Role of Gaming in Stress: A Qualitative Perspective

Ria Kalra*, Namita Tayal**, & Virendra Pratap Yadav**

* Master of Arts, Department of Applied Psychology, University of Delhi riakalra.6399@gmail.com

**Assistant Professor, Department of Applied Psychology, Shyama Prasad Mukherji College for Women, University of Delhi

Abstract

In the modern times, stress has become an everyday problem. It could be caused due to pressures of work and life or individual lifestyles. Based on existing researches, it can be observed that gaming behaviour helps people deal or maintain with their everyday life stressors. The aim of the present research was to understand the role of gaming behaviour in stressful situations. To serve the purpose of the present study, qualitative interviews were conducted on the participants to explore the gaming habits and behaviours of eight players who indulged in playing casually. The data was recorded and transcribed. Further, thematic network analysis was applied to analyse the data. Based on the analysis, four global themes were identified namely, Gameplay: an aid to coping stress; Gaming: an asset to mental wellbeing, Winning enhances the self, and Socialization, by product of gaming. Results of the present study revealed that games not only help in dealing with stress but also maintaining mood and mental well-being.

Keywords: Video Games, Stress, Coping, Well-being, Self, Socialization

Introduction

Stress has become an everyday phenomenon. It is a commonly used term in our daily lives. According to World Health Organization, stress is the "Health epidemic for 21st century". Stress has varied meanings under different situations. Selye (1965) defines stress as "the nonspecific response of the body to any demand." It can be described as being overwhelmed, worried, destructive, exhaustion, and lethargy. Although it has always been considered a negative notion, but this certainly might not be the only way to conceptualise it. Selye (1974) gave the notion of positive stress called the Eustress. He distinguished eustress and distress based on the adaptiveness towards the stress response. Stress can arise from a number of different sources including physical, psychological, social, environmental, cultural, etc. Stress

originating within an individual is called internal stressor whereas the one that originates outside an individual is called external stressor (Papathanasiou, et.al, 2015).

Stress affects our physical, psychological and spiritual health. The effects are usually mixed as the individual is affected by stress as a whole. It can lead to rise in negative emotions. As per the observations which highlight the responses of individuals on critical situations revealed that only 15% of individuals can function effectively when faced with a crisis, and 15% are found to be completely disorganized (Manos, 1988).

Traditionally, people use different activities such as meditation, yoga, music, and exercise to overcome stress. However, in this modern era electronic gadgets have replaced such activities. Individuals have now resort to watching movies, TV series, online shopping or simply play games to overcome stress. Researchers have found that video games can significantly reduce stress in an individual's life (Kathawala, Chaplot & Soni, 2018; Reinecke, 2009). Video games are referred as an electronic or computerized game played by manipulating images on a video display or television screen". It is also called as computer games or digital games (term given by Digital Games Research Association, DGRA). Additionally, gamers have been identified as those who regularly play video games at least more than an hour per day. Four distinct paths for recovery from stress have been identified by Reinecke (2009) as physiological relaxation, psychological detachment, perceived control and mastery experiences.

Two kinds of video games: "casual games" for leisure time and "serious games" that requires huge time, have been identified. Casual games include Candy Crush and Angry birds etc. On the other hand, serious games are more challenging because these have dynamic ingame systems and feature complex input schemes and have more calibration of skilful play. It is important to understand why individuals tend to play video games when they have a large variety of activities to pick from. Yee (2007) has provided a motivational model, based on Bartle's Player types. It consists of three components called achievement, social and immersion along with their sub-components called the Advancement, Discovery, Socializing, Mechanics, Role-Playing, Relationship, Teamwork, Competition, Customization, and Escapism to describe the motivation behind playing games online.

However, most of the researches conducted in this area have focused on the negative impacts of video game, especially on children. Minimal studies have indicated the positive effects of playing video games including improvements at cognitive levels, better coordination of eye and hand, enhanced social relationships etc. Further, due to high levels of

stress an individual is going through in today's life, it becomes even more important to understand how video game playing can help individuals in dealing with stress. Therefore, the present research aimed to understand the role of gaming behaviour in stressful situations.

