, [omitted for review]. Putting Brazil, Belo Horizonte, we'll put among the options not only what would be the country, you know? When I thought about it. But I think we'll leave it like that, you're right in that sense, we don't induce. [omitted for review], welcome, okay? I'm glad you were able to get here. We're here going through screen by screen, discussing, you're welcome to participate. Here on the dates, year, here it's also for me the reassurance of the year, now not even of the month. I was afraid when I was going to induce the child's answer, I don't know if I would put a keyboard or just a numeric keypad as well.

And then, [omitted for review], it's the same question you asked, when you say which month, she already gave the answer options. Do you think it's better to leave it open? I think, even though it's more work, it's better to leave it open, because if you give the options, it also makes it much easier for the person, they already have an idea of what the months are. Precisely, we want to know if they know what month means, in addition to the guidance, right? Or, but then it would have to be scored, another option would be, he didn't answer anything, he doesn't know, then this screen option would open in a second alternative, like I marked it, it's blank, then this second alternative opens. And then, but like that, I think it's better to leave it open, okay? Don't leave the option because then it makes it too easy and it ends. Because when we think about memory, there's recruitment, you search in the lexicon from nothing, an open test and a closed test, right? If you go from nothing, try to search for this memory, the month, you have to recruit more cognitively, that's the hardest part. If you have clues, the clues, which are closed chases, they make it easier. They already allow them. So, it's better to leave it open.

So, would it also be an option to put a button here with a question mark, then it would go to another screen that would also make the answer easier?

It could be, right? And then we could score differently, like, full marks if you answered without clues, half marks if you answered with clues. I'm really thinking in a new validation, another score, you know? Another instrument. Make a new standardization of the instrument.

No, it's a great question about the score. We'll have to validate it ourselves, validate it for each audience, so you already have that option, right? And, therefore, also take advantage of the fact that it's a digital instrument, the track can favor something even if it scores less, right?

Of course, because in practice we sometimes do this, we give a hint when the child is making a mistake. So, we already have this in an organized, systematized way, it even avoids the experimenter's bias, because it happens a lot. If you are applying it, sometimes you say "let me test it, and if I give him a hint, what will he do? Will he be able to do it?" Then, this ends up having a variation in the application, right? So, since we have this organized, it will be better, it will be more systematized and reduced.

Okay. So, it's going to be the same here too. And, with the objects, right? I don't know if I can get it here to see a preview of it, at least on this screen. But, while it's loading, I don't know if I would keep it like this, right? Showing the photo of the object and the child writing. Or just, like, ah, the professional picks it up and places it, and points out which object they want, right? Until I put the screen, wait a minute. Until it would be more of a question, like, ah, okay, you placed it, then you press enter there to break the line and go to the next one. Then, it would be more like, like this here, then you would drag, then it would show a clock, then the child would put a line break here. And then a pair of glasses, right? And there's another line break to answer.

Oh, I liked it, it's well, like, systematized, everything is the same, you know? What sometimes happens is that one person shows a pen one way, another pen another way, then they come without a watch, today they can't forget to bring a watch. It's already well organized, everyone, there's that certainty of standardization, everyone showing the same stimulus. I think it's cool. I liked it.

I also liked it, now just one question, [omitted for review], that you might be able to help with. So, he is typing everything, he would type it. What do you think, okay? Thinking about other audiences too, about us having, for example, what is this object? And having answer options, do you think it is, do you think the same, about us narrowing the range or not? Having an option there, pen, pencil, or...

I also think it's better, if we're going to think about it, even in other audiences, to leave it open. Because it exists, right? Moving forward, we can think about anomie, which is this difficulty in naming. Sometimes people say, "Oh, it's a thing of writing, but I don't know how..." Because there's, right, a transformation of the name, that the person loses, they lose the name of the objects, so they speak, they try to write, but I don't remember the name, I don't know the name. I think it's clear, if it's rarer, it's rarer, but if we're validating an instrument, we already validate it for all options, so I think it's better to leave it open, leave it open.

Here, from the audios, right? Yeah, it was nothing, right? No. Great. From the audios, the child would type and it would listen. But then, as it can't be, the professional is administering the test, right, to do this, to speak, and the child goes there and presses. And then, like, later the program will know the sequence, right, it will have to be a sequence to select, to select and select, because then, every time the child types, it already knows that another question has been downloaded. Or, like, the system will wait a little while, if there is no other input, it will understand that it has already gone to the next order of numbers.

