

NEW MEANINGS OF COMPUTER-BASED ENTERTAINMENT AND COMMUNICATION AMONG STUDENTS IN POLAND DURING THE COVID-19 PANDEMIC

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ABSTRACT: This article is an attempt at investigating new meanings and significance of computer-based entertainment during the COVID-19 pandemic. The authors explore how and to what extent students in Poland have been using electronics for entertainment during the global crisis, what emotions appeared and whether they were able and willing to engage in an auto-reflexive process. The article presents the results of the questionnaire interview designed for the purposes of this particular study. The authors chose to reveal the multi-facetedness of the theme in question, i.e. focus on the possibilities and the future that computer-based entertainment offers, leading to transformations both externally and internally.

KEYWORDS: computer-based entertainment and communication, recreation, leisure, E-leisure, students in Poland, COVID-19 pandemic

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Introduction and theoretical framework

Changes caused by the coronavirus disease (COVID-19) pandemic impacted both the work environment and the sphere of leisure time. Working conditions and numerous restrictions introduced by governments all over the world affected the scope and ways of spending free time. However, recreational activities enabled rest and self-development, as well as shaped social ties, developed interests, and contributed to the general improvement of the quality of life. The new significance of computer-based entertainment is

the main scope of the analysis herein, as it concerns the online leisure activities of students, among whom the research was conducted. At the same time, the authors of this paper intended to offer a COVID-19-related analysis that would be somewhat different from what has been generated in the course of the pandemic-stricken year and a half, and chose to verify quantitative techniques, namely the autoethnography of a didactic task performed by students. To this end, we relied on researchers' notebooks, whereby the role of the 'researchers' was assumed by some of our students, whom we had asked to conduct

questionnaire-based semi-structured interviews among the student community. We hope that the adapted combination of various theoretical lenses constitutes a credible case for inclusion and reflexivity in social sciences, which seems to be in line with the many transformations that the COVID-19 pandemic has brought about and will leave behind.

The article aims to explore new meanings of computer-based entertainment in the COVID-19 pandemic in the opinion of students. To achieve this goal the article is structured in the following way: we begin with a literature review concerning recreation and entertainment in the virtual dimension; then we present in detail the methodology selected for this study; we subsequently demonstrate the findings and, finally, we discuss briefly the results in the form of concluding remarks and give our recommendations for further research into the subject, including the qualitative interpretation of the researchers' notebooks. It allowed us to look critically both at the research process itself and at our method specifically.

Literature review

Leisure time is defined as time left after completing all duties (work, household chores, physiological activities, and needs); it is a part of the general time available to individuals. It is time free from obligations and marked by a freedom of choice. It can be active or passive, and it is usually perceived as compensation for work (Kelly 2009). When defining recreation, it must be emphasised that it has multiple meanings and it is usually identified mainly in the context of physical activity (physical recreation) (Mokras-Grabowska 2019). The semantic range of the concept of recreation is vast, but it always denotes a form of active rest, e.g. sports; tourist, social, or cultural entertainment; hobbyist recreation; and also virtual recreation (Broadhurst 2002; Meeras 2010). All these phenomena take place during leisure time, but there are also many hybrid activities, i.e. those which are becoming increasingly mixed with work. The most important thing is the fact that recreation (and leisure in general) depends on the mind frame and the mental state, and is based on the subjective sense of freedom. It is an activity – rooted in a particular social and

environmental context – that is perceived as free and satisfying by the participant. 'What', 'where', 'when', and 'with whom' all affect the perception. An important part of leisure and recreation is undoubtedly the high-quality integration of culture, tourism, and sports (Ling 2020).

The coronavirus pandemic changed all aspects of reality, including leisure activities. In the era of COVID-19, computer-based entertainment is gaining significance and, as a result, a rapid acceleration of the digitalisation of leisure experiences is visible (Jarszak 2021). Thanks to digital technologies which have become quotidian, mediating tasks such as work, travel, consumption, production and leisure took on meaning. Cyberspace and digitally mediated experience became a form of virtual space for leisure, a kind of metaphor for understanding the worlds accessed by digital technologies (Ash et al. 2018). Similarly, spatiality and mobility started to change.

The outbreak of COVID-19 has become a global health threat affecting the lives of people across different contexts and cultures (Anderson 2020; Rahman et al. 2020; Sivan 2020; Stodolska 2021). Many countries around the world initiated a lockdown policy to ensure spatial distancing, self-isolation or quarantine, all of which are supposed to limit the spread of the disease. Additionally, the COVID-19 pandemic has led to social-distancing restrictions across the world, including the shutdown of schools, the closure of public playgrounds and venues for physical activity, the cancellation of sports and recreation activities, as well as the introduction of numerous travel restrictions through border closures (Katewongsa et al. 2021; Ling 2020; Sivan 2020; Young 2020; Bond et al. 2021; Bonotti, Zech 2021; Lashua et al. 2021; Tulchin-Francis et al. 2021; Wieczorek-Kosmala 2021). Sports and leisure opportunities have become vastly limited and confined to more individual forms. Therefore, leisure-related industries are the most affected branches of economics, and their profitability is facing obstacles (Young 2020). Creative art as well as the cultural sector and the sports sector have all been significantly affected, too, and thus moved into the online form (music venues, theatres, cinemas, fitness, religious gatherings, etc.). There were struggles to make some of the performances available to the public via online