Review of Literature

A digital game can be referred to as an electronic and dynamic system, "a state machine" (Juul, 2005), which is reactive to the activity of the player. They also consist of elements such as vivid colours, changing images, sound stimulus and sophisticated graphics. These are based on challenges, rules, player performances and dynamics in which players try to accomplish a goal or various goals by beating opponents and executing quests (Adams & Dormans, 2012). A number of research studies indicate that stress is induced by playing video games (Ferguson et al., 2016; Hasan et al., 2013). On the other hand, some researches have shown that video games help manage or reduce stress (Kathawala et al., 2018; Reinecke, 2009). A number of studies have revealed that a correlation exists between playing video games and enhanced mood or rise in positive emotions (Russoniello, O'Brien, & Parks, 2009).

Games are found to develop self-confidence. It promotes their interactions with society among children and adolescents (Cunningham, 1994; Favaro, 1982), improves various intellectual skills like coordination, abstraction and reasoning skills along with attention, coordination and concentration. In fact, Smith et al. (1995) are suggestive that better social skills develop among children who play these games than those who do not. Games promote cognitive activities and skills (Green & Bavelier, 2012), enhances creativity (Jackson et al., 2012), skills related to problem-solving (Prensky, 2012), improvements in spatial skills (Uttal et al., 2013)

However, games might increase violent behaviour among children (Fileni, 1988). Roe and Muijs (1998) through a survey revealed that adolescents who were heavy use computer game players were associated with negative characteristics in relation to self-esteem, academic achievement and social skills. Based on the theory of uses and gratifications (Ruggiero, 2000), the top most reasons that individuals mention for using various types of media are enhancing their emotional states and managing their moods. Gaming is supposed to be one of the most effective and efficient ways through which children and youth develop positive feelings. McGonigal (2011) suggests that a few of the most powerful optimistic emotional experiences are prompted in the video gaming environment.

Russoniello et al., (2009) revealed that casual gaming had a positive impact on brain function and mood. In two of the three gaming conditions, decrease in heart rate was observed. Study indicated that puzzle video game playing, which are games with short-term commitments, have great degree of accessibility and minimal interfaces (such as Angry birds or Bejewled II) can enhance players' mood, ward off anxiety and promote relaxation.

Przybylski et al., (2010), proposed a motivational model of video game engagement based on self-determination theory and exclaim that games are appealing and provide a sense of well-being as games have the potential to satisfy the psychological needs for autonomy, competence and relatedness. Roy and Ferguson (2016) exclaimed that various gamers report reduction in stress after playing video games.

Method

The qualitative research paradigm was followed to understand the role of gaming in relation to stress. The data for this qualitative research was collected using semi-structured interviews. For this, the gamers were identified, their consent was taken and interviews were conducted. A total of 8 interviews were conducted and recorded with the participant's permission. Participant observation was also done as a means of data collection. These interviews were then analyzed using thematic network analysis.

Choosing the sample

Gamers were chosen as the population because only gamers can provide us with an in-depth knowledge of their thought, perception and feelings while they experience gaming. Further, stress was taken as a variable of study as it becomes important to study it due to the massive advancements, changing technological dynamics, climatic changes and various other reasons which are contributing to the increase in stress of an individual's life.

Data Collection

In choosing the sample, researcher used the Purposive sampling method. The inclusion criteria was individuals who played games casually. The participants were sought through personal contact of the researcher. Semi-structured interview schedule with open ended questions was prepared based on Yee's Motivational Model (2007). In-depth interviews were conducted until the data collected reached a saturation point which means that similar answers could be noted. In all, interviews of 8 participants were conducted. The interviews were recorded with the permission of the participant and they were assured that the information will be used only for research purposes. Every interview was conducted for

about 25-30 mins. Participant observation was also used as a method of collecting the data. Initially, the researcher started from descriptive observation, observing everything about the gamer. Later, the observation was focused on specific gaming habits, behaviours and thoughts of the gamers.

