Researcher: So, hello and welcome to my little research. Again, thank you so much for wanting to participate here. I very much appreciate it. Basically, what this research is about, we'll be looking into how the head-up display, in a game like Counter-Strike 2, affects somebody's mental state of flow. So at the moment, when you lose track of time and you're fully concentrated, of course, I will ask you to put things Do Not Disturb, just to make sure that this goes smoothly and that you do not get distracted while this is happening. And that's about the introduction. Any questions or something you want to ask me?

Participant: No, I think you'll explain on the go.

Researcher: All right, perfect.

Participant: I think I'll see.

Researcher: Okay, so basically what we'll be doing is first, we'll set a bit of a baseline for you as a person, so I know who you are. Next, we'll be looking into some things that are more connected to the actual research questions. So setting some baseline values, then we'll have a little bit of a game for you. So you play one round of deathmatch as a warm-up and then one round of deathmatch as the actual game.

And then lastly, we'll have a little bit of an assessing moment at the end of all things, so that I can ask you some questions on how everything went, how you experienced the game. Does that make sense?

Participant: Yeah, all right. Sounds good.

Researcher: Perfect. So by the way, I also do want to ask this before we start with all of this. Do you have any type of ADHD or autism?

Participant: No, not that I know of.

Researcher: All right, so let me just really note that down real quickly, because basically, originally this research would have excluded people with autism or ADHD, however due

to it being quite difficult to get participants that might be dropped later on. So I'm trying to keep track of that.

Participant: Alright.

Researcher: All right. So first of all, for the getting to know you a bit better as a gamer and as a person. Would you say that you have a high or a low attention span?

Participant: In general, I think I have a lower attention span, but when it comes to gaming, it can get higher, if that makes sense.

Researcher: Okay, so you feel like you can put all of your attention on the game then?

Participant: Yeah.

Researcher: Okay, would you say this has changed over time?

Participant: No, I think with gaming, it has always been like, when I play the game, I focus on it, unless of course I'm playing more casual with friends. But once I'm in the game, I really focus on it. But for example, with schoolwork, I never really kept focus.

Researcher: Is see. Alright, then secondly, may I also ask what your occupation is?

Participant: What does that mean?

Researcher: As in your job, or do you study?

Participant: Yeah, I'm currently still studying and I'm starting my own business.

Researcher: Okay, may I ask what type of business?

Participant: A game studio, and I studied digital arts and entertainment.

Researcher: Okay, so for both that study and for your job, you do need your PC quite often. Do you believe that affects the way that you play games?

Participant: Yeah, I think so because I'm comfortable with using my PC, so I don't have to pay much attention to what I'm doing in the game, movement-wise, camera-wise, and I think other people would focus more on that in the beginning.

Researcher: And would you say that your occupation, so you studies and you starting a business within the gaming industry, affects the way that you play games?

Participant: I don't think it really affects the way I play games, but maybe the games I play do affect my occupation.

Researcher: Okay, elaborate?

Participant: Yeah, so for example, I'm making games, I'm designing games, then I'm going to use games in my mind to reference and the games I play take a big part of that. So, if I'm making a first-person shooter game, I'm of course going to think about CS2 because I'm playing the game, but it's not that if I'm playing CS2, then I'm going to think, wow, I was just programming something and now my game feels different or something.

Researcher: So, rather than you having experiences in game development and that then going into your games or into the way that you play games, it's the other way around, the way that you play games, affects your game development?

Participant: Yeah, I think so.

Researcher: Okay. Interesting.

Participant: Also, but I do sometimes think in more casual games, like how did they make this 3D model or something? That's what I sometimes now think, but that's a bit for my occupation. I would have never thought about it if I didn't study this.

Researcher: Yeah, that makes sense. And would you say that happens quite often?

Participant: No.

Researcher: Okay. Also, you are a CS2 player, probably played CS Globale Offensive?

Participant: Yes.

Researcher: How long have you been playing those games for?

Participant: Well, my playtime in Steam is 300 hours, but I think I've played CSGO four or five years ago, and then I played it like now and then. But then there was a big period where I didn't play and now when CS2 got renewed, I play every week or so with my friends, two or three games, and then it's done. Then we probably lost two games and we're raging and we're going on another game.

Researcher: Okay, so you play more socially than alone?

Participant: Yes, I don't like these games alone.

Researcher: And why is that exactly?

Participant: I don't know, I just get bored and then everyone on the team is yelling. Half of the time it's either Russians being racist and yelling, you have to plant the bomb or whatever. And I just want to have fun if I play a game, not being yelled at.

