"If the game does not work, it is lagging, or you die in game, you just get furious" – children's experiences on gamer rage

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Abstract

Gamer rage, rage induced by digital games, is an understudied area, especially from children's perspective. This study explores children's stories of the reasons and manifestations of their gamer rage. Data consisted of 31 children's essays which were analyzed using qualitative content analysis. The results show that children explain their own in-game failures, incompetence of teammates, and technical problems as the main reasons for their gamer rage, and they express their rage verbally, physically, and by quitting. This article is the first attempt to study gamer rage from children's perspective and it provides new insights on the topic in general.

Keywords 1

digital games, gamer rage, rage quitting, self-regulation, emotions

1. Introduction

Digital games, as an affective media, can make players feel and generate various emotional responses [1]. Games have been extensively studied from the perspective of emotions [2], and they have been shown to provide positive emotions such as enjoyment and pleasure [3, 1], tools for mood management [4], and meaningful experiences for their players [5]. Meaningful gaming experiences are sought, for example, in games evoking strong and intensive emotions, such as horror games [6] and permadeath games, in which in-game death of a playable character is permanent [7, 8].

Emotions such as anger and frustration have been found to increase aggressive behavior [9]. Aggressive behavior has been studied also in the context of digital games. The effects of gaming, especially on children, have raised a

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concern, as some studies have found children playing digital games to behave more aggressively than their peers [10]. Aggressive behavior has often been associated with violent game content [11], although, according to Ferguson [12], those results remain debatable.

Conversely, playing digital games has also been suggested to support the development of self-regulating skills [13], and digital games have been used as a tool for learning emotion regulation skills [14]. Also, children themselves have reported improved self-regulation skills, such as frustration tolerance, by playing digital games [15]. Rage induced by digital games, gamer rage, has also become entertainment in itself. There are, for example, many gamer rage compilations on YouTube, in which players rage, yell, and often smash their gaming devices. Many of those videos have millions of views, for example [16].

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It is important to understand anger and rage, their reasons, and expressions in different contexts where they emerge. Research exists, for example, on experiences of customer rage after service failures [17] and road rage [18], but it has been pointed out that there are only a handful of studies on rage in the context of digital games [19]. Most existing studies explore the topic in the context of eSports and with adult participants. But as children and adolescents are active players of digital games [20], it is important to understand gamer rage also from children's perspective. This study contributes to this gap of knowledge and explores sixth- and ninth-grade children's gamer rage from two angles: Why do they rage and how do they rage. The following research questions were addressed:

- How do children explain the reasons for their gamer rage?
- How does children's gamer rage manifest, as described in their own words?

2. Previous research

Rage is defined as shame and failure of maintaining self-esteem [21], or as intense and uncontrolled anger caused by tension and hostility arising from a frustration [22]. Anger is a common emotion among children and adolescents [23], and in particular, the onset of puberty can increase emotional arousal and emotion regulation problems [24]. Although rage is a natural emotion [21], its expressions in school-age children are also a problem [25] and can hamper, for example, school adjustment and peer relations [26].

Learning to regulate negative emotions like anger and rage is an important element of growing up [26]. Self-regulation of emotions is not an innate trait but a metacognitive skill that can be learned [26, 14]. In addition to early childhood, adolescence is a critical period for the development of emotion regulation skills [24]. Adolescents use several strategies such as venting, distraction, or reappraisal for purposeful regulation of emotions [27].

Aggressive behavior associated with digital games has been much discussed in public [12]. The violent content of digital games has often been suggested as the cause of game-related aggression [11, 10]. However, also alternative explanations for aggressive behavior associated with games have been suggested. Willoughby et al. [28] argued that the association between violent games and aggressive behavior may be due to the competitiveness and fast-paced action of these games rather than their violent content. Przybylski et al. [29] suggested that the frustrating players competence satisfaction is often the cause of the aggression. Results were similar in violent and nonviolent games.

Frustration caused by multiple failures and losses to opponents sometimes leads to rage auitting: "act of disconnecting gaming equipment, sometimes violently" [29]. Edge [30] defines rage quitting as a situation where the "player becomes frustrated with the current game state and decides to intentionally abandon the game". Rage quitting can be divided further into micro quitting and macro quitting. In the context of digital games, micro quitting, means ending the current session, and macro quitting means quitting the game for good [19]. The gamer rage in YouTube compilation videos is often micro quitting, which does not always lead to quitting and uninstalling the game [16]. Social factors, such as a common gaming history, have been shown to affect player's decision not to rage quit [19].

Uncontrolled expressions of rage can have negative effects in addition to the obvious material damage. For example, rage quitting in digital games has been found to negatively impact other players, especially in team-based games [19], and it is considered reprehensible behavior, penalized by some games [30].