Data analysis

Data analysis is the central step in any qualitative research. It is a continuous and dynamic process and is simultaneous to the process of data collection it is therefore a parallel process. Thematic network analysis was employed to analyse the collected data.

Thematic Network Analysis

Thematic networks attempts to provide web-like map which is an organizing principle and a way to represent, and provides clear-cut procedures that can be used to reach interpretation from text. Thematic networks helps us in drawing: (i) bottom level premises found in the text (Basic Themes); (ii) groups of basic themes categorized jointly to epitomize more conceptual principles (Organizing Themes); and (iii) themes super-ordinate in nature that encapsulate the fundamental metaphors in the content as a whole (Global Themes). Further, these are presented as web-like networks demonstrating the salient themes at all the three levels, and depicting the existing relationships among them.

Interpretation and Discussion

The following global themes, organizing themes and basic themes were identified.

S.no.	Basic Themes	Organizing themes	Global themes
1.	Games pauses constant thoughts about stressors	Mind distraction encourages a refreshing perspective towards	Gameplay as an aid to coping
2.	Release of work stress		stress
3.	Move away from conflicting situations	problem	
4.	Mental Utilization reduces insomnia.		
5.	Gaming helps discard frustration	Venting out feelings by playing when in distress	
6.	Virtual Killing releases aggression		
7.	Social connectivity reducing distressed feeling		
8.	Games calm down anxiety		

9.	Compensate real-life loss with game wins	To maintain Homeostasis by playing	
10	Bridging gaps between real and ideal self	by playing	
11	Mental exercise maintains interest towards game	Mental engagement a path to prosperity	Gaming as an asset to mental
12	Nature of game mobilizes participation of players	paul to prosperity	well-being
13	Replacing boredom through games		
14	Positive Utilization of Leisure time		
15	Refreshing usage of self- time		
16	Winning induces happiness	Gaming Generates Positive emotions	
17	Winning associates to excitement rush	1 ositive emotions	
18	New feature promotes mental arousal		
19	Winning evokes satisfaction		
20	Portrayal of opposite gender character	Lowering discrepancy between real self and	Winning enhance "The Self"
21	Constructing virtual self -synonymous to self	ideal self	THE SCH
22	Building character with desired traits		
23	Benefiting from other sex character		
24	Winning develop self-efficacy	Enrichment of Self- constructs by	
25	Boosts Self-confidence	achievement	
26	Finding new quest contributes to realization of own Potential		
27	Improved decision making		
28	Winning increases self-esteem		

29	Provides a sense of self-pride		
30	Virtual help amongst player	Teaming provides sense	Socialization as a byproduct of
31	Feeling of connectedness with friends	of social support	gaming
32	Heightened sense of involvement		
33	Widened social circle		
34	Posting wins on social media	Comparison among players enhances social	
35	Winning shared offline with family and friends	status	
36	Challenging and winnings adds to superiority		
37	Sharing of social media ID's boosts social identity		
38	Multi-playing improves Communication skills	Team playing builds social skills	
39	Co-operation intensifies team spirit	- SOCIAL SKILLS	
40	Group playing inculcates Leadership qualities		

Themes

The thematic network analysis by Attride & Stirling was used to analyse the data. A total of four global themes, ten organizing themes and forty basic themes were identified:

Global theme 1: Gameplay as an aid to coping stress

Coping can be referred to as successfully managing any stressful event or situation. Through the interviews it could be well understood that gaming has become a new source of coping mechanisms for dealing with everyday stressors. The data yielded that video games are safe and fun outlet of emotions and developing coping skills. Gaming proves to be a source of venting negative feelings and helps individuals in maintaining equilibrium. Another way online games provide help in coping from stress is its ability to distract mind from the psychological stressors. It provides individuals with a refreshing time which helps them to gain unique perspectives of their problems. A study by Reinecke (2009) exclaimed that online games prove to be used as a coping mechanism after exposure to certain stressful situations or strain.