You're talking about the digits now, right, in the correct order and in the reverse order.

So, I'm going to ask the girls to speak, [omitted for review] and [omitted for review], who have experience in this, because usually we speak, the evaluator is the one who speaks, right?

No, but I don't think recording is, won't be, won't be a problem, no. I think recording could be interesting, and then it will be like that, but then no, there has to be a rule, right, that you can't repeat the recording, recording it correctly, right, clearly, leaving a second of space between each digit, I don't think there would be a problem, no. I'm even thinking cognitively, look, because the person will listen and then there's a number there in front of them, then they'll reproduce it. But, really, I think it's a good alternative to think about, which is mainly in the case of non-verbal people, right, because they need to show that they understood. So, they listen, they're a listener, but they can't verbalize. So, I think it is, I

think it's valid, yes. I was just wondering if there would also be the option for the person, if the person is, if the person is going to verbalize, to talk and talk. He would also have this option to reproduce by speaking, or we would have to validate them all the same, we would have to type the number, he would have to write it. If we are going to give these two options, or not, it will be, we have to type it, so that it becomes standardized.

In this regard, I thought about, like, putting a button, right, for this child to verbalize, the applicator, the evaluator goes there and presses it. But, like, it has to be something very discreet so the patient doesn't see it, you know? So, like, some gesture, some shortcut, like that.

In fact, in all of them, we are thinking about this, right, about the evaluator who is there, validating the answer, right, it can be verbal, or not, having this option for all of them to validate, like a little help like that, or not.

Yes, put a little check, right, like, up to here, look, right, under this button, right, make a margin so the professional can press here and put a little check that he managed, verbalized.

Yes, because perhaps the person could verbalize, right, could accept the answer. I'm just thinking about the issue of standardization, so that it doesn't all come down to answers, right. So, like this, or everyone, in standardization, could have just one standardization for non-verbal people, and then everyone types one or another standardization for non-verbal people. Then the person speaks, and I'm thinking about that, but it really is interesting to have both options in the instrument, and then we'll see, right, how the validation issue will be. The person doesn't speak, they type, the person who speaks, ok, they'll speak and the examiner will give the okay, right. That's right, I think that both in direct and indirect order are ok, just like that.

And here, it gives memories of objects in this way.

Guys, good morning, sorry, I'm here not even wanting to talk because I'm a bit lost, you know, I apologize for that, I'll watch the recording properly. But I'm here thinking, because one of the issues we thought about was exactly children who are nonverbal, but also have motor difficulties. So I'm thinking, both about the pen and now, right, reminding the child, she's going to have to type pen, the word pen, right? There's also the issue of literacy that I think you may have already discussed, right, with [omitted for review] there, right, because I'm just getting here. Because, like, I think that if you're going to type, it has to be a really

big key, because it creates this motor difficulty, it can be something small, no, otherwise she won't be able to coordinate it. It has to be something like that, right, so she can touch her little hand and she'll have to be literate, right, but I know that it's already a problem, it's already an issue embedded in the mini-mental, this literacy issue, right, so I don't think that would be the problem. But that's it, remember that this individual that we want to capture, may also have a motor limitation, right, in this fine motor coordination, it has to be something very simple so that just by touching the screen they can express themselves, express their cognition, right?

I had even mentioned this to [omitted for review], the issue of multiple choices to give this clue, right, and then she brought up the issue that it is much more difficult, right, to capture the child's range when we don't give clues, for them to do this cognitive recovery, they will, right, for them, so that we have this cognitive information, it would be more important at this moment. And maybe we can think of different versions, right, because as they are different audiences, we can do a validation for non-verbal, a validation for patients with motor difficulties, because then I understand that a patient with motor difficulties, they will even get discouraged, having to type everything up until now, thing by thing, without the clues. So...

