


The University Students' Awareness of Hyperreality on Social Media and Problematic Social Media Usage: A Qualitative Study

Huri Deniz KARCI* 

ABSTRACT

How social media has changed people's perception of reality is a question of debate in recent years. Excessive social media usage particularly among young people has begun to worry parents, educators and youth researchers. Hence; the study aims to detect how young people are aware of their social media usage and their ability to differentiate the reality between social media and their normal life. The 3rd grade Graphic Design students, consisting 30 persons of population, in a university in Konya started a social responsibility project called "ThisIsNotYourLife" in the first term of 2021-2022 academic year. Regarding the fact that those students have an awareness in a certain extent, the sample was crewed from this population. 27 of the population participated in the study to make an in-depth interview. Thematic analysis was employed depending on Baudrillard's *Simulations Theory* and Griffiths' addiction variables used in *the BSMAS* as SM addiction components. The study concluded young people could hold a balance between the reality of their normal life and social media life and control their social media usage if they are given an awareness task or training. The study is thought to make contributions to social media usage research and professionals who work on young people's addiction behavior.

Keywords: Hyperreality, Social Media, Problematic Social Media Usage, Simulation, Social Media Addiction, Young People

Üniversite Öğrencilerinin Sosyal Medyada Hipergerçeklik ve Problemlili Sosyal Medya Kullanımı Açısından Farkındalıkları: Nitel Bir Çalışma

ÖZ

Sosyal medyanın, insanların gerçeklik algısını nasıl değiştirdiği son yıllarda bir tartışma konusu haline gelmiştir. Özellikle gençlerin aşırı sosyal medya kullanımı, ebeveynleri, eğitimcileri ve gençlik araştırmacılarını endişelendirmeye başlamıştır. Bu anlamda; bu çalışma, gençlerin, sosyal medya kullanımlarının ne kadar farkında olduklarını ve sosyal medyadaki ile normal hayattaki gerçekliği nasıl ayırt ettiklerini tespit etme amaçındadır. Konya'daki bir üniversitede 30 kişilik bir evreni oluşturan 3. Sınıf Grafik Tasarımı öğrencileri 2021-2022 akademik yılının ilk döneminde "Hayatın Bu Değil" adlı projeyi başlatmışlardır. Bu öğrencilerin belli bir düzeyde farkındalıkları olduğu düşüncesinden yola çıkılarak, örneklem bu evrenden oluşturulmuştur. 27 kişi çalışmaya katılım sağlayarak derinlemesine görüşme gerçekleştirmiştir. Baudrillard'ın *Simülasyon Kuramı* ve Griffiths' in *BSMAS* ölçeğinde bulunan bağımlılık değişkenleri olarak SM bağımlılık bileşenlerine dayanarak tematik analiz yapılmıştır. Çalışma, gençlerin, normal hayatlarında ve sosyal medyadaki hayatlarında bulunan gerçeklik arasında denge sağlayabildikleri ve kendilerine bir farkındalık görevi veya eğitimi verildiğinde sosyal medya kullanımlarını kontrol edebildikleri sonucuna varmıştır. Bu anlamda; çalışmanın, sosyal medya araştırmalarına ve gençlerin bağımlı davranışlarına yönelik çalışmalar yapan profesyonellere katkı sağlayacağı düşünülmektedir.

Anahtar Kelimeler: Hipergerçeklik, Sosyal Medya, Problemlili Sosyal Medya Kullanımı, Simülasyon, Sosyal Medya Bağımlılığı, Gençler

1. Introduction

Social media usage has become an indispensable part of daily life. Gradually increasing social media usage by particularly young people has caused a kind of worry about the youth's future among parents, educators and professionals who show interest in young people. The most recent remarkable data in social media usage is as follows (Kemp, 2022):

As *Digital 2022 Global Overview April Report*, which was presented by the partnership of *We Are Social* and *Hootsuite*, states today 4.95 billion of 7.91 billion of worldwide population use the Internet. 4.65 billion of the total number of the Internet users are active social media users of which 45.8% is female users and 54.2% is male users. Thus; 58.7% of the worldwide population is reported to be active social media users, which means more than a half. According to year-on-year change data, 326 million (7.5%) more people have started to use social media. While The United Arab Emirates (114.8%) has the biggest number of social media users, Nigeria (16.1%) has the least number. Most of the countries are seen to have a

* Dr. Öğr. Üyesi, Ankara Medipol Üniversitesi, huri.karci@ankaramedipol.edu.tr
Makalenin Gönderim Tarihi: 15.08.2022; Makalenin Kabul Tarihi: 01.11.2022

percentage of 80. Türkiye (83.7%) is one of them which ranges in the middle. The age range comparison in the report shows that only in the-60+ years old users the female individuals are more than the male and the numbers of the both genders are exactly equal to each other in the range of 50-59 years old. In the rest of other ranges such as 13-19, 20-29, 30-39 and 49-49 male users are more than the female ones. Another remarkable datum is about the average daily time spent on social media: 2 hours 29 minutes. In comparison to the previous year, 2 minutes (1.4%) are added for the daily usage of social media. According to the age range of daily social media usage time, 16-24 year-old young people are seen to spend the longest time while 55-64 year-old spend the least time and the median age spends mean time.

Besides, the matter of reality in young people's social media life and normal life has begun to be questioned. To keep safe and secure as individuals who take actions such as sharing posts, spending time, following specific people on social media is vital particularly for young people in order to lead a healthy and balanced life in future. This could be indicated as the core of digital citizenship and digital well-being which result from keeping a balance and consistence between online and offline life styles.

Recent statistics of the year 2022 on *We Are Social* show the three most frequent reasons for social media users to use SM are lined as: *keeping touch with friends and family*, *filling spare time* and *reading news stories*. Whereas the least frequent reasons are *supporting and connecting with good causes*, *avoiding missing out things (FOMO)* and *posting about their life* (Kemp, 2022). Research has also presented various reasons particularly why young people and adolescents, who are the most frequent users, use social media: to socialize and interact with other people mostly including family members and friends, to be appreciated and followed, and to have fun (Kwon & Wen, 2010; Bilgin, 2018; Boyd & Nicole, 2007). In the last decade, the graphic trend in the numbers of active social media users has shown a drastic change from 1.48 to 4.62 billion in worldwide population (Kemp, 2022). However, not all this number including particularly young generation could be said to use social media consciously by leading a balanced life and making a true differentiation of reality between their social media and normal life. The growing frequency of time spent on social media, which has started to be more and more excessive and problematic in users' different parts of life, is another problem those people are facing.