Researcher: So you're more of a casual player that likes the social aspect of things?

Participant: Just with friends. If that makes sense?

Researcher: Not really with strangers or?

Participant: Yeah, no. Very rarely.

Researcher: I see. And you mentioned you play about two games, so is that the whole session for the day? Or is that just one moment, and you play some more later on?

Participant: No, mostly it's one session a day because we also have other games I play with my friends. So yes, it's like two games, but if you play competitive, it's one hour for a game. Well, a bit less now because they changed the format.

Researcher: So it's almost about two hours per session then?

Participant: Yeah.

Researcher: And so you've been playing quite often besides playing with your friends, so are there any other things that you enjoy about the game?

Participant: Not really, no. I actually just like it with friends. I don't play the game when I'm alone.

Researcher: Okay, so there's no mechanics within the game itself that give you any satisfaction besides the social aspect of things?

Participant: Well, I mean, it's nice if you get a headshot here and there, but it's not that I'm going to wake up and I think let's play some CS2 and shoot some headshots because I think it's satisfying. I just play because it's fun with friends.

Researcher: Okay, interesting. And are there any things that you particularly dislike about the game because you mentioned people being racist in the game and shouting?

Participant: Yeah.

Researcher: Is there anything else?

Participant: I think it's weird that if it's a European server that there are so many Russians and I dislike that, but other than that now, it's a nice game. They tried to opt... and security breaches, that's a bit disappointing, but...

Researcher: And what security breaches exactly, because I'm not filled in?

Participant: Yeah, I don't know how to explain, but there was this thing where you could change your name to like some HTML code and then when you launched a vote for kicking someone or whatever and whenever the vote ended, the game would load all player names and therefore the HTML code would be executed and the guy could grab all your IP and everything.

Researcher: Oh, wow. Okay. That is indeed quite a big security breach.

Participant: Yeah, I think they patched it like two days later or something, but I'm happy I didn't play those days.

Researcher: And to get back onto the having Russians in your... European servers, what is it exactly that is the problem there?

Participant: They just talk Russian, they don't try to talk English and they're just yelling in your ear, so you have to mute them. And if you're playing competitive, I know I'm a bit more casual, so I don't really mind that. I mute them. If you're playing competitive, you basically lose a teammate.

Researcher: Because that lack of communication with your team?

Participant: Yeah, that's... it's very important in these type of games and I don't really care much about my rank if I lose. Okay, so be it, but I can understand it's annoying for other people, but maybe those people don't think about Russians like I do.

Researcher: Yeah, I mean, everybody there biases and believes, right? So, since you've played a few hundred hours in the game, do you feel like you're making use of the head-up display often?

Participant: I don't know, at the top of my head, I think so, like for checking your HP, that's the the HUD is like everything on your screen, right?

Researcher: Yeah, so all the UI that is front of you while you're playing.

Participant: Yeah, checking your HP sometimes, your ammo, that's kind of important. Yeah, I do quite often check my map and I think I check it more than other people. So, but that's like a very big part of the game, your map. So, I think it's logic.

Researcher: Okay, and around what moments do you tend to look at your head-up display and what moments do you not look at it?

Participant: So, of course, when you peek corners, you're looking at your crosshair, not really at the head-up display. And then when you're surrounded by teammates or something and you don't have an angle to peek, you just look for info on the map or check what everyone has for smokes or something. Just in the quiet times, if you're in a gunfight, you're not gonna change your view to your health at the second you're shooting. But the quiet times when you're just walking or rotating from a site and you know there's no enemy close.

Researcher: Okay, so these downtime moments, in a way, are the times that you have a look at it?

Participant: Yeah.

Researcher: Okay, so then the moments that you don't look at it, do you feel like it distracts you sometimes?

Participant: Not really. I would think maybe, I don't actually recall it now how it looked, but maybe when you get hit that your health goes down, maybe it's big red and I get distracted by that. But I don't know because your whole screen gets red. So, I don't really think it distracts me.

Researcher: Okay. And besides Counter Strike 2, or Global Offensive, whatever the name is nowadays. Are there any other first person who you tend to play?

Participant: I played Valorant a lot. I stopped with it though a bit ago. So, I don't really play any others at the moment.

Researcher: Okay. And why exactly did you stop playing Valorant?

Participant: I don't know. So, I played it a lot and then CS2 came out. We switched to CS2 just to try it and it just feels like I play better in CS2 and therefore I enjoy it more. It's also, in Valorant I had a diamond rank and I never played much. So, my rank right now would be bronze, I'm pretty sure. But you still get placed around the same MMR because it doesn't get reset hard enough. So, every game I play that is with try-hards who are still diamond and I don't like it.