This theme is substantiated by the excerpt of the Participant 2: "because I don't have much work. So, I remain free. Thus, I play games. I use to work earlier and use to be busy. But then I left the job so I had a lot of free time. I had a lot of stress. My husband's job got transferred to another state. We had financial problems as well. So, I started playing games so I can indulge my mind somewhere. But I used to think that I won't be able to play this game. Everyone around me used to play this game, but I didn't know how to play it. However, when I started playing the game, I found it easy and learnt it quickly and I am happy that now I can play this game very well. I just like playing the game."

The theme can be further comprehended using its three organizing themes as explained below.

Organizing theme 1.1: Mind distraction encourages a refreshing perspective towards problem

Distraction refers to diverting attention away from the source of focus. Participants reported that games help them in diverting their attention from the source of stress towards itself. It could be understood that it helps them control their thought pattern about stress and focus their attention on the game. This distraction time helps them to calm their mind and ensures a new perspective towards the tensions and problems. It is substantiated by the excerpt of Participant 6: "earlier when I was playing, I had reached at 38th position which means that I was playing quite well then, my fb id got deactivated. Then I started playing game again from the 1st level and in just one day I have reached the 10th level. There is no special feeling. This is just that it helps in reducing some stress and passes my time. This just helps to divert my mind from work to game otherwise my entire focus is on my work."

Basic theme 1.1.1: Game pauses constant thought about stressors.

Several participants described that playing games help them stop any kind of thoughts about the problems prevalent in their lives. Individuals reported that not playing would increase the number of negative thoughts about their stressors. Games tend to be become a pleasant distractor and a block between the mind and the stressor thoughts.

Basic theme 1.1.2: Releases work stress.

Individuals have reported that games are used for releasing their work stress. As games are intriguing in nature and are not necessarily a part of everyday route, they serve to be a useful way of reducing any work-oriented tension by diverting the mind away from that stress.

Basic theme 1.1.3: Move away from conflicting situations

Games provide a brief distraction from the conflicts in the lives of individual as a form of entertainment. Participant mentioned that they use gaming to come over any problem or trouble that had occurred in their lives. It provides individuals, a feeling of "relief".

Basic theme 1.1.4: Mental utilization reduces insomnia

Insomnia refers to inability to sleep or disturbance in sleep patterns. It could be noted that few participants mentioned that gaming especially games designed to relieve stress offers benefits including reduced sleep disturbance as it helps individual to stop overthinking and provide them with a feeling of satisfaction.

Organizing theme 1.2: Venting out feelings by playing when in distress

Individuals play not only when they bored or they have free-time, but also when they feel emotionally distressed or frustrated. Games help them to relieve the distressing situation and help them to feel better. Games are associated to removal of negative feelings and emotions. Research revealed that media usage and mindfulness practices both are helping in decentring which refers to psychological distancing from stressors and symptoms, which is useful in relieving from negative state of mind and lifts mood and eradicates certain cognitive biases which are associated with those moods. The following excerpt adds to our understanding of this theme.

Participant 1: "Sometimes, like once I had my broad exam and it didn't go well so then I played game for 2 hours straight, and then I was relieved of stress and thought would do work harder from the next time. You feel relieved."

Basic theme 1.2.1: Gaming helps discard frustration

Frustration can be referred to as a negative feeling which arises when a goal or drive is blocked. Participants mentioned that gaming helps them to release the frustration caused by any goal that couldn't be fulfilled in real-life. Gaming is taken-up during times individuals feel frustrated and it helps help calm down.

Basic theme 1.2.2: Virtual killing releases aggression

Virtual killing can be referred to as killings that take place during online gameplay. Despite the fact that a number of researchers argue that violent games increase aggression a few researchers argue that it instead decreases aggression among players (Fileni,1988). The participants reported that such killing becomes an outsource of anger and helps them release it.