2. Problematic Social Media Usage: Whatever it is Called “Social Media Addiction” (SMA) or “Excessive Social Media Usage” (ESMU)

Abundant research data are available in literature which remark the problematic social media usage by different generations including the adults, youth, adolescents and children. The youth research overlaps a really big part of the literature because they consist the biggest social media user population: 16-14 and 25-24 age range are the most populated group, 35-44 range is the second, 45-45 is the third and 55-64 is the least populated age group to use social media (Kemp, 2022). The dilemma whether the problematic social media usage must be termed as an “addiction” or “excessive usage” is another matter of opinion. In either cases of usage in those terms, it could be clearly defined as “problematic usage” owing to the harmful effects on users depending on the case of duration, posts, mood motivation, follower numbers, like numbers, etc.

Excessive usage of social media or social media addiction might lead to psychological, social and school/university-based problems in young people's life. In Bilgin's (2018) research on the adolescents' social media addiction (SMA), the most remarkable two results were the relationship of SMA with the daily usage duration and followers-like numbers. The higher social media usage duration was, the higher level of SMA got. The long time social media daily usage was seen to trigger psychological disorders such as depression, psychoticism, paranoid ideation, phobic anxiety and feelings like rage and hatred. Besides, their follower and like numbers were concluded to have some problematic effects such as depression and painstaking resulting social comparison among social media users in their network (Lee, Cheung, & Thadani, 2012; Balcı & Baloğlu, 2018). Social comparison stemming from social media usage seems to lead a decrease in individuals' psychological well-being level (Bilgin, 2018). Social media usage was stated to cause a negative effect on interpersonal relationships (Çalışır, 2015), psychological health (Doğan & Tosun, 2015) and private life (Zhang, Sun, Zhu, & Fang, 2010).

The youth's problematic social media usage indicates strict impacts on their psychological mood. The university students, who had a high rate of daily usage, in Chou and Edge's (2015) research particularly on Facebook reported they had thoughts about the injustice of life. Çömlekçi&Başol (2019) researched the relationship between young social media users' usage motives and social media addiction. Those young participants, who spent approximately 4h 16min on social media, stated they mostly use social media in order to make use of their spare time, know people better, confer with other people, reach some specific people, share personal presentation and information, text and for fun. A positive relationship was found between those motives and social media addiction in the study. Balcı&Baloglu (2018) also found out SM provided people with the opportunity to display their personal interests on their profile, make new friends and communicate with other people, which trigger their dependence on SM more and more.

Aksoy's (2018) qualitative study researched why young people use social media addictively. The participants were 25 university students who labelled themselves as social media addict. They stated they use SM excessively because they lack friends, need to socialize with others and for fulfillment, FOMO (fear of missing out) and intertwining of social media and daily life.

Dalvi-Esfahani et al. (2019) investigated determinants of SMA on 35 respondents consisting psychotherapists and reserachers. The researchers employed the DEMATEL technique (Decision Making Trial and Evaluation Laboratory) because they questioned the clinical importance of SMA. The study consequently reported three most important predictors of SMA from the psychiatrists' and researchers' point of view: the one's openness to experience, loneliness and depression.

2.1. Griffiths' Six Components of Behavioral Addiction and the BSMAS

Griffiths (2005) had put forward six components of any behavioral addiction: "Salience", "conflict", "relapse", "withdrawal", "tolerance" and "mood motification", which was later employed in the design of the Bergen Social Media Addiction Scale (BSMAS) (Andreeassen,et. al, 2016). So, these criteria started to be use not only for behavioral addiction but social media addiction, as well. In here, "salience" indicates domination of social media (SM) in one's life. The component "conflict" represents the negative effect on one's relationship with other people resulting from excessive SM usage. Thirdly, "relapse" is another core factor that means a return back to an excessive use after trials of control over SM. The fourth component is "withdrawal", unpelasant feelings arising from a sudden prevention by using SM. The next is "tolerance" factor that says more and more tendency is got by spending more time on SM. Finally, the last component is "mood motification" which presents the feelings and motives that urge the one to use SM.

The BSMAS was found convenient to apply in different cultural contexts to validate SMA components by Griffiths. The Romanian (Stancelescu, 2022) version concluded salience, withdrawal, mood motification and conflict are the most relevant ones with Romanian participants' SMA findings. The Turkish version (Demirci, 2019) validated the scale and found out that SMA could trigger anxiety and depression symptoms. The Italian version, of which one of the authors was the original creator of the six components-Griffiths, (Monacis, Palo, Griffiths, & Sinatra, 2017) resulted in a relationship of theoretical associations of SMA with attachment styles. There are still many other versions of the BSMAS in the literature; which makes the scale highly-validated to assess SMA criteria in a large-scale of different nationalities.

Although many other cultural versions of the BSMAS were validated as quantitative and survey-based studies, few studies strike in terms of researching Griffiths' components of behavioral addiction. One of those qualitative studies is the one in which Griffiths himself participated. The study (Jameel, Shahnawaz, & Griffiths, 2019) focused specifically on smartphone addiction in terms of six components-"salience", "conflict", "relapse", "withdrawal", "tolerance" and "mood motification"- and 40 participants as college students were categorized as "addicted" and "non-addicted". Salience, withdrawal, conflict and tolerance dimensions were concluded to be outstanding in the study as behavioral addiction. Another qualitative study depending on Griffith's components of behavioral addiction was a Chinese version (Yang, Griffiths, Yan, & Xu, 2021), which investigated whether online video watching was addictive. Thematic analysis was done deriving from the indepth-interview replies by 20 young Chinese adults. Some specific video content

like the pornographic ones, short-form videos and platform-driven continuous watching was found to be potentially addictive.