Researcher: Yeah. So, because you're more of a casual player and you don't hold these skills up in a way.

Participant: Yeah.

Researcher: You feel like you're being put into lobbies with people that are of a higher skill level. So, it's just less fun?

Participant: Yeah, but I think if you ask 10 people who play Valorant, if they are ranked correctly, they'll say we get placed in higher games. Like 9 out of 10 would say it, I think.

Researcher: Okay. So, is there anything else that you dislike about Valorant besides the ranking and the skill level being different because of it?

Participant: Yeah. Besides the fact that Riot are money grabbers, no, it's a pretty fun game.

Researcher: Okay. And so, because it is quite fun game, is there anything that you like about it? What about it do you like?

Participant: Yeah, like the visuals, the more like Overwatch style. You know the game probably. I think the visuals are more appealing to me and of course, the whole thing with the abilities, that's pretty nice. It's a fun extra thing, I think, to a first-person shooter.

And even if your aim isn't that great, my aim isn't very great. So, I like to use the abilities and get an extra kill with it or something. And in my opinion, Valorant is way more tactical than CS.

Researcher: So, the use of the abilities in a way gives you a feeling of control because even though your aim might not be up to par at that moment, you still make an impact?

Participant: Yeah, and you can assist teammates way better with your abilities than just throwing a smoke in CS.

Researcher: Okay. Makes sense. So, because you play CS2 and Valorant, or used to play Valorant, when do you tend to play these games?

Participant: In the evening or weekend with my friends, yeah. Like when everyone stopped working on their job or school. Okay.

Researcher: And do you play on the couch or the desk?

Participant: At my desk. Always.

Researcher: Okay. So, you did mention that you prefer playing with others rather than alone. What are the reasons behind that exactly?

Participant: I just find the game boring alone. If I can't have a chat with someone I'm playing with, it's like, I ask myself, why am I even playing this? I'm just wasting my time. And I don't think that's a good feeling to have when you game. So, yeah, I just get bored and I can play sometimes play a game, play it alone, but I'll legit just shut it down after 10 minutes.

Researcher: And would you say that has to do with you having a generally lower attention span?

Participant: Um, no, I don't think it has to do with the attention span because I just get, um, yeah, how do I say this? It's not like I lose a focus. It's like I just lost interest before I started playing.

Researcher: Okay. So the fun very much comes from that social interaction then?

Participant: Yeah, with my friends. Yeah, not with strangers.

Researcher: Yeah, because you're more, would you say it's because you're more comfortable with your friends or?

Participant: Yeah, definitely. Okay.

Researcher: And so you probably are in a voice chat or a text chat when you're playing games.

Participant: Yeah, we use Discord.

Researcher: Okay. Would you say that you were able to fully concentrate on the game, while you do?

Participant: Um, yeah, see, no, that's the difference. I don't think I really focus 100% anytime because I'm always in Discord and always hear my phone doing random stuff when I'm dead. So in that way, I do have a low attention span, but if it's for like tournament or whatever, then I can really focus up.

Researcher: Okay. So you have joined tournaments, for example?

Participant: Oh yeah, like for fun. You didn't win anything big.

Researcher: And would you say that you were, so you were probably in the voice call with your teammates then as well?

Participant: Yes.

Researcher: Would you say that you were able to concentrate then on the game?

Participant: Um, I have noticed I concentrate better when I don't speak. Um, because when I have to give callouts, I'm thinking about what actually am I saying? And sometimes I tend to make a misplay based of that. But in general, I think I can keep focus, yes, but it's even, it's even better when I don't have to speak. But that way you're not helping your team if you don't speak.

Researcher: And when you don't speak, but your team speaks to you, would you say that you were able to concentrate then?

Participant: Yes. If it's an important moment for myself, like if I'm shooting and someone's talking, I think I just basically ignore it and my brain filters it out. Um, so it doesn't distract me.

Unless of course if they start ear raping you and just buzzing in your ear or something, but if they just give callouts, I tend to ignore it if it's needed.

Researcher: So when you're on that moment of full concentration on something in the game, you can kind of filter it out?

Participant: Yeah, I think so.

Researcher: Um, and are these the moments then that you're shooting at somebody?

Participant: Yes. Any other moment I don't, I think I have enough attention to listen to what they're saying. Maybe I won't act on it because I, I choose to ignore it deliberately or something. But I can hear it like if, when I'm in a fight, maybe not. You'll maybe notice it during a death match.