Basic theme 1.2.3: Social connectivity reducing distressed feeling

Social connectivity refers to feeling of belongingness with their social community. Games provide a sense of involvement and important to individuals which helps them to overcome the distressed feeling. Participant's mentioned that on being upset they choose to play with their friends which helps them to release their distress and helps them feel calm and composed.

Basic theme 1.2.4: Games calm down anxiety

Anxiety can be understood as a feeling of apprehension. Games are found to be helpful relieving individuals from anxiety which helps an individual to calm down. According to Reinecke (2009) games provide physiological arousal in the players and exclaims that this arousal helps in decreasing anxiety and thereby helping a person to feel relaxed.

Organizing theme 1.3: To maintain Homeostasis by playing

While coping, an individual strives to reach homeostasis or an equilibrium. From the interviews it can be observed gaming helped an individual to compensate their real-life losses with the wins in game. This essentially means that winning helped them maintain the balance of wins and losses in their real-world. To maintain this balance of loss and wins, individuals tend to engage in gaming more often. This particular theme might be useful in coping from stress but it needs to be focused that this ability of game can essentially contribute to its addictive nature. The below mentioned excerpt adds to our understanding of the theme.

Participant 7: "I would want more of adventurous. In real life too, I have interest in adventurous, trekking and related stuff. So, I would want, if I were to dress my player, I would give her a sporty look like camouflage or military print jackets and black or similar military print lower and a lot of shields and gloves in the hand, overall a complete sporty look; "ready for the fight" kind."

The following basic themes can also be used to have an in-depth understanding of this theme.

Basic theme 1.3.1: Compensate real-life loss with game wins

An important motive for gaming that could be identified is its ability to compensate for real-life loss through virtual game wins. Gaming is used as a coping tool using which one can win in games to gain a sense of accomplishment and attain a feeling of being worthy as player despite not being able to accomplish goal in real-life.

Basic theme 1.3.2: Bridging gaps between real and ideal self

Games provide individuals with a platform the bridge the gap between real and ideal self. This discrepancy could be a major source of stress in an individual's life. In accordance

with Rogers, lesser the discrepancy between the two selves, more the individual will move towards fullest potential. Games help make the real self-congruent to ideal self.

Global theme 2: Gaming, an asset to mental well-being

Mental well-being refers to a positive or a healthy state of mind. Through the interviews it could be noted that gaming has become a resource of enhancing mental well-being by keeping individuals engaged in this mental activity and through the generation of immense positive emotions associated with winning in game, finding new features and proceeding to higher levels in game. The PERMA model by Seligman which is model of wellbeing can be used to have a better understanding of this theme. The P stands for positive emotions, E stands for engagement, R stands for positive relationships, M for meaning and A for accomplishment. Gaming helps in fulfillment of these essential components of well-being, specifically focusing on the first two components in this theme.

A lot of participants mentioned using game for coping from stress and managing mood. Participants reported that succeeding in games elicited a number of positive emotions in them. By processing in levels, successfully solving puzzles, winning against opponents or opponent team, reaching to first position, participants described positive feelings which were sometimes in contrast to what they actually felt in real-life. Some participants believed that game had escaping qualities and identified the mood enhancing aspect of games. A sense of curiosity also emerges to find what new features could be unblocked because of game wins. Being able to help is another way individuals feel happier and content. The below mentioned excerpt facilitates our understanding.

Participant 7: "mostly, I feel good when I play and for example: in Pub-g our wins and kills increase or in Ludo or in any other game, if we play it nicely then obviously it feels amazing. If we lose, then we feel shit man for some time."

Gaming has become an essential activity especially during leisure times. All the participants reported that gaming reduces boredom. Games keeps them engrossed in itself. They reported games to be interesting and stimulating in nature. People tend to find enjoyment in different things. These things help an individual to maintain the "flow" in their lives and enhances their well-being. Csikszentmihalyi coined the term Flow, which represents the feeling of complete and energized focus in an activity, with a high level of enjoyment and fulfilment (Debold, 2002). One of the participant's mentioned that they remember of game when they don't have any work to be done.