streaming platforms. Owing to communication technologies, the leisure sector has the opportunity to exist in virtual reality, and relationships between people have been sustained. However, during this physical isolation, leisure is vital – and also absent – like never before (Lashua et al. 2021). If we were to consider Maslow's hierarchy of needs, basic needs (food, shelter, clothing) were met, while others (safety, love, contribution) were challenged (Anderson 2020; de Miranda 2020). People had to modify their usual leisure activities (e.g. dining out, travelling, outdoor physical activity), with home entertainment and social life undergoing a profound transformation (Katewongsa et al. 2021; Young 2020; Stodolska 2021). Computer games, virtual reality and streaming had the greatest impact on digital entertainment (Jarszak 2021). The pandemic has revealed to the public the critical role that leisure plays in human life while helping people cope with traumatic events and offering an escape from stress. New network techniques have been used – Zoom, Skype, YouTube, Facebook, Google Hangouts, WhatsApp, Instagram, Messenger, etc. – for connecting people during family celebrations, home cooking, sewing homemade face masks and gardening (i.e. home-based activities). People learned how to discover new meanings in activities which they had previously taken for granted, and very often they managed to adjust to the new pace of life (de la Barre et al. 2020; Sivan 2020; Young 2020). The phenomenon has brought the renewal of leisure interests and intervened with the work-life balance system; people changed and adapted to their leisure pursuits to cope with the new situation.

The widespread diffusion of Internet usage has triggered new interest in the effect of media technologies on social behaviour (Nimrod, Adoni 2012). It radically changed practices in all life domains and it is still transforming individuals' access to leisure, developing new social ties and networks. New technologies are a source of information, but also of entertainment in the form of enjoyable activities such as games, online education, shopping, dating, blogging, online fitness, e-sports, etc.

Years ago, it was unclear whether cyber-spatial leisure could be conceptualised as leisure at all (Miah 2000). Nowadays there is no doubt, and such activities are called 'online leisure', 'cyber

leisure', 'virtual leisure', 'computer-based entertainment', 'digital entertainment or 'E-leisure'. In the COVID-19 pandemic, online leisure meets the demand for social connection, which manifests itself through a range of media channels (Sivan 2020). The crucial difference between offline and online leisure is the spatial aspect – leisure in cyberspace challenges conventional conceptions of spatiality, i.e. 'E-leisure' is not performed in the material, physical space; it is performed in 'cyberspace'. It is a space where individuals are involved in communications in unspecified environments. According to Farmer (Nimrod, Adoni 2012), cyberspace is a place where people – regardless of their location – can get together to socialise in a participatory experience.

E-leisure is considered to be one of the subsets of leisure activities. In recent years, numerous scholars have explored activities such as online gaming, dating (Lawson, Leck 2006), and participating in virtual communities (Nimrod, Adoni 2012). Since E-leisure challenges conventional conceptions of reality, spatiality, time, and geography, it calls for new understandings. For a long time, it had been argued that most E-leisure activities had no physical health benefits, but on the contrary they had a negative influence on health. The non-physical status of E-leisure has been changing recently (e.g. online gyms, online courses and classes) However, the E-leisure literature highlights the lesser importance of geographical space. Access to the Internet enables individuals to enjoy their leisure along with their working and commuting activities. When conceptualising E-leisure as action, it should be noted that it can be physical, intellectual, social, or creative – just like traditional leisure activities. It is also the space within which social life and relationships take place, develop, and thrive (Lawrence 2003: 302).

One interesting question during the COVID-19 pandemic is whether the Internet will predominantly become a means of active social communication, or, perhaps, a means of passive and private entertainment. Will E-leisure 'crowd out' face-to-face interactions? Long-term implications of the Internet translate into the fact that many pre-existing cultural forms have suddenly gone liquid, losing their former shape as they got 're-tailored' for computerised expression. As new patterns solidify, both useful artefacts and

the texture of human relations that surround them are much different from what had existed before. According to Winner (Lawrence 2003), this process amounts to a vast ongoing experiment whose long-term ramifications can never be fully comprehended.

The COVID-19 pandemic has also exerted an unprecedented impact on the tourism industry (Lu et al. 2022). Consequently, virtual tourism was expected to have great potential during the COVID-19 pandemic, especially when (due to pandemic travel restrictions) it reduced unnecessary trips (Lu et al. 2022). New technologies empowered the tourism industry and brought new opportunities. New technology advances, such as 'virtual reality', provide consumers with the opportunity to experience a destination in virtual reality as well as it has the power to engage them in travel activities and behaviours (Kim, Hall 2019: 236). Virtual tourism is a virtual representation of an actual attraction, destination, or a visitor's experience. Virtuality in tourism is also used as a management tool, i.e. as a substitute for visiting environmentally sensitive sites, holding great potential for marketers promoting their products and services (Deng et al. 2019). Studies show that the majority of potential tourists experienced some form of virtual tourism before their visits (Tussyadiah et al. 2018). Tourism was an early adopter of the potential of virtual reality (interplanetary voyages, trips to fantasy worlds, sporting events and theme parks) (Dewailly 1999). Nowadays, it reduces the risk of unfamiliar destinations and enables tourists to search for potential tourist destinations from the comfort

of their homes. It uses virtual reality devices to play, enjoy, experience, and explore by looking at pictures, watching 3D 360-degree videos, drone videos, gaming, broadcasting, streaming, etc. During the COVID-19 pandemic virtual trips used to be an entertainment activity to bring experience to people without being actually in the destinations, thus reinforcing stay-at-home order and helping contain COVID-19.