3. Reality Misperception in Social Media and Baudrillard's Theory of Simulation

The core components of Baudrillard's *simulations theory* such as "hyperreality", "simulacra", "simulations" and the action, "to simulate", date back to Plato's *philosophy of idealism*, which divides reality into two sides as "the ideal" and "the phenomena". While the ideal is represented as the perfect reality, the phenomena are the physical world, a follower of the ideal. Thus; ideas are free from time and space. Plato used an allegory of cave in order to depict the division between the ideal and the phenomena, in which some chained individuals see some shadows of things as "the real". Actually, the source of those shadows were imitations held by other people "outside". According to Plato, the ideal was "outside", which was the reality comes from while "shadow" was associated with the phenomena (Gültekin & Tokdil, 2017; Ünlü, 2018). Based on Plato's *idealism*, the French thinker Deleuze (2015) created the concept of "virtuality". The "virtual" was associated with the term "the ideal", which had been created by Plato, but not an exact "real". However "it was in an opposite position to "the actual". Thus; Deleuze advocated the study on the relationship between "the real" and its "imitation". He states the true representation of the ideal depends on the imitation.

Deriving from this theoretical background, Baudrillard insists on inbeing of reality from the unreal one or imitation because the existence of everything is simulation. That's; each phenomenon depending on reality includes a hyper version; which is called "hyperreality" (Ünlü, 2018). Baudrillard (2011) defines *hyperreality* as "reproduction of reality deprived from any origin or authenticity via some models" and calls it "synthetically reproduced reality". Baudrillard uses some allegories based on social conditions so as to explain the terms he uses. First of all, *simulation* is his basic term laying under his theory. Simulation is actually hyperreality as well. One of his well-known case is a patient's condition representing simulation. He depicts the framework in the allegory of a patient. He claims a dilemma of reality will arise in a condition of an imitating patient. According to his claim, an individual who is lying in a bed and shamming is actually in an effort to make people believe that he is sick. If he simulates the disease, some symptoms of that disease could be seen in this person. So, this action is only "dissembler", to behave as if not owning something which is actually owned. A clear and absolute difference between dissembler and reality is available. On this condition, the person behaves as if he were sick. So, he does not give any harm to reality. However, in simulation as an action *to simulate* is to behave as if owning something which is actually not owned. For this reason, any clear line could not be seen between reality and simulation. In another word, simulation is the effort to erase the line between reality and imitation. Consequently, whether that person is really sick or not is not the point at issue anymore. Finally, *simulacra* could be explained through the same allegory. According to the logic behind simulation, simulacra could be defined as the view of any thing that is aimed to be seen as "reality" or "real" (Baudrillard, 2011; Güzel, 2015).

Thus, in problematic social media usage people could begin to simulate what their life or themselves is not like. Indeed, Abraham Maslow's (1943) *theory of human motivation* sets light on this phenomenon. He insists on human needs in a hierarchy of needs ranging from the bottom to the top: physiological needs, safety and security, love and belonging, self-esteem and self-actualization. That well-known and referred theory puts self-esteem at the top of human needs which includes some components of idealization such as morality, creativity, spontaneity, acceptance, experience purpose, meaning and inner potential. Miranti (2017) sees the relationship between human being and digital technology as a marriage in which they are together in a virtual room that makes a new reality. The opportunity which is provided by social media to act in selfies, get likes and positive comments about themselves urges the a new formation of identity. However particularly young people who have not completed their formation of identity gets into a fantasy world by too much self-imaging, following like numbers closely and keeping away their normal environment. This confuses their mind by putting them in a dilemma of real and virtual world. Resulting from this theory and components, it could be said human being needs to prove his or her existence in the society he or she lives in order to be a person or individual as the part of that society. And that self-actualization could be realized by making one's case in the society. Accordingly, that is the way how users

prove themselves on social media, which used to be called only “virtual” but today has begun not to be differentiated from offline life. Hence; each frequent login into SM profile and acting there by sharing posts, taking selfies, liking or commenting on other posts, interacting with other members could be users' tendency to prove themselves for their self-esteem. As Baudrillard (2011) claims, signs or news need to be repeated in order that any system is able to prove its own reality while meaning and communication may get harmed due to bombarding of media and news feed. In this respect, problematic SM usage depending on excessive acting and addiction might lead to a misperception in individuals' mind about the line between their normal life and life on SM.

Nunes (1995) issued Baudrillard' hyperreality theory in terms of media and communication. He particularly focuses on hyperreality in th Internet by using the tems “information highway” and “cyberspace” due to the fact that it creates a virtual reality. According to him, virtual reality firstly becomes simulacra and then simulacra turns into simulation. Antony&Tramboo (2020) claim Baudrillard's simulation theory also criticizes media and literature are influenced by hyperreality and accordingly technology particularly affects children and young people in such a virtual reality way that they will never be able to reach the ideal reality and originality.

Within this perspective, the study aims to fill the gap in literature by holding a qualitative research lacking in problematic social media usage particularly depending on the phenomenon of reality. As recent statistics indicate young people are the dominant population to use SM, the study crewed university students as participants. They were chosen from a specific group in a university in Konya, Turkiye because they had practiced a project in their graphic design course: “ThisIsNotYourLife”. The idea lying behind the aim was to depict the picture of young people's reality case depending on their SM usage even though they were thought to be rather conscious. Furthermore; deeper and rather objective insight of the participants could be supplied by employing a constructivist qualitative method. Thanks to the results of the study, professionals, researchers, parents and educators are thought to be able to have a broader idea about how to behave and what precautions could be taken for the sake of young SM users.

Since the problem of the research to define young SM users' misperception of reality in a duality of their life on SM and normal life as a consequence of problematic SM usage, research questions are as below:

- 1) What are the participants' opinion about problematic social media usage?
- 2) What are the participants' opinion about distinction between social media users' distinction of reality between normal life and life on social media?

4. Material and Methods

4.1. Design

The study design was based on explorative qualitative method including an in-depth interview in order to acquire the notion how university students as young generation differentiate the reality of their normal life from their life on social media and evaluate their problematic social media usage. In this sense; besides the dilemma which the participants experience between these two duality, whether this had an impact on their problematic social media usage were researched. How the participants hovered between their normal life and their life on social media was questioned within the context of Jean Baudrillard's perspective of reality, hyperreality and simulation. Correspondingly, whether their confusion or clarity among those phenomena was related to their social media addiction was based on the factors by the BSMAS (the Bergen Social Media Addiction Scale). The study was conducted with 3rd grade Graphic Design Students' participation in a private university in Konya regarding they had awareness of reality in the duality of social media normal life to some extent and their social media usage. Data collection was provided after the students' campaign project “This Is Not Your Life” by getting permission from the head of department. That group of students were focused regarding the idea they gained a kind of awareness because the aim of the project was to raise awareness among the youth who were under a deep influence of social media. Hence; a constructivist paradigm was followed in the study (Creswell, 2017) which in-depth interviews were employed. The participants were interviewed after they completed the campaign and created graphic design pieces. The purpose behind this urge was to wait for the passing time after they completed the

project and had a chance to observe people around them. "What" and "which" questions were based on to collect descriptive data.