Participant 5: "When there is no work at that time, I remember that there must a playing life available on the games, so let's play game."

The following organizing and basic themes helps us in better interpretation of this theme.

Organizing theme 2.1: Mental engagement a path to prosperity

Engagement means "being one with the music, time stopping, and the loss of self-consciousness during an absorbing activity" (Seligman, 2012). Engagement in any activity is extremely essential to maintain what we call in positive psychology as "flow" which helps us to immerse in an activity and lose track of time. Gaming is found to be very entertaining and an activity done primarily for enjoyment. This helps to keep individuals engaged and helps them to calm down and enjoy what the like. Participants mentioned that games are interesting and fascinating. The excerpt mentioned below provides a support to theme.

Participant 8: "it is good pastime if I tell you. time passes easily and nicely. Because a game match lasts for about 20-25 mins so it's a great pass time. Suppose there is a free class you are just sitting around in college you can play a game."

Basic Theme 2.1.1: Mental exercise maintains interest towards game

Participants report that games are intriguing in nature which help maintain their interest. Games ensure that players remain busy and engrossed in the game itself. The usage of mind for solving the puzzles makes them enjoyable and interesting for the players.

Basic Theme 2.1.2: Nature of game mobilizes participation of players

The visuals of the games are fascinating. Games require the participants to be attentive and alert. The nature of the game, its ability to connect so many players that is, multiplying, the kind of content they provide, they target a set of audience is stimulating for the players. Especially games that provide some kind of arousal and involves violence attracts the players and are found to be amusing.

Basic Theme 2.1.3: Replacing boredom through games

All the participants reported boredom to be the leading cause of playing games. Games help in attaining a refreshing feeling. Interesting and challenging nature of games help players to move from boredom to the area of flow which also depends upon the ability of the player. This can be understood using the flow theory (Chen, 2007).

Basic Theme 2.1.4: Positive Utilization of Leisure time

Participants reported that games help them to use their free time into some interesting activity which reduces their chance to keep thinking about the negative stressors of their

lives. As games keep them indulged, it reduces the time of overthinking about the strains and individuals are able to pass their leisure time optimistically.

Basic Theme 2.1.5: Refreshing usage of self-time

Participants mentioned that games have become their "me time". Individuals usually prefer activities which they enjoy during their self-time. Games provides them with a time to enjoy and rejuvenate. It also helps them to release any work-oriented tensions. Even small period of time spent on playing games is found beneficial by the participants.

Organizing theme 2.2: Gaming Generates Positive emotions

Gaming brings out optimistic emotions in individuals. It has been reported that winning make them elated. A sense of happiness if derived from finding new places, new features. Individuals feel satisfied after winning challenges in games. Especially when games are wined in groups it fills the individual with excitement and calls for celebration. Numerous researches has found a causal relationship between playing preferred video games and enhancement in mood or a substantial increase in positive emotions (Russoniello, O'Brien, & Parks, 2009).

Participant 3: "it feels amazing. It's like today we have chicken dinner. They show this line at the end when you play "winner winner, chicken dinner". In fact, before starting the game, we all talk and tell each other that today we will win and have chicken dinner. And then till the time we don't win the games doesn't stop we just keep playing. It becomes like an addiction at that point. Sometimes it happens that we come 2nd but even then, we aren't satisfied. We want 1st position only."

Basic Theme 2.2.1: Winning induces happiness

Happiness is a primary positive emotion. Participants reported that by winning in online games they experience happiness and joy. It helps them feel good about their own selves.

Basic Theme 2.2.2: Winning associates to excitement rush

Some participants reported that they feel excited when they win in the game. They mentioned that this winning is associated to the celebration calling it "winner winner, chicken dinner" as observed in the famous game pub-g.

Basic Theme 2.2.3 New feature promotes mental arousal

Some individuals mentioned a mental arousal that evokes by knowing about new features in the game or finding feature that were not known earlier. Being able to use these new features efficiently caused increase in gameplay whereas, an inability to use it effectively sometimes led the person to switch to another game.