Researcher: Okay. Yeah. Not a problem. Okay. So we know a little bit more about you as a gamer and as a person. So we've got a bit of a reference field to put everything to. Now, I'll start with some baseline values that are more closely related to the actual research question. Do you have any questions so far? Or, anything you forgot to mention, for example.

Participant: Um, I don't think so. I think I tried to answer as broadly in as much detail as I could.

Researcher: All right. Perfect. Okay. So the first question for setting a bit of a baseline is how would you currently rate your mental effort?

Participant: In gaming or in life?

Researcher: As in currently. At this moment in time.

Participant: Um, I don't know. Yeah, I'm fully here. So, uh, like 90, 90% effort.

Researcher: And what exactly do you understand under mental effort?

Participant: Being, um, engaged in your conversation, like. As in understanding and thinking about stuff and being aware of the thing only.

Researcher: That is the part of it. However, another element of mental effort is also the, um... So see it as a bucket, right. And every single action you do adds to that bucket. Once that bucket is full, you have full mental effort. So, you can't do anything besides the thing you're doing at that moment. So with that in mind, how would you currently rate your mental effort?

Participant: Then I'd say it's more about 50.

Researcher: About 50% then?

Participant: Yes. I'm very bad at multitasking. So I think it's rather high than low. But I'll say 50.

Researcher: And what exactly do you mean with that, if you don't mind me asking? Do you mean talking and dealing with something, or more elaborate things?

Participant: When I have to use my mind. Like, I can just be rolling a battery around. Like I was doing five minutes ago, but that doesn't require me thinking about it, so that I can do.

But if I really have to write something down or something, I probably ask you to repeat your question.

Researcher: Okay. So up to the next question for the baseline. So you're probably familiar with the deathmatch game mode in Counter Strike 2?

Participant: Yes.

Researcher: Would you say you ever feel helpless while having that game mode?

Participant: Yes. When there is too many people on the map and you get spawn killed, then I feel helpless.

Researcher: Okay. And why exactly do you have that feeling of helplessness then?

Participant: Because I feel like you're forced to first 360 around to check your environment. But nobody does that. So when you start moving, you lose your vulnerability, as you know, and you get killed and you didn't even know there was someone. So of course, you're helpless then. Like the game just puts you in a death spot.

Researcher: Okay. This is mainly when spawning happens?

Participant: Yes.

Researcher: And are there any other moments that you would say that you feel helpless while having the game?

Participant: No.

Researcher: So just the spawning in?

Participant: Yeah. Like the spawning can be like can be a bit annoying because you get spawn killed if you're not careful. But for the other like, that is purely up to yourself.

Researcher: So that actually, what you just said very much, almost answers the next question. In a way that would you say that what happens to you in the game? So the things that happen to you in the game mode. Are mainly dependent on yourself? Or would you say that it's more dependent on your environment?

Participant: Dependent on yourself. Like let's say 85% yourself, 15% environment. Because of course sometimes you can have a disadvantage for the environment. And yeah, sure, you put yourself maybe in that disadvantage, but maybe it was for getting an advantage on the previous kill or something. So I think it's highly up to yourself. Of course it doesn't if the game is placing you in higher ranks, but that's a different thing.

Researcher: Yeah, so in the game mode itself?

Participant: Yeah, that's up to yourself in my opinion.

Researcher: So, would you say that you also have a sense of control while playing that game mode?

Participant: Yes.

Researcher: Okay. And so would it also be the 85 to 15% sense of control? Or would you say that it's a bit of a different aspect ratio?

Participant: It's probably about the same. Because you can control a lot and like if your aim is there, that's all control to you.

Researcher: Okay. All right. And then lastly we've got one last thing to set a baseline for. And that is the way that you perceive time duration. So how much time has passed. So what I'll be doing is I will be playing a tone later. So I'll give you an example of that tone, what that tone will be just right now. [Plays tone] So that tone.

Participant: Yeah.

Researcher: It's a very convenient tone, as it is part of the discord sound board. So I will play that tone later and I'll have some time pass by and play it again. And then you just tell me how much time you believe has passed in between those two tones.

Participant: Am I allowed to look at the timer in the game?

Researcher: Exactly. That's one point that I wanted to bring up, of course, because we are wanting to look at subjective time. I would want you to avoid looking at any time, or in terms of a clock or anything else that would help you tell time and also to avoid counting in your mind.

So to keep it more intuitive. So what we'll do now is, this is almost the most awkward time of the research, or the interview that we're doing right now, because you won't be playing, but you can of course play with the battery that you mentioned earlier or whatever. And then, of course, we'll do this again, but while you're playing as well. Okay?