Methodology

Referring to the main aim of the article, it was decided to verify the changing meaning of computer-based entertainment during the COVID-19 pandemic. To answer the main research question, the authors carried out the questionnaire interview described in the table below (Table 1).

The questionnaire interview aimed to analyse students' opinions about participation in computer-based entertainment. Students from the Faculty of Geographical Sciences, University of Lodz (study programme: Tourism and Recreation) were asked to conduct interviews (eight interviews each) with selected students at any university or faculty in Poland or abroad (the period of the research: October – November 2020). Their task was to carry out online interviews based on the questionnaire prepared by the authors in the MS Forms platform beforehand, as well as to complete the research notebook. The authors decided to use non-probability sampling techniques which are useful in exploratory and qualitative research to develop an initial understanding of a

Table 1. Selected methodology of the study.

Main research question	Detailed questions	Method
What is the new meaning of computer-based entertainment during the COVID-19 pandemic?	<p>What are the most popular computer-based activities among students during the COVID-19 pandemic?</p> <p>How do these activities differ in terms of sex?</p> <p>What are the most popular channels/programmes/applications that enable participation in computer-based entertainment?</p> <p>Are these activities undertaken individually or in groups?</p> <p>What are the main reasons for undertaking these activities?</p> <p>How do the students rate these activities?</p> <p>What are the benefits of participating in computer-based entertainment?</p> <p>What computer-based entertainment will still be undertaken after the end of the COVID-19 pandemic?</p> <p>Are these activities able to replace the non-virtual reality, and to what extent?</p>	Questionnaire interview among students from various universities

population of students' convenience sampling. In consequence, the sample is not representative of the population, so the results obtained cannot be generalised. Eventually, it came to 530 students from various universities. A structured interview (based on a questionnaire) is considered to be a highly standardised technique, one which is based on mutual communication (Grzeszkiewicz-Radulska, Krzewińska 2013). It is particularly useful in short interviews, where the topic is generally simple and might not be considered by the respondents as troublesome or controversial. The authors chose quantitative methodology and the interpretation of the collected material was based on descriptive statistics.

To verify the process of conducting the interviews and our questionnaire, the students carrying out the study were asked to complete the research notebooks. The research notebooks included a table where the students were supposed to fill in: the date of the interview, the interlocutor's sex, as well as the start and end time of the interview. There was also space for comments of the study participants and for the students-researchers' reflections. At the end of the notebook, we also left space for writing a summary of the research. Although the research notebooks were merely a didactic task, the analysis gave us a better understanding of the phenomenon and emphasised a therapeutic aspect of the conducted research. The qualitative analysis of the contents of the research notebooks—performed in the form of autoethnography—involved an attempt at finding answers to the question:

“What are the students-researchers' experiences and reflections on computer-based entertainment during the COVID-19 pandemic?” The answers were described in all the 53 notebooks. These qualitative methods of the interpretation of the notebooks allowed the authors to extend the results of the interviews to a limited degree.

There are many dimensions of autoethnography in contemporary social research. As one of the experts in the field convinces, it is necessary to refer to the participant's perspective in social sciences (Kacperczyk 2014). The researcher proposed three levels at which autoethnography is used. The authors of the article have chosen one of them, namely that which concerns the level of data production—here, autoethnography remains merely a technique for obtaining information

from the participant's perspective. Below, the authors will explain the usage of autoethnographical techniques for their research material in the form of research notebooks, which were analysed to reveal the respondents' understanding of the phenomenon and its interpretation. In this regard, autoethnography is about intersubjective data-checking, where an individual history becomes significant, as it brings an essential element to the exploration of the human world (Kacperczyk 2014).

Findings

As was already mentioned, the data was collected by students of the Faculty of Geographical Sciences, of the University of Lodz, through the MS Forms app for creating and implementing online questionnaires. The statistical analysis included 530 questionnaires of those respondents who declared having participated in computer-based entertainment during the COVID-19 pandemic. The questionnaires consisted of questions concerning opinions about participating in computer-based entertainment, including the type of activity and its frequency, channels, programmes and apps used, the main motivations and the benefits. The respondents were also inquired about their willingness to continue pursuing particular online activities after the end of the pandemic. In this context, they were asked to rate the extent to which virtual activities managed to replace the real, non-virtual world for them.

The respondents came from various academic centres in Poland and abroad, with the majority representing the University of Lodz (52%) and other Polish universities (26%). The sample was evenly split between female and male participants. The dominant respondents' age group was 20–23 years old (77%), and then 17–19 years old (18%).

The vast majority of the respondents declared having participated in activities such as film (88%), TV series (78%), and short films (61%). Gaming was also largely popular (58%), while online festivals or performances attracted the least interest (9% and 8% respectively). Moreover, the research proved that other physical trainings (32%), fitness and aerobic (25%), or self-development activities (29%), webinars (25%), concerts

(25%) and workshops (17%) were also popular to some extent.

The activities were undertaken alone (60%) more often than in the company of family, partners or friends (40%). As shown in Fig. 1, yoga (62%), meditation and relaxation (60.7%), workshops (59.1%), and podcasts (59.1%) were undertaken alone most frequently. In contrast, activities such as festivals (56.5%), performances (56.1%), or webinars (56.1%) were more often undertaken in someone else’s company.