4.2. Participants

Purposive sampling method was used in the study. 30 students studied in the 3rd grade of Graphic Design Department in a university in Konya. Those students attended a campaign as a social responsibility project of their Graphic Design course. 27 students of the whole population accepted to attend the research by answering in-depth questions. While 15 female students consisted the participants, 12 students were male.

4.3. Data Collection

The aim of the study was to explore to what extent young people were aware of their social media usage and whether they make any differentiation of reality between their normal life and life on social media. 30 students who studied Graphic Design in a university in Konya and participated in a social responsibility project of their Graphic Design Course were requested to take part in the research by sending an e-mail presenting the informed consent form. Informing in the consent form that they were free to quit the interview whenever they feel discomfort with the questions or the manners by the interviewer, voluntariness was supported, which led convenience sampling. In order to send the request e-mail, related permission had been taken by the head of Graphic Design Department. Because the head of the department had stated their students' preference was a digital interview instead of a face-to-face interview because of pandemics conditions, a Microsoft Word document including interview questions as a digital data collection tool was sent to 27 students who had accepted to be a research interviewee. As Creswell (2017) stated an approximate number of 30 participants were enough for an in-depth-interview technique, 27 persons were the sample of the research. The in-depth interview form included 14 open-ended and unstructured questions, which did not use any manipulative or directive tactics effective on the participants. Any confusing statement was avoided by following a step-by-step path from simple questions to the deeper.

The structure in forming questions was based on two fundamentals consisting totally 11 questions. The first part, which included first 5 questions, was based on Jean Baudrillard's *Simulation Theory*. (...) The first question was a general introduction. Within the frame of the theory, four basic concept "simulacra", "simulation", "to simulate" and "hyperreality" had been discussed by Baudrillard. Thus; the questions from 2 to 5 were created depending on those concepts in order to detect the participants' awareness of the reality in their normal life and their life on social media. The second part included the questions between 6-11. The purpose behind forming those questions was to discover the participants' awareness about whether their social media usage was excessive. To discover this phenomenon, Griffith's six core features resulted from the BSMAS (Bergen Social Media Addiction Scale) were employed. Hence; the six questions in the second part of the interview form were based on these core features "salience", "conflict", "relapse", "withdrawal", "tolerance" and "mood modification".

4.4. Data Analysis

Not any software program was used in the coding or transcription process. Codes were categorized into umbrella themes and subthemes. First, codes were generated from the research aims based on *Simulation Theory* and *the six core features of the BSMAS*. The raw data were interpreted depending on those criteria. The reliability and validity of research findings depend on the theoretical background. Until the saturation of the analysis, coding and transcription were deepened.

4.5. Ethics Statement

Firstly depending on the declaration of Helsinki, Ethics Committee approval was obtained from Ankara Medipol University Social Sciences Noninvasive Ethics Committee. For participants recruitment, informed consent was obtained by stating they were free to quit replying in case of a discomfort by either the questions or the interviewer. Their confidentiality was also guaranteed by keeping them anonymous

and their names were given as “Student A, B, C, etc.” instead. Furthermore, data collection was conducted after the participants had completed the social responsibility project in their course and enough time had passed, which gave them chance to observe their social media user environment.

5. Results

The qualitative analysis was designed centering around two mainstays as “the reality phenomenon in experiencing social media” and “problematic social media usage”. Therefore; both phenomena were thematized with subthemes. Resulting from the indepth-interview questions; firstly, the reality experienced on social media was based on the specific concepts included in Jean Baudrillard’s “simulation theory”. The main themes were stemmed from those concepts: “simulacra”, “to simulate”, “simulation” and “hyperreality”. Since those themes were thought to gain a deep meaning related to problematic social media usage, it was investigated through the participants’ detailed replies. To define the themes resulted from problematic social media usage, the BSMAS, in which Griffith had identified six core features of addiction, was employed. The themes of problematic social media usage were stated as “salience”, “conflict”, “relapse”, “withdrawal”, “tolerance” and “mood motification”. To conclude the university students’ reality perception related to their problematic social media usage, subthemes were derived from the two mainstays’ themes.

Baudrillard’s Simulation Theory

5.1. Theme 1: Simulacra

When the participants were asked to what extent their images on social media (in any post in the form of a photo, video, etc.) and their normal life are in accord with each other, subthemes were basically structured around “coherent simulacra” and “incoherent simulacra”. A big number of participants (18 students) stated their images on social media corresponded to their images in their normal life while a small number (6 students) reported they are different from each other. Only three of the participants stated it did not matter because they did not share posts or it depended on the social media platform they were registered.

5.1.1. Subtheme 1.1: Coherent Simulacra

22 students reported their simulacra on social media, which they expected other people in their social network to see them, were coherent with their simulacra in their normal life.

Student B: “I have a social media self-image very similar with the one in my normal life. I cannot be someone I’m not in anywhere.”

Student I: “I behave like in normal life what I do in the photos and videos which I share.”

Student P: “They are exactly same.”

5.1.2. Theme 1.2: Incoherent Simulacra

6 students state there are some kind of differences between their social media and normal life images.

Student C: “To be honest, people might see me someone as a wannabee.”

Student H: “They do not correspond much to each other because my image on social media seems to be happier and I have more problems in my real life.”

5.2. Theme 2: To Simulate

To present or try to show something as if they had not been like were evaluated by the participants. Their replies were in the direction of approval, disapproval or indifference. Almost all the participants (25 students) stated they did not favor simulating something on social media. While only one person said he saw it positively, the other one told she had no idea about this situation.

5.2.1. Subtheme 2.1: Disapproval of Simulating Something on Social Media

To simulate something was disapproved by 25 of the participants.

Student Z: “We live there not for us but for the vanity.”

Student K: "In my opinion, simulating something on social media is a kind of attention-seeking effort."

Student T: "I think people share things' happening in the last lane; namely, reflecting as too good or too bad. That's; it's a kind of unreality. They deceive both themselves and other people."

Student F: "I do not think it's sincere. Everybody must reflect themselves as they are in real life."

5.2.2. Subtheme 2.2: Approval of Simulating Something on Social Media

Only one student said simulating is something with a positive meaning.