Basic Theme 2.2.4: Winning evokes satisfaction

Winning provides a sense of satisfaction, caused due to a feeling of accomplishment, an enhanced feeling of self-potential or in fact the relaxing nature of the games. Participants mentioned that game wins were important to them.

Global Theme 3: Winning enhance "THE SELF"

Gaming wins have great impact on how an individual think about himself/herself. These help individuals to decrease the gap between real-self and ideal-self. Gamers tend to create their virtual characters in accordance to their idealistic selves, where as some others created them in resemblance to their real-self. It could also be noted that individuals tend to choose opposite gender characteristics such as girl's wanting their characters to look stronger and sporty, characteristics assumed mainly for boys. Perhaps, individuals also tend to choose opposite sex so as to gain benefits associated with the other sex. This could be possible due to the various gender and sex related problems that individuals face in real-life. It is essential to understand here that gender is a societal term whereas, sex is a biological term. Van Looy (2005), found two mechanisms that underlie mental association between self and character called the perceived similarity and wistfulness, these are driven by the desire of the player to be similar to avatar. In accordance to self-discrepancy theory, the player are able to feel closer to their ideal self by identifying with the character in game. This identification also helps in reducing negative psychological tension or stress. He exclaims that "games function as a virtual laboratory in which players can experiment with different aspects of their selves" (Van Looy, 2005). Favaro (1982) exclaimed that playing video games on computers helps in development of self-confidence.

Excerpt from the Participant 2 substantiate the theme: "I feel amazing. Especially when I am able to do it in the first go, I feel so good about myself that the one who thought that I won't even be able to play this game, I have cleared it in first attempt."

Organizing theme 3.1: Lowering discrepancy between real self and ideal self

Gaming has become a way to showcase what an individual is and how they want to be like. Some participants exclaimed that they want their characters to resemble who they are whereas some experiences showed fulfillment of what they want to be like. Resemblance of virtual self to real self-exclaimed that the discrepancy between the two reduces through engaging in games. This is extremely beneficial in knowing various aspects of self.

Participant 3: "Yes, I really like the caps and the heart hair hand because I love hair bands in real life too. So, it's my character it should look like me so I like my character to wear good hairbands. I also love cute shoes. There are some dresses too like my friend Shayra plays so she loves shorts but she doesn't have any. So, she steals shorts from boxes of those who are dead which makes her happy. Styling and accessorizing her character is important for her."

Basic theme 3.1.1: Portrayal of opposite gender character

Many participants mentioned creating their virtual avatars with characteristics of opposite gender. The existing gender-related stereotypes is a major source of pressure and is extremely demanding stress. By portraying virtual characters using the typical opposite gender features helps an individual to feel the freedom and cross all gender related boundaries.

Basic theme 3.1.2: Constructing virtual self synonymous to self

Virtual self can be referred to the online game characters or "avatars" of an individual. Participants reported that they wish to identify with the character and create it as unique and special as possible. This is helpful for them as one is able to identify with own self and understand certain aspects of self.

Basic theme 3.1.3: Building character with desired traits

Participant's mentioned that sometimes characters are created with certain desired traits, which one wants to build in real-life are also. This helps them to reduce the discrepancy between who they are and what they want to be like which in turn reduces psychological distress.

Basic theme 3.1.4: Benefiting from other sex character

Participant's mentioned that certain individuals also tend to choose other sex character which could be to gain game related benefits associated with the other sex character.

Organizing theme 3.2: Enrichment of Self-constructs by achievement

Various participants believed that achievements in gaming helped them feel better about themselves. By winning in games they had a feeling of progress. They felt an increase in self-worth and self-efficacy. Gaming achievements bought a sense of accomplishment and potential. It helped them believe in themselves. This generates immense positive emotions in participant and helped them in feeling more accepted with self. They reported an increase in their confidence level by winning or successfully clearing levels in the game. According to

Cunningham (1994) computer game playing is found to be very useful in building of self-confidence in children.