Participant: Okay.

Researcher: Alright, so I'll mute myself here, I'll play the tone a bit, and then again, and then you tell me how much time has passed. Okay?

Participant: Okay.

Researcher: And remember to not look at a clock or try to not count in your head as well.

Participant: I will be staring at my guy on the screen.

Researcher: It's whatever keeps you occupied. Alright.

[Plays tone]

[Plays tone]

Participant: I'll say 45 seconds.

Researcher: About 45 seconds? Okay. Let me just note that down real quickly.

Participant: Can I already know how many it was, or is it only after the test?

Researcher: That will be afterwards, yes. We'll play another, we'll do that again later with a random amount of time, and you just tell me how much time you believe has passed then as well.

Okay. So that is the baseline that we've set, so if you want, you can open up the game now, and stream it for me.

Participant: Alright. Luckily for you, it was already open.

Researcher: Oh, perfect. Efficient use of time.

Participant: They changed something that you know when you alt-tab, the whole game shuts down or something. Well, can you see it?

Researcher: I can see it. Yes.

So we'll be doing a little bit of a set of things to make sure that everything is in order. I would ask you to put your steam on Do Not Disturb, so that people can't text you or call you or whatever.

Participant: Yeah, it's on. Yep.

Researcher: Alright, perfect.

If you would go to this settings menu here and turn on full screen mode or make sure it's turned on.

Participant: Yep.

Researcher: Yes, it's on. So what we'll do now... Do you know the developer console in Counter-Strike 2?

Participant: I know what it is, but I don't really use it.

Researcher: Okay, is it turned on?

Participant: I don't know. Can I check with the hotkey?

Researcher: It's turned on, perfect. I'm going to send you this code here. Basically what this will do is this will turn off your head-up display except for your crosshair so that you can still aim but you don't have any other elements around you.

Participant: Oh no...

Researcher: Then I'll send you another piece of code and that will make sure to mute everything except your friends and party, but because you're not in a party and you are doing your own stuff, that will make sure that you do not have any communication from enemies or teammates or whatever.

Participant: Did it work or do I have to do something?

Researcher: That normally works. It does not give a confirmation which is a bit of an annoying thing I suppose but nothing you can do. If you were to go to play for me and select deathmatch matchmaking, could you also close the party on the left side of your screen? Dust2 is selected, perfect. And you can now press go.

Participant: Okay, is this a free for all or maybe it's still on team? I don't know.

Researcher: Deathmatch is normally a free for all.

Participant: I thought there was the option. I thought I gave the option now to make it team that match because in CSGO it was teamed.

Researcher: Well, what we'll be doing now, you'll be playing a warm-up game in a way so that you're used to playing it and also to not having the head-up display.

Participant: Yes.

Researcher: So I'll mute myself here. If you feel like you need some more warm-up after this one you can tell me. Otherwise, you just keep in the lobby and we'll start the actual session. If that makes sense.

Hello, can you hear me?

Participant: Yeah.

Researcher: Okay, so did I come through on the...

Participant: You said if you need more warm-up and then I think my game took over and trashed the whole discord so I didn't hear anything else.

Researcher: So if you feel like you need another warm-up after this you can just... Tell me and you play another warm-up session. Okay?

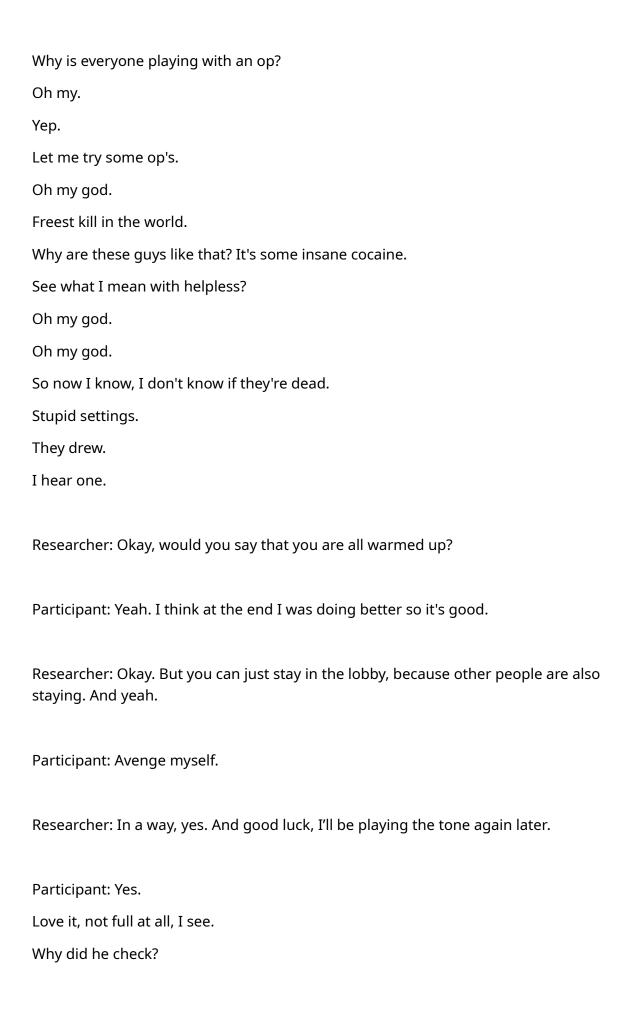Participant: Do I have to be counter terrorist or terrorist?