The female respondents were more willing to take up computer-based entertainment activities than the male respondents (Fig. 2). Also, the female participants more frequently participated in yoga (79.7%), fitness and aerobic (67.7%), meditation and relaxation (61.9%), and sightseeing (58.8%). On the other hand, the male respondents more often declared their participation in games (64.3%), other physical trainings (53.3%), podcasts (52.2%), and film-watching (50.7%). The differences seem to result from general tendencies connected with sex interests.

In terms of channels, programmes, and apps used for the activities, YouTube (80%), Netflix (65%), Facebook (28%), Instagram (22%), and Spotify (22%) were of the greatest interest, which corresponds to the fact that social media were the most popular source of information about the upcoming activities (73%). In this context, the most

common contents included: films (89.2%), TV series (81.2%), games (61.4%), podcasts (48.3%), and physical trainings (33.9%).

The respondents’ most important motivations in computer-based entertainment turned out to be: compliance with interests (75%), a diversification of free time (36%), no entrance fees (34%), and the willingness to participate in an easy and enjoyable entertainment (32%). Table 2 presents the respondents’ motivations referring to particular categories of the undertaken activities. In all categories of activities, all of the above-mentioned motivating factors were marked with some degree of importance. In games and in watching various genres of films, the willingness to participate in an easy and enjoyable entertainment was of great importance. Participating in workshops and performances was significant in terms of searching for more ambitious forms of entertainment. On the other hand, participation in various forms of physical activities – meditation and relaxation, yoga, fitness and aerobic – was motivated by the willingness to take care of the body and physical and mental health, as well as to regenerate, compose oneself, and relax.

Since the respondents had to rate the extent to which computer-based entertainment activities replaced the non-virtual reality for them (on a scale from 0 to 5), the results show that the average rate was not very high (3.16%). The highest

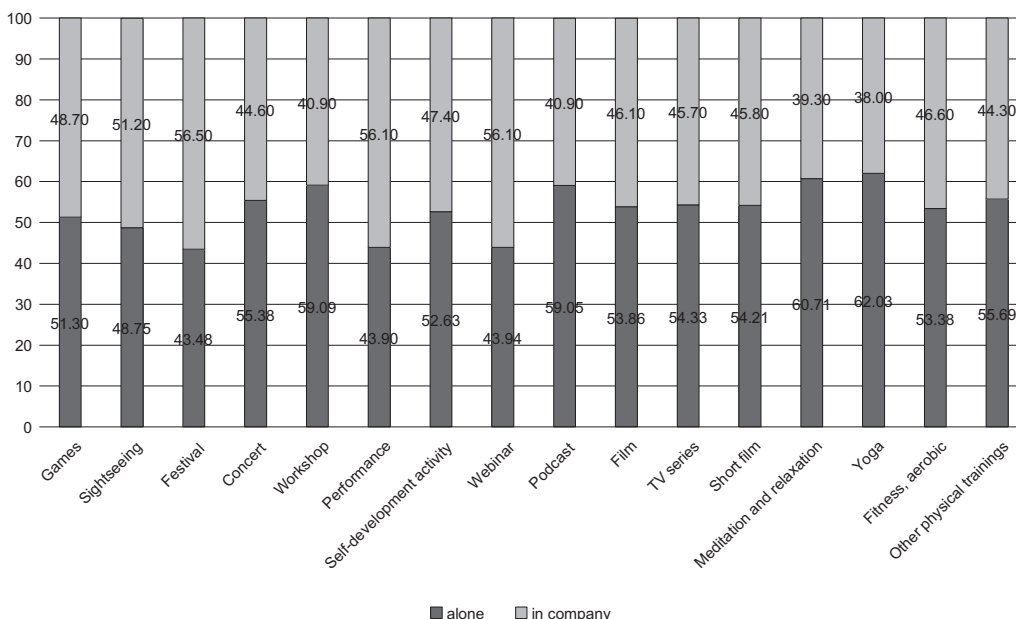


Fig. 1. Computer-based entertainment activities undertaken by the respondents with respect to the company of other people.

Source: own elaboration based on online questionnaires.