And if we really think about the child with motor difficulties, and he may not be literate either, then perhaps we would have to give him that option same, right, it would be to give the clue with the sound, so like, click on the button, the person clicks on the button, then it will be written, then you see the pen there, then you actually put some objects related to office objects and such, and still with the sound, then the person clicks on the button and it will say pen, because it may be that he is not literate, so it will be written pen there and he, even if he has to click and drag, he does not know how to write pen, so maybe he has to, in addition to it being written, it has to have a sound, he presses for pen, brush, eraser, then he will press again and then that, and really recognize the appropriate sound, he drags, so I think maybe we will have to add this option thinking about people with greater impairments, right, which may really be the motor impairment and non-literacy, which are the most serious cases, so maybe we will have to add, right, so maybe, I don't know what the strategy would be, if it would in fact be, like [omitted for review] said, let's make another version, right, for those who are more serious, or did the pen option, then he won't be able to type, so we press a button here on the instrument and then this second screen opens, which is specific for cases with greater impairment, and then I think, but then the voice has to be there too, the sound has to be there, right, because it won't be there at the same time.

I liked the idea, but I was wondering: is it necessary to make several versions? What if we make a version that includes the one who has the most difficulty and we don't also include the other one to make it easier? So, for example, you take a child who is nonverbal but has good motor skills, but you also take the one who has a more serious motor skill and is also nonverbal, right? So maybe we could do something like this and include everyone, wouldn't that be more practical? And then it will certainly give a ceiling effect to others, because it won't recruit anything, so if there's a pen there, he just presses it, it says pen with sound, he'll drag it, so for those who don't have this difficulty, maybe, because the mini mental for those who don't have any major cognitive difficulty, already gives a ceiling effect too, right? It's an instrument more for more serious cases, so maybe, right, I think, there's no need to make two versions, but it gives this second option, the instrument appears, and in case he can't open another screen, then I don't know.

Yeah, maybe it's possible, right, [omitted for review] and [omitted for review]?

I thought about doing it, like, when filling out the patient information, I put a check, like, motor impairment, right, like motor impairment or illiteracy, then we go to another version of the mini mental, which is more simplified, like, there will be more, there will be options, there won't be so many open things, it will be something much more simplified, I thought about that too, also because, like, it's like putting the question mark all over the screen for the professional to go there and click, it will be very repetitive, so it would be even easier for us to put a check, like, motor impairment, and then at the beginning already put it and go to another version.

I understand, you already have a version, but it will only appear according to the person's impairment, I think, like, then you see if he is nonverbal and has motor impairment, then you open a version, right, of this proposal that [omitted for review] brought. But three-year-olds are not literate, right, [omitted for review], and having a cutoff point lets them, right, in a way minimize this issue, right, because the cutoff point is lower, so I don't know if literacy is that important, because the mini mental, even the traditional one, already includes this literacy issue, right, no, [omitted for review]. Like, you already have a cutoff point for that, at least for children, right, adults, I don't know what it is, honestly, if you could tell me if there is a different cutoff point for illiterates, there is, there isn't?

Yes, there is a different cut-off point for the illiterate.

So, I think that literacy, the cut-off point that we already have in literature, will support us. I imagine, right, I'm here opening it up for discussion here in the group. Now, I think it addresses this issue more, whether he is nonverbal and whether he has motor difficulties.

Yes, I'm also thinking about what you're saying, [omitted for review], right? The goal of all this work, right? Well, it's the most compromised patients, and also those who aren't compromised already do the conventional mini-mental test, right? So, maybe our demand is really for the most compromised patients. I was very concerned about the cognitive issue, because when you provide a clue, it really makes it easier, you really recruit, because, if you don't have any clue, the person has to look for the name of that object in semantic memory that means what it brings there. If you have a clue, no, it makes it easier. So, it's much easier, you don't have to recruit so much cognitively. So, that's why we already thought, no, there can't be a clue, because the idea of the initial instrument is to recruit from semantic memory, there wasn't supposed to be a clue. But, what's the idea now? To establish a new norm, a normalization, a validation, an adaptation for cases with greater impairment. Verbal commitment, verbal communication, and motor skills, right? I think that's the focus, right? Motor and verbal commitment. And then, we have to take that bias away a little, right? So, thinking about it, maybe these buttons that talk are really necessary, right? The buttons that read and talk, as well as to make it easier to see, right? And the button, I think it's going to have to be that one.