Student A: "Simulating something evokes the idea of metaverse in my mind. I think it will be existent in our future, so we should accept it. No problem for me."

5.3. Theme 3: Simulation

As a reproduction of any process with the aim to describe how it works or functions, simulation is often confronted on social media. Whether it is practical or impractical in terms of normal life was questioned by consulting the participants as young people who are accepted as frequent social media users. 14 students stated they find simulations of any process on social media are practical in normal life whereas 5 students find it impractical. Finally, 8 of them reported it depended on extrinsic factors.

5.3.1. Subtheme 3.1: Practicability of Simulation

14 students evaluated simulation of any process in education, various hobbies and social media platforms as practical to use in normal life.

Student S: "I think they are mostly practical".

Student V: "I think they are useful as far as they are affordable and safe."

5.3.2. Subtheme 3.2: Extrinsic Factors Effective in Practicability of Simulation

Some students (8 students) emphasized the impact of some extrinsic factors on practicability of simulation on social media. They stated that they could be practical depending on the content, the presenter, social media platform and budget.

Student K: "Simulations are possible to practice in real life excepting the contents demanding talent like sport."

Student J: "For example; recipes are adaptable into real life but I don't think it goes for sport because it needs for discipline and will. I don't think it could be possible with only posts."

5.3.3. Subtheme 3.3: Impracticability of Simulation

Lastly, 5 students thought simulation on social media is impractical in terms of adapting them in normal life because of particularly budget.

Student E: "Not many simulations are adaptable into real life since they don't address to middle-class."

5.4. Theme 4: Hyperreality

Baudrillard's "hyperreality" is a phenomenon in which the line between real and fiction becomes indistinct and is very close to simulation. This phenomenon was questioned in terms of reactions on social media and normal life. What differences in feedbacks such as "likes" and "comments" between social media and normal life the respondents could report were asked in order to state the difference was blurred or clear. Replies were nearly equal with a slight difference. 13 students reported the reality of likes and comments were hard-to-discern. 12 students stated they were different. Lastly 2 students stated they don't get any feedback.

5.4.1. Subtheme 4.1: Indistinctive Reactions

Reactions which was taken from followers or friends on a social media platform as a result of a post were commonly seen quite similar to the ones in real life. Eventhough the respondents' simulacra were incoherent, the reactions of people in their social network were nearly the same with the reactions coming

to their image in normal life. So, they (13 respondents) stated they could not differentiate each one from the other.

Student E: "There is no difference. I take the same reactions."

Student L: "I take the same reactions on social media with the ones I take in my real life".

5.4.2. Subtheme 4.2: Distinctive Reactions

12 students stated they could clearly differentiate reactions they take on social media and in their normal life. Most of this half find real life reactions more sincere.

Student C: "We can take likes and comments more easily on social media. That fake sincerity doesn't reflect on real life."

Student U: " I think likes and comments on social media are pretended. Opposite to social media reactions, the pretended reactions in real life appear easily by the means of their behavior and mimics."

Griffiths' Core Features of Social Media Addiction

The six core features which had been categorized by Griffith (2005) Addiction Scale was employed to detect the university students' awareness of excessive social media usage to support their awareness of reality on social media. "Salience", "conflict", "relapse", "withdrawal", "tolerance" and "mood modification" were those six core features which had been claimed by Griffith.

5.5. Theme 5: Salience

"Salience" was the first theme that represented the activity in on social media that dominated the user's thinking and behavior in a way. 13 respondents stated social media was salient in their life in terms of occupying, regenerating their moment, adjusting their physical appearance, etc. while 11 students told they do not let social media affect their whole life and 3 students could not give meaningful replies.

Student: "Sometimes when I wanted to share the moments I enjoy and feel happy, I take the photos of surroundings instead of myself if I do not have any make-up."

Student N: "We even need to reorganize and pretty a view or table up because we are about to share it on social media."

5.6. Theme 6: Conflict

"Conflict" was a core factor in detecting problematic social media usage that affect the user's relationships, work or education. 17 of the students reported they experienced conflict in some parts of their life while 10 of them stated it did not matter in any way. The students were also asked how they could cope with their conflict.

5.6.1. Subtheme 2.1: Lessons

6 of 17 respondents who said social media caused conflict in their life indicated their lessons.

Student Z: "I delay my deeds and homework because of the time I spend on social media."

Student B: "Although I don't frequently use social media I think it affects my lessons."

5.6.2. Subtheme 2.2: Family

Another group of 6 persons told their social media usage affected their relationships with their family.

Student B: "Even though I don't much frequently use social media, I see that it affects my relationship with particularly my family."

Student G: "I rarely use social media excessively. I think I neglect my siblings at such times."

5.6.3. Subtheme 2.3: Private Life

5 students stated their social media usage affected their private life.

Student H: "I mostly affects my private life. Because I continuously spend time on social media, I see there as a different world . So I try to put some limits in using it."

5.7. Theme 7: Relapse

Relapse was another effective factor in detection of addictive and problematic social media usage. In asking whether the participants experience any failure in controlling over their excessive social media usage and how they cope with it, 18 students reported they had a control over it and did not have any difficulty. On the other hand; 9 students stated they failed in controlling and they could cope with it by the means of some efforts such as digital detoxing and other social activities.

5.7.1. Subtheme 3.1: A Constant Control

A big number of the participants (18 students) reported they were capable of having a constant control over their social media usage.

Student I: "I do not have any difficulty or failure. I can reduce my dose of usage."

Student N: "Because my lessons and family are my priorities, I don't fail in control over social media usage."

5.7.2. Subtheme 3.2: Coping Skill with Failure

Some students (9 students) underlined their failure in control over control over social media usage. 3 of these people stated they cope with it by practicing digital detox. 4 of them told they directing their attention into other social activities or social life streams.

Student U: "I don't usually succeed in my control level. To get over this failure, merging into social life helps me."

Student P: "Though not always, I think I waste too much time. In the face of such a situation, I try to spare more time for myself. For example, I try to spare time for reading and sports instead of the time I spare on social media."

Student J: "I use digital or mobile phone detoxing when I need for a control."

5.8. Theme 8: Withdrawal

Among excessive social media users, "withdrawal" is a common condition that is experienced. In condition that excessive social media users stop or reduce using suddenly, some kind of feelings might occur. A big number of students (19) reported various negative feelings such as FOMO (fear of missing out), severance, insufficiency, boredom, blankness. On the other hand; 4 students reported they did not have any difficulty or unpleasant feeling. And lastly, 4 students told they felt relief when they got away from social media.