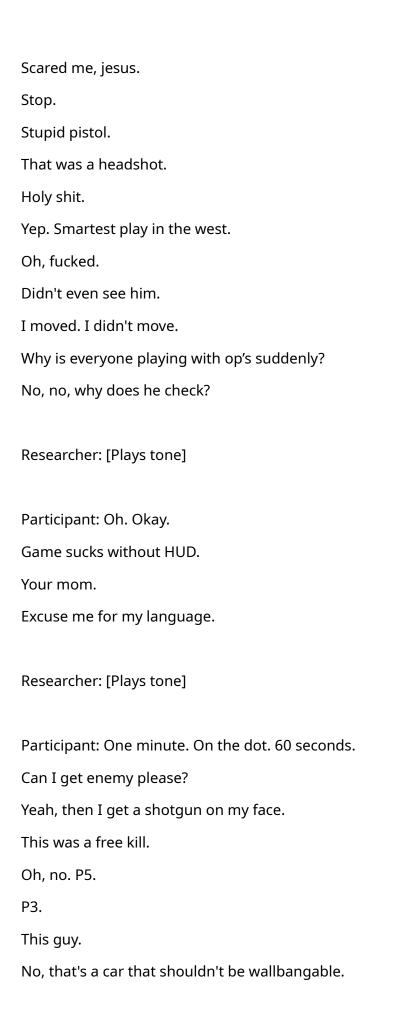Researcher: It doesn't matter. As long as you can play.

Participant: Okay, then I want to choose team.

Researcher: Alright, perfect. Then I'll mute myself now.

Participant: Jesus Christ.

Jesus.

Why is everyone playing with an op?

Oh my.

Yep.

Let me try some op's.

Oh my god.

Freest kill in the world.

Why are these guys like that? It's some insane cocaine.

See what I mean with helpless?

Oh my god.

Oh my god.

So now I know, I don't know if they're dead.

Stupid settings.

They drew.

I hear one.

Researcher: Okay, would you say that you are all warmed up?

Participant: Yeah. I think at the end I was doing better so it's good.

Researcher: Okay. But you can just stay in the lobby, because other people are also staying. And yeah.

Participant: Avenge myself.

Researcher: In a way, yes. And good luck, I'll be playing the tone again later.

Participant: Yes.

Love it, not full at all, I see.

Why did he check?

Scared me, jesus.

Stop.

Stupid pistol.

That was a headshot.

Holy shit.

Yep. Smartest play in the west.

Oh, fucked.

Didn't even see him.

I moved. I didn't move.

Why is everyone playing with op's suddenly?

No, no, why does he check?

Researcher: [Plays tone]

Participant: Oh. Okay.

Game sucks without HUD.

Your mom.

Excuse me for my language.

Researcher: [Plays tone]

Participant: One minute. On the dot. 60 seconds.

Can I get enemy please?

Yeah, then I get a shotgun on my face.

This was a free kill.

Oh, no. P5.

P3.

This guy.

No, that's a car that shouldn't be wallbangable.

Shouldn't this game only be 10 minutes or something?

[Checks timer in tab menu] Wait, it's still 8 minutes.

I thought they... deathmatches where only 10 minutes.

No.

Oh my god.

I'm dead.

No! And I got killed by another one.

Oh my god.

Wait, why does it stop now?

Researcher: That was the game. How do you believe it went?

Participant: Some of these guys were insane, so I think it went great.

Researcher: Okay. If you want, you can stop the queue now and head back to the main menu. Close the game, if you prefer.

Participant: I'm sure they all played with the HUD.

Researcher: Most likely. I don't think there's this many people doing this research now.

Participant: Is it automatically back on when I play next time?