Yes, what we thought of doing, [omitted for review], is, for example, taking this digital version and taking it to the typically developing public as well, and comparing the two, applying both and seeing, because then we will see if there will be this difference. A 3- year-old child with typical development doing the traditional version, and this digital version, will these facilitation's make him/her have a higher score? Then we will answer your question. If it will be only specific to this public, because we are going to make a new cutoff point. In fact, we already have the cutoff points, right? Of this traditional version for these children, with PC too, right? You did it yourselves. I don't think it included quadriplegics, because that's what we want. A version that we can use, including, to know the cognition of a quadriplegic child, right? Who is nonverbal and has motor difficulties, but who can at least touch a screen, let's say. But the idea is for us to see if this version could also be applied to the general public, right? But then we'll see only after testing, that we'll see, oh, no, the score was really similar, no, the score was much higher in this digital version for typical development. Right, [omitted for review]? Because we thought about validating based on

that too, right? Validating...

That's exactly what we thought. Validate it and then, after we see the results, we'll see if it's applicable. That's why I was there, when [omitted for review] started to put it in, I said, "[omitted for review]", I had thought about options for the days of the week, the months of the year. I remember that I even mentioned this to [omitted for review], to give her tips to make it easier for the boy.

No, [omitted for review] was talking here and I was just thinking about the cognitive issue. Now that I'm realizing it, [omitted for review], sorry. Now that I really understand.

No, but it's great, I think this is wealthy, it's a process that we'll discuss, right?

It's just that we reflect and analyze and go back and really think. Because I was thinking a lot about the cognitive issue. "No, it's different, you have to recruit, the person has to remember the concept." But if we think about the rate of complexity, think about the case of the CP itself, maybe we really do need to make it easier.

And the question that Le has just asked, and I think it will also be a test, for us to have, even in those other questions that we have already asked, that Le had brought the days of the week, that we had brought the months, we leave this option, she will fill it in at the beginning, there is the option to type normally, there is the option for those who have more difficulty that opens the other screen with the clues. And then I think the same thing applies to identifying objects, for example, a pen, right? There is option number 1 and then there are options with others, and we have to define together with her here to help, what would be these other similar ones, similar, in the semantic field of view, pen, brush, pencil, mechanical pencil, so that she has to put it. I think both options are valid then.

And then in the validation we can apply the three to the child with typical development, the three versions are the result, because this issue of literacy is an important issue, right [omitted for review]? Like, sometimes the child doesn't know write "pen", but she knows it's a pen, from a cognitive point of view, isn't that valid? From the memory point of view, from the memory recovery point of view. So we can be proposing an instrument that will eliminate this issue of literacy, at least the issue in this sense, because we know that literacy influences, right, this cognitive issue there, but at least it won't be an obstacle for the child to demonstrate what he really has in terms of cognitive potential, right? So it might even

be interesting for us to do this validation there, right, considering the three versions.

So this version here would be more for non-verbal people, right? The one with the keyboard and such. There's also another thing that I thought about that I see a lot these days with autistic people, right, I see a lot of non-verbal autistic people who use the tablet and click on the button there to speak. What they want, right, to communicate with their parents. And I also thought about putting this on the mini-mental, like a button for them to say what they wrote. I don't know if it would be feasible or not.

But what do you mean by the button in the answers? How do you see it? Yes, it is, like in the answers like he just typed there and then there is a little button to speak, like non-verbal autistic people do, you know, they press the tablet and they can speak, they press it and speak too.

For those who speak, how does this work? The one speaking is, [omitted for review] has experience with this, [omitted for review], how does this work?

The child writes her name, for example, [omitted for review]. And then there's a little button, she presses it, and it says Leticia. So she hears her name verbally, through sound, but she writes it. All the words they write can be pressed to be spoken.

That's after you write, right? It would just be like feedback, like, for the child and they'll be... For example, when she is writing her name, then I will write "ABCDEF", then press A, B, she keeps pressing and there is a sound stimulus, A, B, C, D, E, F. Then she presses the little button and it reads, "ABCDEF".

That. Does that get in the way, [omitted for review]? The test itself or not?

No, it doesn't get in the way, no.

It's like feedback that he got it right, that he wrote it correctly, is that it?