3. Methods

3.1. Participants and procedure

The data of the current study (31 essays) is extracted from the data of a larger research program designed to explore children's metagame activities [31]. The term metagame is used here in its broad meaning to refer to "all the activities connected with the game that is not part of playing the game itself" [32].

Participants of the study came from one municipality and three separate schools in Eastern Finland. Written permissions and informed consent were asked from the participants and their guardians. Out of 194 requests sent, permissions were received from 142 children, including 73 sixth graders (31 girls, 42 boys) and 69 ninth graders (33 girls, 36 boys), who participated in the first phase of the study. Permission was not received from 52 students, who were therefore excluded from the study.

The data were collected as a part of children's school day over two 45-minute school lessons. A total of 142 students participated in this phase. At the beginning of the first lesson, the researcher introduced himself, and the researcher and children briefly discussed the purpose of the study to create an atmosphere of confidence for data collection [33]. Next, participants were divided into groups of two to four students to discuss and create lists of any possible digital game-related activities they know, other than playing the game itself. After that, the groups presented their lists of these activities to other children. Groups were then disbanded, and as the last task of the first lesson, the children were instructed to write down personal lists of digital game-related activities (other than playing the game itself) they have participated in. The purpose of the first lesson was to help the participants to recall, by discussing and making lists, metagame activities they have participated in. After the first lesson, a break of about 20 minutes followed.

At the beginning of the second lesson, participants were asked to complete their list of activities in case some new activities had come to their mind. Next, participants were instructed to write an essay on their digital game-related activities. Of these 142 participants, 31 participants discussed gamer rage in their essays and were therefore included in the current study; 22 of them were sixth graders (9 girls, 13 boys) and 9 were ninth-graders (6 girls, 3 boys). The remaining 111 participants who did not discuss gamer rage were excluded from the study. Before analysis, participants were given pseudonyms, and data were transcribed into electronic form.

3.2. Data analysis

Data were analyzed using qualitative content analysis, which is well suited for analyzing written data in exploratory research [34]. The approach to analysis was conventional, in which the data is approached without predefined codes or categories [35]. This approach is often used when there is little or no previous research on the phenomenon under study [36, 35]. Atlas.ti 8.4 qualitative data analysis software was used for analysis. Analysis followed the description by Hsieh and Shannon [35]. The analysis was performed by two researchers.

Before the coding, data were first read several times to get a general sense of it. The first analysis run was concerned with the first research question on the reasons children gave for their gamer rage. Reasons for children's rage were coded without predefined codes. Codes were revised several times during the coding session, and to increase the reliability of the analysis, differences and similarities of content and naming of the codes were negotiated between the researchers until both agreed with the coding.

Subsequently, codes were grouped into categories based on how they related to each other. Two researchers participated also in this phase of analysis. To ensure the quality of the categorization, content and naming of categories were negotiated between researchers until they reached a consensus. Three categories of children's perceived reasons for their gamer rage emerged: in-game failures, incompetent teammates, and technical problems.

The second analysis run was concerned with the second research question on children's reports of how their gamer rage manifests. The data were analyzed using the same procedure as with the first analysis run. Data were coded without predefined codes, the content of codes was discussed and reviewed many times during the process, and codes were aggregated into categories. The three categories in which children's gamer rage took form were verbal expressions, physical expressions, and quitting.

4. Results4.1. How children explained the reasons for their gamer rage

This section reports the results of the first research question on how children explained the reasons for their gamer rage. Those reasons were divided into three different categories: ingame failures, incompetent teammates, and technical problems. Table 1 shows the categorization of reasons by which children explained their gamer rage.

Technical problems
reennear problems
Inoperable gaming devices
Inoperable games
Inoperable Internet

Table 1Reasons for children's gamer rage

4.1.1. In-game failures

The first category that arose from children's essays was in-game failures, which refers to a player's own failures in the game. Players'

failures, such as dying or losing to another player in game, were described in several essays as a cause of outrage. Sixth grader boy, Keeko, writes as follows about his reaction to dying in the Fortnite, a popular Battle Royale type game: "I raged in Fortnite when I died. I threw the controller into the wall, but it did not break. My feelings were mixed." For some players, the success of a friend when the player him/herself was failing was found to be particularly frustrating: Sixth grader girl, Adela, wrote: "I always rage if I lose. For example, my friend won the game and I did not, so I started the whole game from the beginning." Children compared their in-game performance to the performance of their friends and other players, which on occasion made them feel incompetent and frustrated.