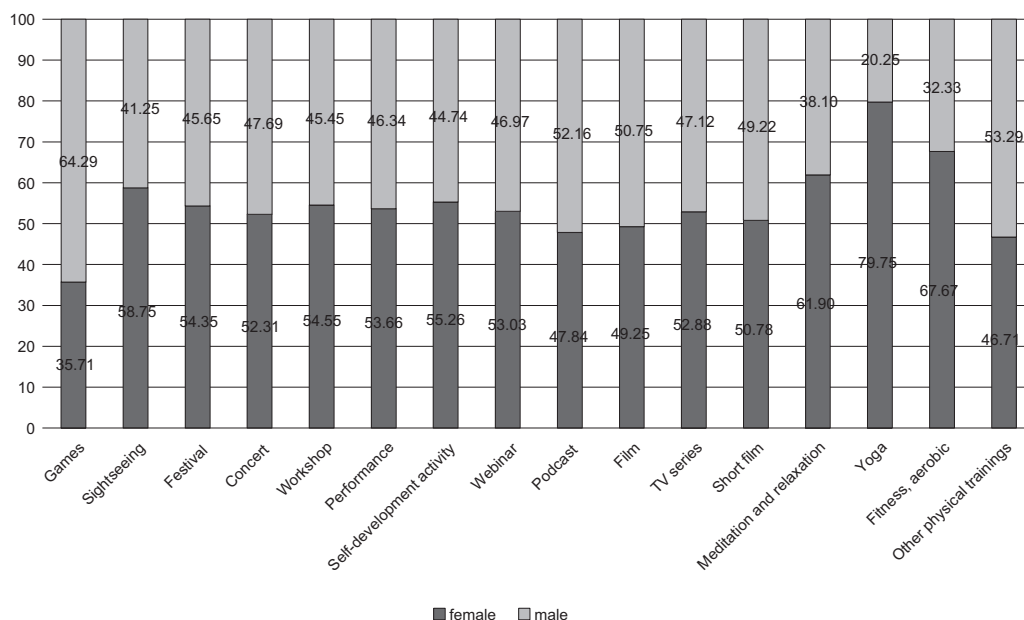


Fig. 2. Computer-based entertainment activities undertaken by the respondents with respect to sex. Source: own elaboration based on online questionnaires.

Table 2. Computer-based entertainment activities undertaken by respondents and their motivations (%).

Motivations	Computer-based entertainment activities														
	Games	Sightseeing	Festival	Concert	Workshops	Performance	Self-development activity	Webinar	Podcast	Film	TV series	Short film	Meditation and relaxation	Yoga	Fitness and aerobic
Compliance with interests	76.0	73.8	63.0	73.8	78.4	73.2	75.7	79.5	75.9	77.2	76.7	80.7	64.3	59.5	69.9
Popularity, recommendations	22.4	15.0	19.6	20.0	23.9	12.2	21.7	14.4	22.0	22.2	21.9	20.9	13.1	11.4	21.1
No entrance fees	36.4	42.5	39.1	40.0	42.0	29.3	39.5	45.5	40.5	33.9	34.1	32.7	38.1	35.4	41.4
Willingness to participate in easy and enjoyable entertainment	37.0	27.5	28.3	27.7	25.0	26.8	28.3	25.8	29.3	32.8	32.5	34.3	28.6	16.5	21.1
Willingness to continue activities undertaken before COVID-19 pandemic	17.9	18.8	21.7	23.1	29.5	22.0	29.6	27.3	21.6	18.6	19.0	19.9	23.8	17.7	21.1
Diversification of free time	40.6	42.5	37.0	45.4	40.9	34.1	41.4	37.9	39.7	37.1	38.2	37.4	38.1	35.4	34.6
Searching for more ambitious forms of entertainment	16.9	27.5	21.7	14.6	27.3	26.8	19.7	18.9	19.8	15.4	16.1	15.6	20.2	12.7	14.3
Discovering new, previously unknown areas of spending free time (online)	10.1	18.8	13.0	12.3	11.4	9.8	15.8	9.1	15.5	10.2	9.4	11.2	20.2	11.4	9.8
Willingness to fill free time excess	31.8	35.0	34.8	36.2	29.5	36.6	28.9	25.0	31.0	32.0	34.1	31.5	23.8	35.4	24.8
Willingness to take care of body	18.2	22.5	17.4	18.5	13.6	17.1	23.0	15.2	19.4	19.4	20.7	17.8	36.9	36.7	43.6
Willingness to take care of physical and mental health	21.1	18.8	19.6	20.8	14.8	12.2	26.3	18.9	24.6	21.5	22.4	22.1	38.1	43.0	36.8
Willingness to regenerate, calm down, relax	21.1	17.5	21.7	20.0	20.5	17.1	19.7	17.4	21.6	20.7	20.2	20.9	34.5	32.9	24.1

Source: own elaboration based on online questionnaires.

value concerned the following categories: film (4.04%), TV series (3.94%), and short film (3.76%) (Fig. 3). It should be underlined that 64.2% of the respondents admitted that the Internet could not replace the reality for them, mainly due to the lack of tangible contact with people. Furthermore, 12.5% of the respondents claimed that they had used the computer-based activities before the pandemic, which is why for them it was a completely natural means of obtaining entertainment during the pandemic, constituting a continuation rather than a change. When justifying their assessment, the respondents also stated that it was very comfortable, they could stay at home, it saved them money and time, and it provided them with new possibilities to develop.

As far as the benefits of participating in various forms of computer-based entertainment are concerned, the development of new skills and interests was the most popular answer (47.92%), followed by filling free time (28.11%), physical condition improvement (17.74%), and psycho-physical regeneration and rest (16.42%) (Fig. 4). Relaxation, entertainment (8.68%), and contact with new people (meeting new people) (8.3%) also appeared to be significant advantages.

After the COVID-19 pandemic ends, the respondents are willing to continue particular

activities. The female respondents dominated in the willingness to continue with undertakings such as yoga (76.8%), fitness and aerobic (67.6%), meditation and relaxation (64.2%), self-development activities (56.6%), sightseeing (53.1%) and TV series (52%) (Fig. 5). Men, on the other hand, more often than women want to continue games (67.4%), films (52.8%), short films (51.2%), and also other physical trainings (51.3%).

The analysis of the additional material in the form of research notebooks (autoethnography of the students-researchers) reveals another aspect of our study. We were able to discover new ideas for further research as well as limitations of the designed questionnaire. The coded material contained a group of codes describing new dimensions of emotions and experiences of students during the COVID-19 pandemic, such as: 'values', 'becoming a researcher', 'therapeutic aspects of the interviews', 'around the pandemic', 'surprises and discoveries'. This didactic task clearly underlined the strength of the therapeutic aspects of the interviews.