5.8.1. Subtheme 4.1: FOMO (Fear of Missing Out)

The most remarkable outcome that was felt by the participants (10 students) when they stopped or reduced using social media was FOMO. They felt they were missing something happening on social media.

Student A: "I think I get way from recent news and developments."

Student E: "I wonder about the matters at hand."

Student I: "I feel I miss the news and my friends' activities out."

The participants performed 22 different patient profiles in 39 internal medicine systems.

5.8.2. Subtheme 4.2: Blankness

Some participants (6 students) stated they had some unpleasant feelings in blankness. According to their statements, it was just like severance and insufficiency.

Student H: "I feel as if I broke loose from my other world. I think the part of mine which I feel is there on social media."

5.8.3. Subtheme 4.3: Boredom

Lastly, 3 students stated that the unpleasant feeling they had in the moments they stood apart from social media was getting bored.

Student W: "Days apart from social media becomes boring."

5.9. Theme 9: Tolerance

Tolerance is a determinant which indicates the increasing level in tendency to use social media. 14 participants stated they were getting tolerance with an increase in social media usage frequency.

Student A: "Actually the wish for spending time in social media usually increases when I feel get bored and in my free time."

Student X: "In my opinion, we are getting more and more frequently connected to social media in order to compensate for the feeling of getting bored or avoid our real life responsibilities."

11 students reported any increase is not available in their social media usage.

Student R: "My level of social media usage is still the same."

Student Q: "There is not any increase in my social media usage level even generally the same."

Only 2 students told a decrease is available in their social media usage.

Student Z: "I feel it is gradually decreasing."

5.10. Theme 10: Mood modification

Mood modification is referred as some unpleasant feelings which urge people get online in social media. Within the scope of the study, the participants were asked what kind of unpleasant feelings influence them that urge them to get connected to social media. The replies were getting around some basic feelings such as boredom, sadness, anxiety. Only 1 student told she did not have any feeling that urged her to get online: "I feel nothing." Lastly, just 1 student stated he got online in social media when he felt happy: "I like to get online when I feel happy and joyful."

5.10.1. Subtheme 10.1: Boredom

Boredom was the most dominant feeling which urges people to get online in social media. 15 students pointed out boredom as the urgent feeling in using social media.

Student A: "I am usually in need of logging in social media when I am bored."

Student C: "I usually get online in social media by saying "Let's have a look at what's going on!" to myself when I feel get bored."

5.10.2. Subtheme 10.2: Sadness

Next, 8 students reported they needed social media when they feel basically sad, unhappy and moody.

Student B: "The times I feel unhappy and depressed, the period I was logged in social media overruns in order to let it all hang out."

Student N: "When I am in the feeling of a big sadness, I more frequently tend to use social media."

5.10.3. Subtheme 10.2: Anxiety

2 students emphasized the feeling of anxiety that urges him to get connected to social media.

Student O: "I usually prefer to use social media when I rather feel anxious."

6. Discussion&Conclusion

In the study, the university students' awareness of reality phenomenon on social media was aimed to detect depending on problematic social media usage. To clarify the matter of "reality", Baudrillard's "simulation theory" was based on. To discover the extent of the students' awareness of their social media usage about whether it is problematic or not, Griffiths' core features of addiction was utilized.

In this respect, the study investigated the themes resulting from the participants, who were focused with the idea that they were aware of their SM usage in some extent because they had completed a project on this topic, replies in two basic issues as "hyperreality" and "problematic social media usage" via unstructured depth-interview questions. The study did not aim to get access to general the rates or trends for components of Baudrillard's simulation theory or Griffiths' addiction scale on big samples because there were quite numbers of quantitative research in literature. On the contrary, deeper and more detailed

perspectives of young people, the most frequent SM users, were aimed to discover. On the other hand; subthemes were undercovered, which helped to find out those deeper and detailed motives underlying themes in participants' replies.

The hyperreality results depending on Baudrillard's terms such as *simulation*, to *simulate*, *simulacra* and *hyperreality* in order to depict a framework of the participants' control over the balance between their normal life or social media life gave remarkable data for reaching fruitful conclusion. Almost all of the students reported they disapprove simulating on social media by acting as a person whose life actually is not so in their life. They commonly saw simulating something on social media as falseness, deception, forgery, insincerity. Subsequently, other replies centered around unnecessary, danger, appeal, weariness, vanity and not reflecting reality and the moment of life. Secondly; many students stated they had coherent self-image on social media with the one in their normal life. What they dominantly said was they behave natural on SM and quite similar to their image in normal life. Then; a big part of the participants find simulations practical to benefit form in their normal life. Then; almost half of them stated practicability of simulations depends on extrinsic factors. A small number of them said they are impractical. They emphasized simulation posts and videos in education, hobbies and sport are likely to be practiced in normal life on condition that they are safe and affordable. Finally; hyperreality of social media; that is, whether they can differentiate people's feedbacks towards their shares on social media from the reactions they take in their normal life is the last theme resulting from the participants' replies. Slightly more than a half could not differentiate the feedbacks on social media from normal life even if their simulacra are incoherent. On the other hand; the other half said they find feedbacks from other people in their normal life and SM network distinctive and see the normal life feedbacks more sincere.

As for problematic social media usage results, very similar range of pattern was seen among core features of Griffiths' addiction detection: *salience*, *relapse*, *withdrawal*, *tolerance*, *conflict* and *mood motification*. Firstly, a clear cut exists between the feelings by the participants after a sudden withdrawal from SM. Those feelings achieved by the replies were categorized as negative and positive feelings while a small number stated they did not have any difficulty in keeping away from SM. Majority of the feelings were found to be negative ones including mostly FOMO (fearing of missing out), then blankness and in a smaller part as boredom. Some of the students stated they feel as if they were broken apart from the world. Next, relapse was the secondly most remarkable result which questioned if those young people could have constant control over their trials to stop their excessive SM usage or experienced failure in coping with it. Much more than half said they could demonstrated a will on their self-control. Another important result was found in conflict, which the participants faced in different parts of their life. Although one part told their SM usage did not affect their life in any negative way, the quite heavy group told it had a problematic effect in their lessons, family and friend relationships. Procrastination in their deeds and relationships because of spending much time on SM was found to be a widespread effect. The participants were also asked what kind of unpleasant feelings urged them to get online on SM. Many students told they log in SM because they got bored. Another big part told sadness pushed them to get online while very small group said they could not stand anxiety. A quite outstanding result was on SM users' tolerance, duration of spending time. The weighted distribution was on the ones who reported an increase in the time they spend on SM. Nearly the other half stated there was no difference. However; only two students said they could decrease that specific time. Boredom due to spare time was shown as the fundamental reason behind the increase in duration on SM. Lastly but quite importantly; a very balanced distribution was found in salience component. Eventhough more than a half told SM had a big role in their life, a very close number stated not big effect was felt in their flow of life.