In addition to comparing their own performance to that of others, repeated failures and losses were particularly frustrating for the gamers. For instance, a sixth grader boy, Max, wrote about repeated losses in a popular competitive real-time strategy game as follows: "I have raged in Clash Royale. I lost 200 trophies out of 3900 trophies and broke the phone because of it." A ninth grader girl, Isabella, wrote about the rage caused by several repeated failures: "I have tossed my phone at the wall when I became angry, because I died, and I died many times in a row, but when the level was completed it was pretty easy." Some children also recognized a connection between playing in an angry state of mind and failing easier again.

Also, getting very far in the game and failing in the final moments was a source of raging. Sixth grader boy, Lennie, wrote the following: "I once raged in Fortnite when I died to last opponent and I threw my keyboard out of the window and I was not able to play at all next week because I did not get a new one". In-game failures, especially when repeated within a short period of time, or when the game had so far progressed well and success was close, were oft-mentioned causes of participants' gamer rage.

4.1.2. Incompetent teammates

While failing is something that can happen in a single player game as well as multiplayer games, the second category, incompetent teammates, is exclusive to multiplayer games. A number of participants wrote that they have raged because of their teammate's incompetence. Sometimes incompetent teammates were friends, but also playing with previously unknown players caused raging. Ninth grader boy, Riley, had played a popular team-based competitive first-person shooter game, and wrote as follows: "I once broke my laptop when I lost my temper in CS:GO when my team was full of Russian silvers (silver is lowest player rank in CS:GO), but now I have a Some desktop computer." participants described that incompetence of other players reduced their own chances of success, which, they explained, was the reason for their rage.

4.1.3. Technical problems

The third rage-inducing category was technical problems, which mainly referred to completely or partially inoperable gaming devices or network connection. Results showed another reason to rage, taking place when technical problems either limited or completely denied participants' gaming. Many participants wrote that they fly into a rage if the gaming equipment, internet connection, or game itself did not work at all, or worked poorly. Sixth grader girl, Milana, wrote as follows about gaming related technical problems and her feelings on them: "I have been furious with many games. If the game does not work, it is lagging, or you die in game you just get furious." Gaming session cancelled or ruined by technical problems was a real disappointment for children.

4.2. Children ways to express their gamer rage4.2.1. Verbal expressions

The first category that emerged from the data was verbal expressions, which refers to the participants' verbal articulations of their emotions. Participants wrote that they, for example, cried, yelled, and cursed as a result of the rage caused by the games. Ninth grader girl, Belle, wrote: "I've done many game-related things; I have, for example, become angry when the game does not work, or playing for some other reasons fails. Neighbors certainly have often heard the screaming and laughing as well." Another ninth grader girl, Jennifer, wrote: "I have lost my temper many times when playing and cried because of it. The games where I lose my temper are specifically The Legend of Zelda, Alicia Online, and online games in general." The participants were not shy to verbalize their game-related rage.

4.2.2. Physical expressions

The second category of children's ways to express their rage was physical expressions. Reported physical expressions were mostly violent and targeted gaming devices such as gaming computers, consoles, game controllers, keyboards, mice, and smart phones, but sometimes also furniture. Sixth grader boy, Evan, wrote about his outrage at Fortnite as follows: "I have often raged when I have died in Fortnite, and when I died, I kicked the computer and hit the table." Participants' rage usually targeted readily accessible objects at the time of their tantrum.

The children also wrote about the consequences of their rage: Objects on which they unleashed their fury often broke down, though the intention was not always to break anything, but sometimes to even avoid damage. Sixth grader boy, Ethan, wrote: "The controller broke when I died in Fortnite. I tried to throw it

on the couch, but it hit the wall and now it no longer works; it does not charge." Broken gaming equipment hampered or prevented children from playing and was thus displeasing. Some participants wrote that they tried to soften their most destructive expressions of rage. Other participants wrote how they were on the verge of breaking something as a result of the outrage but had succeed to control their emotions and most destructive intentions.

4.2.3. Quitting

In addition to expressing anger verbally and physically, some participants reported to have done more as a result of their gamer rage: quitting altogether. The third category, quitting, refers to children's actions to distance themselves from the game due to the rage it had evoked. Quitting often happened in a gust of rage, or as a result of breakdown of gaming equipment. However, participants also wrote that they had taken a break and uninstalled games more thoughtfully and constructively after the raging incident. Usually, participants micro quit but came back to play the game after a while. Sixth grader boy, Victor, wrote about his actions and thoughts of game induced rage as follows: "Sometimes when you die in a game then you get angry and you rage. It makes playing difficult and it can last for a while, or the rest of the day that your gaming doesn't pan out and that's when I take a break because I don't want to lose every game." Some participants wrote that they had learned that gaming will not go well and is not enjoyable on tilt (in a furious state of mind).