Researcher: No, however, I'll send you the stuff that you have to put into, to reset the settings again.

Participant: Right.

Researcher: Okay. That was the gameplay session. Now to the last part, which is the assessment part of things. How would you have rated your mental effort while you were playing?

Participant: Like 80, because I was trying to focus, but I couldn't really do anything else. On the moments I died, sometimes I do anything else, but when I'm in the game, I can't really do anything else. Maybe talk, but... so maybe 70.

Researcher: So that's a pretty significant change, but why did you feel that you were not getting to that 100%?

Participant: Maybe because I just do different... Like when I die, when I'm fully, when I'm spraying on someone, then it's 100%, because I won't do anything else and I won't talk. But when I'm just walking around, like... I'm focusing, but I can still think and do something else.

Researcher: Okay. So what elements in the game, or what moments or elements would you say that had the greatest impact on this change?

Participant: On my mental state, or like the HUD being off?

Researcher: Only the mental state, if the HUD being off had an impact on that. That is also something that you can mention.

Participant: Well, I don't really think it had a direct impact, but it's annoying that some things of your HUD are gone. Like in deathmatch, I think everyone does it, you use your map a lot because when you spawn, I think you see the enemies. So I really had to go based off of sounds right now, which is also fine, but... It was annoying that I couldn't use it, but I think I had to put more focus into the game, therefore.

Researcher: Okay, so your mental effort kind of increased by the head-up display not being there?

Participant: Yeah, yeah.

Researcher: Okay. And what would you say had the smallest amount of impact on this change in mental effort?

Participant: I don't really know. For deathmatch, like... I guess your HP doesn't really matter. So I never really thought about it.

Researcher: Okay, interesting.

Participant: So HUD being on or off doesn't really change.

Researcher: Yeah, because you don't look at your health either way?

Participant: Yeah, it's deathmatch, you just go in and you try to win the duel with a headshot.

Researcher: And then when in these moments that you were in action, so shooting at somebody, did you at those moments feel like you were missing the head-up display?

Participant: No.

Researcher: No? Okay.

Participant: No. In the shooting itself, like I said before the game, you just use your crosshair and then when the fight is done, that's when you... In those down times, that's when you use your HUD, in my opinion. Okay. At least in my experience.

Researcher: So would you say that the lack of it made you able to concentrate better on these fights or worse? Or maybe it didn't change?

Participant: I think for me it didn't change, but there's more chance that it improves your concentration in a fight than something else. Because I would be... like now I didn't have a distraction, but there is also for me nothing to be distracted by normally.

Yeah, I think if it... for anyone, like I can just say it for me doesn't really affect it, but for anyone I think it would improve your concentration when the HUD is gone.

Researcher: Okay. So, would you say that you had a general feeling of control while you were playing the game?

Participant: Yes, but it was lower than I mentioned before the game, because I didn't have my HUD and your HUD basically means a bit of control, right?

Researcher: Okay. Could you elaborate on that?

Participant: Well, yeah, the big point is the map is gone, so you don't really know where everyone is. Like when you spawn normally in that match you get like a radius around you that you see your enemy. So that's a bit of control where you know some enemies are. And now it was just based upon sounds. But also like you're reloading.

I really had to count in my head a bit like okay three fights down I sprayed some here and there probably best to reload now. And that's also control you have with the HUD. Knowing how much bullet.

Researcher: So the lack of information was something that you felt was taking away control from you?

Participant: Yes.

Researcher: Okay. So were there any moments that you felt helpless while playing?

Participant: Yeah, I think I show you when I got spawn killed. It's just a problem with me. I never stand still and when you start moving you lose your invulnerability. And it's so easy to get spawn killed in the game. Or when someone randomly spawns with a shotgun and you're in. I can't really change anything about it. Unless that one bullet randomly flies in his head. So that's pure luck.

Researcher: Okay. And so would you say that the events that were happening to you were playing... were mainly dependent on yourself?

Participant: Yeah, I still think so. I think my opinion changed a little bit though because it's still highly dependent on where you get spawned and who's around you. So there are a lot of factors you don't control. But I think I play alright. And in that way I think what happened to me was my own doing.

Researcher: Okay.

Participant: I think it's fairly the same answer as before the game.

Researcher: So almost the same ratio of I think said something about...

Participant: 85 15.

Researcher: Yeah, something like that.

Participant: Yeah, let's say it's 80 to 20 now because I'm... I'm not happy with my spawn sometimes.

Researcher: And do you think that your perception of those spawns. Do you think that was somewhat impacted by the fact that he didn't have that head-up display? So the mindset that you got from it.