The study results support recent social media statistics (Kemp, 2022) and research (Kwon & Wen, 2010; Boyd & Ellison, 2007; Bilgin, 2018) in terms of the increase in spending time and the feelings behind their reason to get online such as FOMO and fulfilling time. Besides, the problematic SM usage effect resulted from the study shows resemblance with other research particularly on interpersonal relationship (Çalışır, 2015) and private life (Zhang, Sun, Zhu, & Fang, 2010).

Contrary to some other research in literature (Balci & Baloglu, 2018; Dalvi-Esfahani, Niknafs, Kuss, Nilashi, & Afrougha, 2019; Doğan & Tosun, 2015), any findings about depression, psychological disorders

or serious social problems were not reached in problematic SM usage. Depending on Griffiths' six components of addiction, withdrawal and relapse were the most leading features that should researchers take into account in terms of self-control. Those results give the impression the young people in the research group seemed not to have powerful control over their SM usage and have difficulty in putting limits.

Additionally, that group of young people seem to be aware of the distinction between the reality of normal life and their life on social media. What makes them aware of this condition could be related to their getting awareness from the project "ThisIsNotYourLife". Still, it cannot be reached an absolute conclusion in whether they are conscious or not because people's reality perception of the balance between their normal and social media life cannot be known exactly by solely depending on verbal replies.

7. Limitations&Future Research

The study is limited to young people's SM usage on the condition that they are aware of their usage is problematic or not and they are able to differentiate their normal life from their SM life. Since verbal statements of the participants are thought to be more effective when they are combined with brain imaging reactions, neuroscientific research is recommended for future researchers.

References

- Aksoy, M. E. (2018). A qualitative study on the reasons for social media addiction. *European Journal of Educational Research*, 7(4), s. 861-865. doi:https://doi.org/10.12973/eu-jer.7.4.861
- Alvermann, D. E., Hagood, M. C., Heron-Hruby, A., Hughes, P., Williams, K. B., & Yoon, J.-C. (2007). Telling themselves who they are: what one out-of-school time study revealed about undereachieving readers. *Reading Psychology*, 28, 31-50.
- Andreeassen, C. S., J. B., Griffiths, M. D., Kuss, D. J., Demetrovics, Z., Mazzoni, E., & Pallesen, S. (tarih yok). The relationship between addictive use of social media and video games and symptoms of psychiatric disorders: A large-scale cross-sectional study. *Psychology of Addictive Behaviors*, 30, s. 252-262. doi:https://doi.org/10.1037/adb0000160
- Antony, S., & Trambo, I. A. (2020). Hyperreality in media and literature: an overview of Jean Baudrillard's simulacra and simulation. *European Journal of Molecular & Clinical Medicine*, 7(10).
- Antony, S., & Trambo, I. A. (2020). Hyperreality in media and literature: an overview of Jean Baudrillard's simulacra and simulation. *European Journal of Molecular & Clinical Medicine*, 7(10), 3314-3318.
- Aufderheide, P. (1993). *Media literacy: a report of the national leadership*. Massachusetts: The Aspen Institute.
- Balcı, Ş., & Baloğlu, E. (2018, Aralık). Sosyal medya bağımlılığı ile depresyon arasındaki ilişki: "üniversite gençliği üzerine bir saha araştırması". *İletişim*, 209-233.
- Baudrillard, J. (2011). *Simülaklar ve Simülasyon*. (O. Adanır, Çev.) Ankara: Doğubatı.
- Bilgin, M. (2018). Ergenlerde sosyal medya bağımlılığı ve psikolojik bozukluklar arasındaki ilişki. *the Journal of International Scientific Researches*, 3(3), s. 237-247.
- Boyd, D. D., & Ellison, N. B. (2007, October). Social Network Sites: Definition, History, and Scholarship. *Journal of Computer-Mediated Communication*, 13(1), s. 210-230. doi:https://doi.org/10.1111/j.1083-6101.2007.00393.x
- Buckingham, D. (2015). Defining digital literacy: What do young people need to know about digital media? *Nordic Journal of Digital Literacy*, 4, 21-34.
- Building digital capability*. (2018, October 31). JISC: https://www.jisc.ac.uk/rd/projects/building-digital-capability adresinden alındı
- Chou, H.-T. G., & Edge, N. (2015). "They are happier and having better lives than I am": The impact of using Facebook on perceptions of others' lives. *Cyberpsychology, Behavior, and Social Networking*, 15(2), s. 117-121. doi:https://doi.org/10.1089/cyber.2011.0324.
- Colin, L., & Knobe, M. (2006). Digital literacy and digital literacies: policy, pedagogy and research considerations for education. *Digital Kompetanse*, 1, 12-24.
- Creswell, J. W. (2017). *Nitel araştırmacılar için 30 temel beceri*. Anı Publishing.