Some children were able to distance themselves from the game in these situations, for example by taking breaks. However, micro quitting the game was not enough for everyone. Some participants were able to make extreme and permanent solutions when their gamer rage started to bother themselves too much. For instance, a ninth grader girl, Belle wrote: "Thousands of times I have lost my temper, and as a result, the digital device has almost broken. In the end, I decided to quit gaming altogether. It always felt easiest to get angry when it was about gaming."

5. Discussion

Different rage-related phenomena have been studied in different contexts, and a body of research on game-related rage is emerging. One gap in that nascent literature base is research on gamer rage from children's perspective, as children perceive it. This study addresses that gap of knowledge by using children's own descriptions of their gamer rage as data. This study explored how do children explain the reasons for their gamer rage, and how does children's gamer rage manifest. The results show that children consider their in-game failures, incompetent teammates, and technical problems to be the chief reasons for their gamer rage, and that rage manifests in verbal and physical actions, as well as in quitting.

Previous studies have suggested violent content [11], competitiveness and fast pace of action [28], and loss of the feeling of players' self-competence [29] as the reasons for gaming related aggressive behavior. This study found no mentions of violent content as the reason for children's gamer rage. Competitiveness of digital games emerged from children's raging stories of almost winning in competitive game but failing in the final moments as well as from upset when a player's friend won. Frustration and raging related to it were an outcome of children's own failures, especially repeated failures or failing at a critical moment. Those results support Przybylski et al.'s [29] results that linked frustration caused by players' own mistakes with aggressive behavior.

The results also revealed that some children took breaks from the games to regulate their anger and its expressions, because they did not want to play on tilt and keep failing in game because of their anger. Kahila et al.'s [15] study investigated children's perceived learning in the context of digital games and their results revealed similar ways to manage game related frustration. Behavioral distraction, doing something else when faced with negative affect is found to be an effective and easy-to-use emotion regulation strategy [27]. Understanding gamer rage can also provide professionals working with children with a child-friendly topic to discuss the reasons, consequences, and different methods of anger management.

The results of this study also found that in some extreme cases, participants were also able

to quit gaming altogether when they found that their gamer rage negatively affected their quality of life; Weber [19] called this macro quitting. Quitting gaming altogether is a big decision for a gamer; one that requires serious self-control.

5.1. Limitations and future research

As an exploratory study, the results are limited in a number of ways. Firstly, this study explored why do children rage and how do they rage, in their own words. Reporting one's own experiences is always a subjective approach and the results must be seen in that light. For example, children may have attributed some of their rage to technical problems or to incompetent teammates, because reasons found outside of themselves might have been easier to accept.

Secondly, the sample size and sampling small. which prohibits frame were generalization from these exploratory results. Thirdly, although essays can provide rich data in participants' own words, they do not allow for in-depth questions or follow-up questions to be asked. Participants also wrote about their past experiences, which differs from describing an experience immediately after it happened, as memory of past experiences may have been distorted over time. On the flip side, a monitored gaming situation, in the presence of a researcher or teacher and other students, would hardly have brought out similar rage reactions as playing in familiar home circumstances. Writing essays about their authentic, past experiences provided children with a lower threshold and familiar way to share their experiences. However, in the future, research on children's gaming rage would benefit from complementary methodological approaches and more diverse samples. This study highlighted several interesting topics for future research.

• Rage reported by children often occurred while playing competitive games such as Fortnite and Clash Royale, although the participants reported gamer rage also with single-player games. Thus, children's experiences on game types and game genres in relation to gamer rage, and children's strategies to cope with or control their gamer rage in different games or game genres, are promising topics for future research.

• In-game failures, incompetent teammates, and technical problems—the reasons to which children attributed their gamer rage—are all directly related to the games being played, and there were no mention of the effect of out-of-game events or bad mood on the onset of rage. Thus, children's perceptions of the effect of nongame factors on their gamer rage is also interesting topic for further research.

• Although this study did not explore children's attitudes toward gamer rage, there were signs that attitudes towards gamer rage varied between participants. Some children reported their raging almost proudly, which may be due to the entertainment aspect connected with gamer rage (in form of gamer rage compilations in YouTube, for instance [16]. However, other participants wrote more regretfully about their rage. Children's attitudes towards their own gamer rage, as well as that of others, presents another promising direction for further research.

5.2. Conclusions

The purpose of this exploratory study was to provide a children's perspective on gamer rage by examining how children explain the reasons for their gamer rage and how does their gamer rage manifest. This study has shown that children consider their in-game failures, incompetent teammates. and technical problems to be the chief reasons for their gamer rage. Children's rage manifests in verbal actions, physical actions, and in quitting. The findings of this study widen our understanding of children's gamer rage. Results also give new perspectives for media educators, teachers, and other professionals working with children. The study also highlights important future research topics, such as children's experiences of the impact of out-of-game events on their gamer rage and children's attitudes towards their gamer rage.

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