The majority of the students were conducting the interviews for the first time in life. They felt uncertain as to whether they were doing their task in the correct way. It caused stress, which then faded away with subsequent interviews.

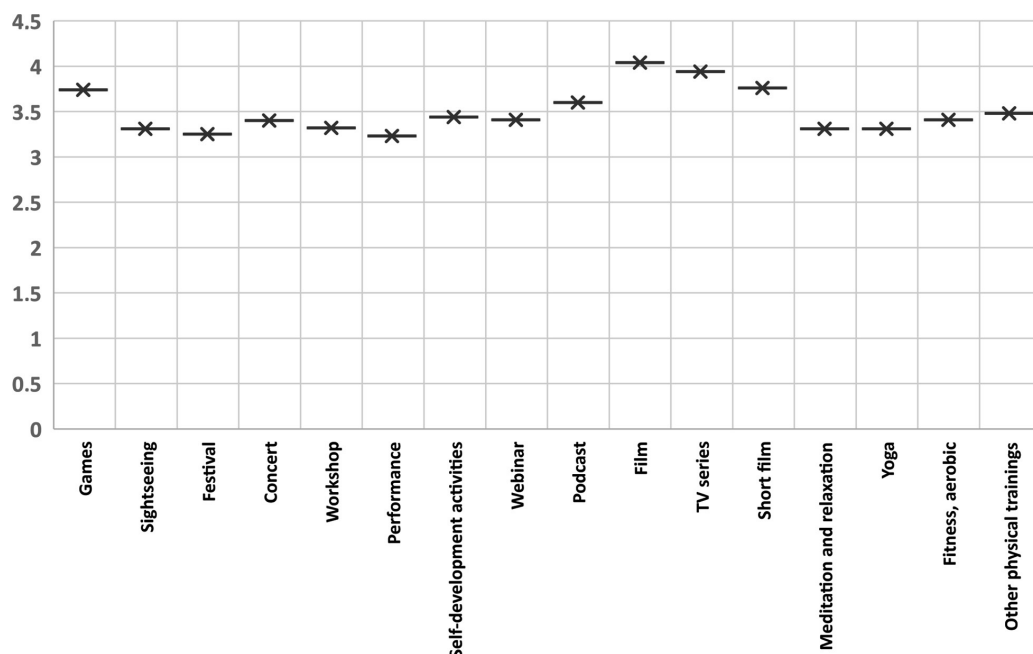


Fig. 3. Computer-based entertainment activities undertaken by the respondents, and their rating in terms of the replacement of the real world (scale: 0-5).

Source: own elaboration based on online questionnaires.

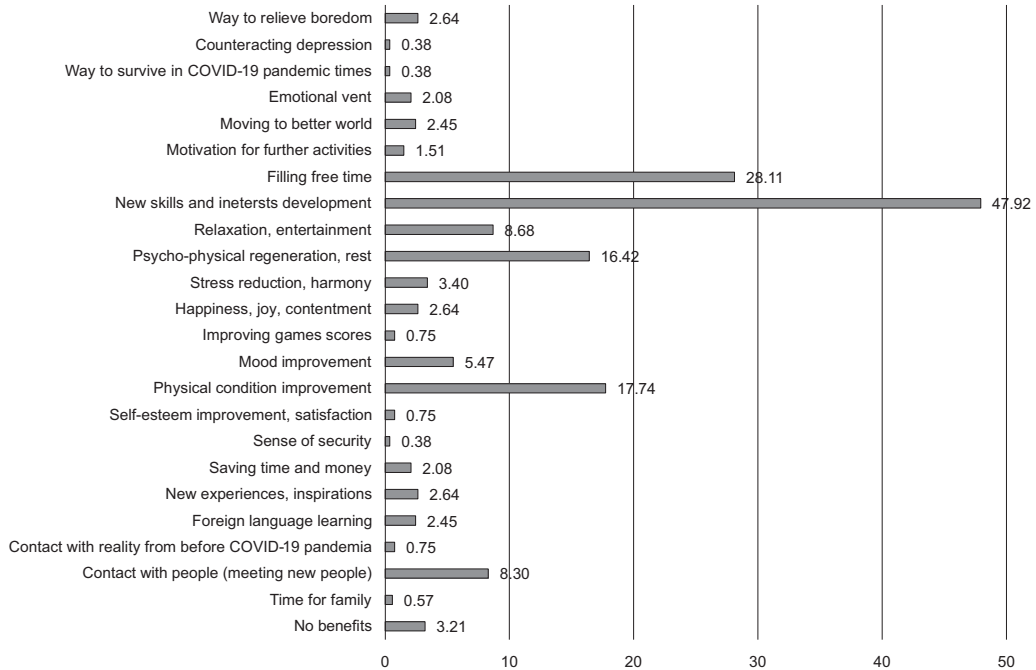


Fig. 4. Benefits of participating in computer-based entertainment according to the respondents. Source: own elaboration based on online questionnaires.

This experience also tested their abilities. After the first fears had been overcome, they often felt self-satisfaction and joy with the conversations with friends. They also underlined the expanded knowledge, curiosity about the answers, and the discoveries and surprises, which we describe in more detail below (the 'discoveries and surprises' code).