Participant: No, I don't think the HUD has anything to do with it. Even if I had a map or something. The spawn itself wouldn't have changed to. That's... that's different sections.

Researcher: Okay. And now more related to the time duration that we tested before and during the play. Would you say that you were losing track of time during your game play session?

Participant: I don't know because I think I don't think I do because I knew deathmatch was 10 minutes. So, I fairly... I assume my brain knows that I if I play deathmatch, I'm 10 minutes of gameplay in. So I think I don't really lose track of time. But if it's a longer game then probably I will.

Researcher: Okay. Because. If I'm not mistaken you after the time duration test also looked at the time of how much that was left. And, and you seemed confused about the time that you saw?

Participant: Yeah, because the time was running upwards. Okay. It was like at eight minutes. And I thought wait there's still eight minutes left, but it was one minute left.

Researcher: Okay, so then the question I kind of have for you there is that: so when you saw that and would you say that... you... How would you say this? Calculate it yourself to that time that you then believed was still left?

Participant: No, honestly I was thinking the 10 minutes were over already. So then I was thinking I was in 12 minutes, but I was only in nine. So I think time moved faster in my head than it actually did. So kind of the opposite of what you're trying to prove to be honest.

Researcher: So you kind of expected it to be done already, and then there was a confrontation that there was some time left?

Participant: Yeah, I think in my head, but it's because of timer going upwards that I got confused and then thought it was faster. So actually I think maybe I got like sped up in my head a bit.

Researcher: So when deciding to look at the time. Was that a moment that you said: 10 minutes are over?

Participant: Yeah, it was more for like checking how much I had left to try and get the first spot. And then I thought, oh wait, I still have eight minutes and then like 30 seconds later I hear the music. So I was like very confused then. But yeah, it was more it was more am I checking how long I had left before I could try for the first position.

Researcher: Okay. So you don't say that you were really losing track of time?

Participant: No, I don't think so, no.

Researcher: Okay. So is that mainly because you knew that there was 10 minutes in a game? Would you say that smaller time periods were more difficult to interpret?

Participant: I think knowing that the game mode was 10 minutes is giving me kind of a measurement in the game for like how much time has passed. But in general, I don't think that the length of a game changes if you lose track of time or not because when I play Rocket League, that's only five minutes. I play a game after game after game, and suddenly three hours pass.

So there I do get kind of lost in time. But I don't know in CSGO, I don't think I do. It's just maybe the type of game where you constantly, when you die, you check your scoreboard, you are back to reality or something. I don't know.

Researcher: Okay. So in a way, the times that you've died and looked at the scoreboard were kind of the moment of getting out of that concentration for a bit, to then get turn back into it?

Participant: Yeah, I think that's actually indeed a good point. When I look at the scoreboard, I think that resets my mental a bit and then therefore you don't lose track of time that much playing CS. Well, I do. So I think that's maybe the reason, yeah.

Researcher: Okay. And so if a period would be longer in between you looking at your scoreboard and not looking at your scoreboard, so that moment that you're not looking at it, if that would be longer, would you lose track of time then?

Participant: Yeah, definitely. Because you're focusing on the game, you're not paying attention to how many seconds are actually passing. Yeah, I'll lose track of time very swiftly.

Researcher: Okay. All right. So, lastly, because you kind of mentioned it already, but want to a little bit further on it. Did you ever really miss the head-up display while you were playing and what moments did you miss it the most?

Participant: Yeah, so missed it the most definitely when I was spawning because then you don't have your map where literally I think... I still think I still do it that you see red dots where the players are when you spawn but I'm not 100% sure but yeah, I missed that a lot. And then something else I missed a bit was the amount of ammo I had left. But I never got into a fight without ammo so I think I handled it well.

Researcher: Okay. So would it be correct to say that in moments that you were not in action, you kind of missed it sometimes but not completely? And then when you got into moments of actions you said well, I don't really care that it's not there because I'm focused on what's happening?

Participant: Exactly.

Researcher: Okay. Interesting.

Okay, that was about it then. Thank you so much for lending me be at your time here and participating. If you ever want to change your mind on this data or this conversation to be used for the research, you can of course send me an email or DM or whatever. And I'll send that all over the recording here unless there are any other questions.

Participant: I want to know how I did it with my time. Okay.

Researcher: Well, actually both moments were the same time, and it was 45 seconds.

Participant: What?

Researcher: So, you were right with it. But during play, you estimated it to be one minute.

Participant: I am kind of right that time speeds up in my head?

Researcher: Yep, exactly. I'll stop the recording here.

Participant: Yeah, okay.