It's even better for the professional not to stay there on the screen to see if he's getting it right or not, because there's not much of this kind of bubble, right, personal space. So if the child feels like their personal space is being invaded to approve for the professional to see if they are seeing or not, right, to see the screen, until the child starts to feel uncomfortable,

they may start to get some things wrong too.

No, I found it interesting, I just kept thinking the following, if I make a mistake.

If you make a mistake, how about pressing?

No, sometimes she wrote the wrong answer, because that applies to names and other things, right, so let's use "pen". She didn't write "pen", so what will the voice say?

Then it will say that she wrote, like, if she wrote "pencil" instead of "pen", she will put pencil.

If she wrote, for example, "pan", it will read "pan", it is the reading, right, it is just the reading, it is just the voice, sound and all the readings.

I wonder if this would be interesting or not, because it's a test, because if the child makes mistakes, it could discourage the child, since they already know they're making mistakes. Because if the mini mental is actually applied to the child and you close the score later, imagine this here, it will give a score later. This type of instrument that you and Amanda are talking about, is not for evaluating, right, it's for communicating. So I wonder if there's this in an evaluation instrument, if it couldn't be negative feedback when the child starts to make mistakes, you know, [omitted for review]? I'm also bringing it up for discussion, we're not saying that it's the right thing to do, no, I'm just worried that, instead of being something positive, it could hinder the child's performance on the test, because they'll start to feel insecure because they saw that instead of writing in "pen", they wrote "ink".

But in this matter, if she thinks she made a mistake, right, like a character, for example, if she made a mistake in a character, I don't know if she can, right, in the evaluation, she can just fix it there and that's it, it's over, but like, if she, in the other version that she's going to put, like, the professional applicator will say something like "what's the pen?" Then the same thing will happen, right, he'll see and respond.

Maybe that's it, [omitted for review], because when we're giving a test and the child says something wrong, I remember that [omitted for review] said that we had to give the correct answer later. And then, for example, she wrote pen "oh, you meant to say pen, right, I understood perfectly" and move on to the next one. Something along those lines, you know?

You always give verbal feedback like "ah, you're doing very well", "ah, you meant this here", "ah, you meant to say this here, right, I understand".

How does she say it wrong? How do you give this feedback? I know that you apply mini mental child, which we, we are what I said to Ju, we make the students apply, right, [omitted for review]? For example, if the child says pencil, then I say "no, very good, but you made a mistake, it's a pen, how do you do that?"

You're not going to say something like "oh, but wait a minute, you said pencil, but this is a pen, right, a pen". Now what about this one here? What is this one? I was already going to the next one, [omitted for review] thinks, but I didn't say "look, you made a mistake", no, I was like, I would make a correction, but a more lively correction like "hmm, did you mean pen?" Because this one here is a pen, right, different from the pencil, so you make a context and then I would jump to the next one "look, and this one here is what? What are these?", then I would point to the glasses, you know?

Why is what [omitted for review] said important? [omitted for review] is trained. The child can't just sit around in the middle of the assessment thinking that she's doing badly, right? So we somehow encourage the child to want to continue. And why do we give this feedback, in the mini mental, because I could simply say that she said pencil, right, "ah, pen", but she said pencil, okay, I could not say it's a pen, but remember that we're going to ask about the objects later on. So it's important for her to know that it's actually a pen, even if she says pencil it will be wrong, it's wrong, okay, which marks it as wrong, but she has to correct it, because later on we're going to test her memory of the correct object, right, you know. But it's like this, during the assessment the person can't, I always say that they can't leave the assessment worse off than when they arrived, so if not, you know, they have to feel, feel that they're doing well, you know, feel encouraged to complete the assessment, so that they don't get emotionally shaken, because sometimes the child really does badly, you know.

So, that being the case, I don't see any problem in including what [omitted for review] is proposing, right? Since the feedback is given, then there's no problem with what I said it wouldn't be good because it's an assessment, but if this is something that already happens in the assessment, then I think it's ok, right? Yes, do you think it's possible to have this feedback in the audio?

But the feedback won't be like "congratulations, you got it right", right, you'll just be

reading what he wrote, so it's not, I don't think it's something that will get in the way, because it won't say "congratulations, you got it right", "you got it wrong", it's not like that, so I don't think there would be a problem because it's not actually performance feedback.

-Yes.

-So, that's it, today's meeting ends here, thank you all. Bye.