There were also reflections on the role of researchers, i.e. their responsibility for the final effect of the survey, the ability to ask questions properly and conduct live or online research, as well as the differences and consequences between the techniques. Owing to that research experience, some of the students even had their own ideas for new research and, as a consequence,

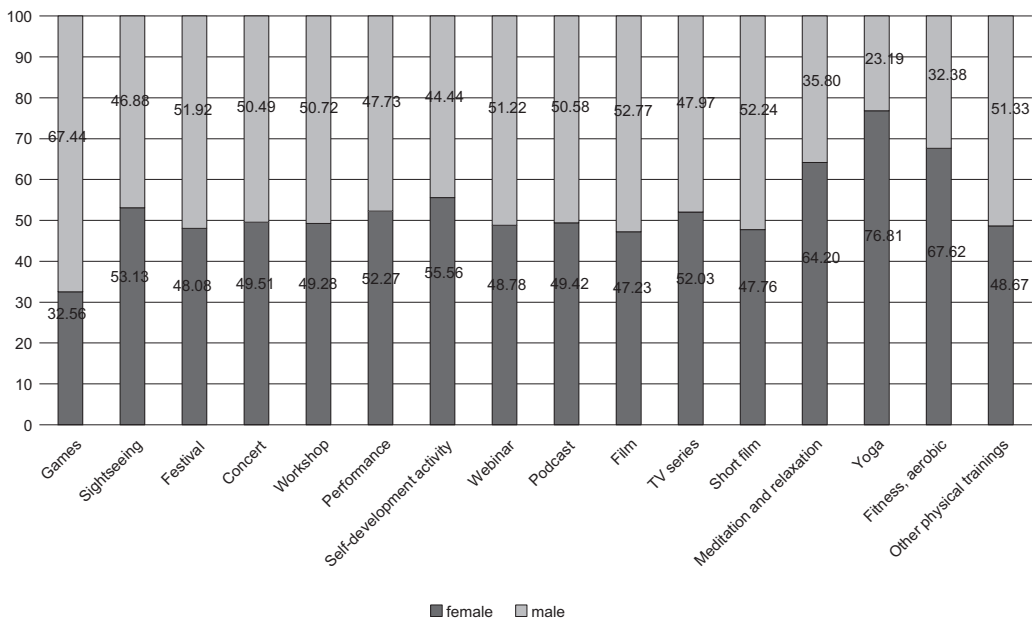


Fig. 5. The respondents' willingness to continue computer-based entertainment after the COVID-19 pandemic, based on sex preferences. Source: own elaboration based on online questionnaires.

they would be willing to continue the task to self-develop in this area. The study turned out to be not only enjoyable but also educative. The students also emphasised another important element of 'becoming a researcher', namely a therapeutic aspect of conducting the interviews.

The main therapeutic aspect of conducting the interviews was the fact that it provided the students-researchers with new motivations and inspirations. They highlighted the importance of caring for the development of the body and mind. They also discovered new forms of computer-based entertainment, new programmes and apps. They felt inspired by combining spending time with the family with online activities. The significant effect of the survey came in the form of being motivated and more open to others. Several of the students-researchers underlined that they had even influenced the interlocutor to motivate them to take part in new activities. They showed new opportunities and threats of computer-based entertainment. Also, conducting interviews can positively affect the researchers' well-being. The students conducting our research often highlighted the joy of conversations with friends, a positive atmosphere, and the opportunity to renew contact with them.

This analysis made it possible to discover the main values of the students-researchers. Above all, they very often emphasised the importance of self-development and efficacy. Leisure time during the COVID-19 pandemic has tested our ability to avoid wasting time.

Determination also seems to be a significant value. The students mentioned the importance of self-denial. They often realised that contact with people, taking care of them, and maintaining relationships were all crucial. The pandemic has significantly exposed our need to be among people.

During the research process, the students-researchers mentioned their 'surprises and discoveries', which mostly referred to their being unaware of some types of computer-based entertainment, such as online tours, online performances, or webinars. Several of the students-researchers discovered that their interlocutors often spent computer-based entertainment activities with friends, while others felt surprised that most of the respondents pursued them alone. The differences in the responses seem to refer to

the discrepancy between the values attached to contact with people. A very interesting part of the analysis is the one connected with the students' experiences and reflections regarding the pandemic situation.

As for emotions, in the students-researchers' notebooks, the biggest part of the notes concerning the COVID-19 pandemic referred to the students' fears. The students are scared of many negative aspects of the situation, such as becoming antisocial, getting isolated, laziness, choosing mainly entertaining forms of leisure activities, addiction to electronics, etc. Another important aspect is the feeling of lack during the pandemic. The lack mostly concerns relations with people, the joy of everyday routine, habits, life in the hustle, and crowd. Moreover, some aspects of the new reality seem to be irreplaceable. The students-researchers underlined that almost everybody thought that it was impossible to have real activities, emotions, and contact with people replaced with computer-based entertainment.

The students described the phenomenon of a new sense of time during the pandemic. People seem to deal with new patterns of time management. A bigger amount – or even an excess – of free time seems to be a new challenge coming from these difficult times. This explains the value of good self-organisation and efficacy during our leisure time. A new sense of time brings the possibility of choosing new forms of computer-based entertainment.