- Çalışır, G. (2015). Kişilerarası iletişimde kullanılan bir araç olarak sosyal medya: Gümüşhaneüniiversitesi iletişim fakültesi öğrencilerine yönelik bir araştırma. *E-Journal of New World Sciences Academy*, 10(3), s. 115-144. doi:DOI:10.12739/NWSA
- Çömlekçi, M. F., & Başol, O. (2019). Gençlerin sosyal medya kullanım amaçları ile sosyal medya bağımlılığı ilişkisinin incelenmesi. *Celal Bayar University Journal of Social Sciences*, 17(4), s. 173-188. doi:10.18026/cbayarsos.525652
- Dalvi-Esfahani, M., Niknafs, A., Kuss, D. J., Nilashi, M., & Afrougha, S. (2019). Social media addiction: Applying the DEMATEL approach. *Telematics and Informatics*, 43, s. 1-14.
- Deleuze, G. (2015). *Anlamın Mantığı*. (H. Yücefer, Çev.) İstanbul: Norgunk.
- Demirci, İ. (2019). Bergen Sosyal Medya Bağımlılığı Ölçeğinin Türkçeye uyarlanması, depresyon ve anksiyete belirtileriyle ilişkisinin değerlendirilmesi. *Anatolian Journal of Psychiatry*, 20(1), s. 15-22.
- Digital Literacy*. (2017, February). Western Sydney University : https://westernsydney.edu.au/studysmart/home/study_skills_guides/digital_literacy adresinden alındı
- Doğan, U., & Tosun, N. İ. (2015). Lise öğrencilerinde problemlı akıllı telefon kullanımının sosyal kaygı ve sosyal ağların kullanımına aracılık etkisi. *Adıyaman Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 8(22), s. 100-128.
- Griffiths, M. (2005). A 'components' model of addiction within a biopsychosocial framework. *Journal of Substance Use*, 10, s. 191-197.
- Gültekin, T., & Tokdil, E. (2017). Gerçeklik ve sanı yaklaşımı üzerine karşılaştırmalı bir çalışma: denemeler dergi örneği. *Felsefe ve Sosyal Bilimler Dergisi*(23), 277-290.
- Güzel, M. (2015). Gerçeklik ilkesinin yitimi: Baudrillard'ın simülasyon teorsinin temel kavramları. *Felsefe ve Sosyal Bilimler Dergisi*(19), 65-84.
- Hobbs, R. (2010). *Digital and media literacy: a plan for action*. Washington D.C.: The Aspen Institute.
- Jameel, S., Shahnawaz, M. G., & Griffiths, M. D. (2019, October 17). Smartphone addiction in students: A qualitative examination of the components model of addiction using face-to-face interviews. *Journal of Behavioral Addictions*, 8(4), s. 780-793. doi:DOI: 10.1556/2006.8.2019.57
- Kemp, S. (2022). *Digital 2022 Global Overview Report*. Kepios. Haziran 14, 2022 tarihinde <https://datareportal.com/reports/digital-2022-global-overview-report> adresinden alındı
- Kwon, O., & Wen, Y. (2009, May). An empirical study of the factors affecting social network service use. *Computers in Human Behavior*, 26(2), s. 254-263. doi:10.1016/j.chb.2009.04.011
- Kwon, O., & Wen, Y. (2010). An empirical study of the factors affecting social network service use. *Computers in Human Behavior*, 26(2), s. 254-263. doi:https://doi.org/10.1016/j.chb.2009.04.011
- Lee, Z. W., Cheung, C. M., & Thadani, D. (2012, January 4). An Investigation into the Problematic Use of Facebook. *2012 45th Hawaii International Conference on System Sciences*. doi:10.1109/HICSS.2012.106
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370-396.
- Miranti, A. (2017). Visual hyper reality of teenagers in social media with photographs as communication media. *The 3rd International Conference on Social and Political Science "The Impact of Information Technology on Social and Political"*. KnE Social Sciences.
- Monacis, L., Palo, V. D., Griffiths, M. D., & Sinatra, M. (2017, May 11). Social networking addiction, attachment style, and validation of the Italian. *Journal of Behavioral Addictions*, 6(2), s. 178-186. doi:DOI: 10.1556/2006.6.2017.023
- Nunes, M. (1995). Jean Baudrillard in cyberspace: internet, virtuality, and postmodernity. *JSTOR*, 29(2).
- Park, Y. (2016, June 13). *weforum*. 8 digital skills we must teach our children: <https://www.weforum.org/agenda/2016/06/8-digital-skills-we-must-teach-our-children/> adresinden alındı
- Pérez-Escoda, A., Garcia-Ruiz, R., & Aguaded, I. (2019). Dimensions of digital literacy based on five models development. *Culture and Education*, 31, 232-266. doi:https://doi.org/10.1080/11356405.2019.1603274
- Rahmah, A. (2015). The Third Information Systems International Conference Digital Literacy Learning System for Indonesian Citizen. *Procedia Computer Science*, 72, 94-101.

Sezgin, A. A., & Karabacak, Z. İ. (2020, Haziran). Yükseköğretimde dijital dönüşüm ve dijital okuryazarlık dersine yönelik betimsel bir analiz. *e-keşif*, 28(1), 17-30.

Stancelescu, E. (2022). The Bergen Social Media Addiction Scale Validity. *International Journal of Mental Health and Addiction*. doi:https://doi.org/10.1007/s11469-021-00732-7

Ünlü, F. (2018). Orta yaş üstü bireylerde sosyal medya bağımlılığı ve sosyal izolasyon. *Pesa International Journal of Social Sciences*, 4(1), 161-172.

Yang, Z., Griffiths, M. D., Yan, Z., & Xu, W. (2021). Can watching online videos be addictive? A qualitative exploration of online video watching among Chinese young adults. *International Journal of Environmental Research and Public Health*, 18, s. 1-14. doi:doi.org/10.3390/ijerph18147247

Yılmaz, E. A. (2020). *Oyunların Gücü Adına: Oyunlaştırma Bilimine Giriş*. İstanbul: Epsilon.

Zhang, C., Sun, J., Zhu, X., & Fang, Y. (2010). Privacy and security for online social networks. Challenges and Opportunities. *IEEE Network*, 24(4), s. 13-18.

Araştırmacıların Katkı Oran Beyanı / Contribution of Authors

Yazarların çalışmadaki katkı oranları %100 şeklindedir.
The authors' contribution rates in the study are %100 form.

Çıkar Çatışması Beyanı / Conflict of Interest

Çalışmada herhangi bir kurum veya kişi ile çıkar çatışması bulunmamaktadır.
There is no conflict of interest with any institution or person in the study.

İntihal Politikası Beyanı / Plagiarism Policy

Bu makale İntihal programlarında taranmış ve İntihal tespit edilmemiştir.
This article was scanned in Plagiarism programs and Plagiarism was not detected.

Bilimsel Araştırma ve Yayın Etiği Beyanı / Scientific Research and Publication Ethics Statement

Bu çalışmada Yükseköğretim Kurumları Bilimsel Araştırma ve Yayın Etiği Yönergesi kapsamında belirtilen kurallara uyulmuştur.
In this study, the rules specified within the scope of the Higher Education Institutions Scientific Research and Publication Ethics Directive were followed.