What is not surprising is the fact that the students-researchers complained about the prevalence of worst mental and physical conditions. Living in isolation takes away the joy of everyday life; people are confused and sometimes even depressed. There seems to be a special 'care concern', one connected with the sphere of physical activity. However, the students underlined the positive aspects of the pandemic situation as well. Namely, it provided new circumstances to self-reflect [for the context of 'reflexive modernisation', see Beck et al. (2009)]. As a result, people can try new forms of activity, find a new passion or hobby, and generally get to know themselves better. These opinions refer also to the importance of the value of self-development during the pandemic.

Concluding remarks and recommendations for future research

Altogether, computer-based entertainment is gaining popularity, both in the general leisure sector as well as in many other fields (Aylan, Aylan 2020). The COVID-19 pandemic has revealed that the emergence of online activities provided the opportunity to have more collective, equitable, and diverse formats of virtual communities, and it has brought a new sense of belonging. Facing the crisis, computer-based entertainment becomes more significant and thus acquires new meanings (Ellen et al. 2021). Physical isolation and numerous restrictions generated new solutions in leisure and recreation (Sumbogo et al. 2021). Technology has been employed to connect with others and to pursue leisure activities. People needed to overcome the psycho-social and physiological problems associated with the pandemic by indulging in leisure activities (Güzel et al. 2020). They changed, adapted to a new pace of life, and adjusted their leisure pursuits to fit the situation.

Our research revealed a huge popularity of computer-based entertainment activities undertaken during the COVID-19 pandemic, with the most common being film-watching and gaming. The study participants also chose physical training, yoga, meditation and relaxation practices, or even virtual sightseeing and self-development workshops. The results seem to be similar to that of the research carried out by Sumbogo et al. (2021), proving that international students use their leisure time to do exercise on social media platforms, pursue personal hobbies, and undertake social activities through digital communication media.

Güzel et al. (2020) pointed out that leisure activities could improve the quality of life, especially in psychological, physical and social aspects. In our study, the main motivations behind computer-based entertainment were connected with the choice of one's interests, engaging in enjoyable entertainment, and filling an excess of free time. Most of the respondents admitted that Internet activities could not replace the non-virtual world, mainly because of the lack of tangible personal contact with people. Nevertheless, they want to continue with online activities after the

pandemic. Amongst the main benefits, the development of new skills and interests was rated high, but so was the improvement of physical condition.

The students noticed many disadvantages and negative consequences of the pandemic situation, such as isolation, the lack of real-world contact, worse mental condition, and the deterioration of physical well-being. In the research carried out by Güzel et al. (2020), the participants also described positive and negative aspects of staying at home due to pandemic restrictions. The positive aspects of the pandemic seemed to revolve around finding new computer-based entertainment activities. Hence, ultimately, the COVID-19 times provide people with an opportunity to self-reflect and self-develop.

Our study has also highlighted that the pandemic can, in some ways, reveal students' most important values and coping mechanisms, namely self-development, determination, and self-denial. Findings suggest that the most significant value is the need to maintain contact with people tangibly; it seems that it cannot be replaced with computer-based entertainment activities, regardless of how diverse and well-developed they might be.

The research also revealed the proliferation of computer-based entertainment offers and their use, as well as a growing need for connectivity (Sivan 2020). Computer-based entertainment can constitute an opportunity for people to maintain some level of activity or search for new forms of leisure. Nevertheless, it was somewhat challenging to find out that online activities are strengthening people's well-being at a level similar to how traditional outdoor recreation or nature-based activities influence them (Brent Jackson et al. 2021). Furthermore, satisfaction with leisure time during the COVID-19 pandemic can motivate people to assume working responsibilities, as proved by Dal and Bulgan (2021). Surprisingly, reducing stress was not the main motivation for the respondents in our study. Therefore, it would be interesting to explore whether the researched types of computer-based entertainment activities can help reduce stress and motivate people to perform different kinds of activities or duties.

As to other areas worth investigating in the context of our research, one idea would be to extend the questionnaire interviews and some

elements of the autoethnographic insight over more diverse groups of respondents, i.e. beyond the students' environment, which, after all, is a specific one. Therefore, what computer-based entertainment activities would other age groups declare to have been undertaking, and what emotions and priorities do they attach to pursuing leisure under the pandemic-driven virtual circumstances? Would the percentage of middle-aged men and women involving in such activities be lower, or would it turn out that the COVID-19 pandemic has significantly changed the expected dynamic and people's relationship with technologies, challenging common age- or location-related stereotypes? Further, what would the results be if one added the respondents' profession and career as yet another variable, including the information as to the current mode of work (e.g. home office)? These are only examples, but they seem significant considering the fact that leisure is a world-encompassing category and as such is easily – though differently – relatable.

Last but not least, the authors of this article believe that a similarly themed research should be conducted after the pandemic officially ends and a certain amount of time passes (a 're-adjustment phase', so to say). Both in general and in reference to the researched students' statements, we would be curious to verify whether particular social groups continue to use electronics for online leisure and entertainment in ways that had not been typical or conceivable before the global crisis began. Altogether, the COVID-19 pandemic has dramatically changed the dynamics not only with regard to how people interact with one another, but also with reference to how they relate to their own selves, motives, and emotions. We believe that this will play an irreplaceable role and remain part of people's lives regardless of the actual official status of the epidemic in various countries around the world. Whether and how this will impact the world of recreation and leisure specifically – and whether E-leisure will become the default category – is yet to be seen.

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