Participant 7: "Obviously, it is an amazing feeling. For example: in Pub-g if we have kills or more kills, or in any other game like Ludo if you win then you have a Conquering feeling which comes when you defeat everyone. It hits you differently. And I think because of this we get boost up, our confidence level somewhere or the other increases because when we play online games our score or our level increases so, when you share your id with someone of Ludo or Pub-g or of any other online game so the person can easily decipher from the scores that what level have you reached as a player or how good of a player are you. so, your image as a good player is established. Thus, the confidence level also increases."

However, various participants also reported experiencing negative emotions on not being able to cross a level or by losing in game. This induced stress and anger. It further led them to indulge in gaming for longer hours until they win in the game. The following excerpt highlights this point.

Participant 1: "I feel really great when I win. Yes, I did it. I get extremely stressed when I lose and keep playing the game until I actually win the game for continuous hours, for 1 hr. 2 hrs. doesn't matter until I win, I just want to win."

Basic Theme 3.2.1: Winning develop self-efficacy

Various participants mentioned that clearing a level or winning in the game helps them to believe in their capabilities. It helped them feel that they have the potential which helps them to take difficult task as challenges which they try to master.

Basic Theme 3.2.2: Boots self-confidence

Participants reported an increased self-confidence on being able to win in the games. Self-confidence is increased by playing video games which aids to well-being among the veterans who were treated for behavioural and mental health issues.

Basic Theme 3.2.3: Finding new quest contributes to realization of own Potential

New features in games not only arouse players to indulge more in gaming but also adds to their sense of potential. Participants reported that on finding new features of the game helps them in realizing their potential, they tend to use it for their advantage and share those further with their friends and help them feel superior than others.

Basic Theme 3.2.4: Improved decision making

Participant mentioned that gaming helps them in learning to take wise decisions and helps them in learning patience. It enhances our understanding and helps take larger perspectives.

Basic Theme 3.2.5: Winning increases self-esteem

Winning not only helps in development of self-confidence but also in development of self-esteem. Self-esteem refers to the value of own self. Participants reported increased self-esteem by winning in games.

Basic Theme 3.2.6: Provides a sense of self-pride

Participants mentioned that winning, finding new quests and defeating opponents in the game provided a sense of pride to them about their own selves. This increased a sense of potential and made them believe that they can accomplish their targets and goals.

Global theme 4: Socialization, a byproduct of gaming

Participants mentioned that playing games with friends is a source of enjoyment and provides them a sense of support whereas few others preferred playing alone and used games as a means of isolating from others. Nonetheless, individuals preferred talking about the games that they play with people around them including their family members and friends. Few participants liked playing with unknown players from the world, whereas a few restricted to play with known friends. Playing with unknown players increased their social circle but it was limited to gaming experiences and no personal experiences were discussed with them. Indulging in games with real-life friends enhanced their friendship bonds. Participants believed that games had the ability to foster social support.

Participants also used games as a means to compare themselves with other players to enhance their social status and to boost their sense of self in comparison to others. Participants reported a feeling of superiority on winning from other players and finding new features priorly not known to other players. One of the participant also mentioned that on finding new feature she would use that to her advantage and not share with other gamers so she can perform better in play. Along with this, she also mentioned that after using it to her advantage for some time, she had share it with others and be the first one to find that feature in the eyes of others as she believed this would enhance her level as a player and that others would listen to her believing that she is a good player. Moreover, participants mentioned sharing about their gaming and winning experience over social media sites which they feel enhances their social status. Not only with online friends such gaming experiences are discussed with other gamers during face-to-face interactions and even with non-gamers.

Along with this, participants mentioned that playing in teams also helps them in learning various skills that can be useful in our social surrounding including cooperation, communication and leadership skills. They believed that these skills develop in an individual during the course of online play.

The below mentioned excerpt helps us in better understanding of the theme.

Participant 3: "yes, it increases a lot specially through PUB-G because they show usernames in the game. Also, the biggest advantage is voice chat. So, through voice chat you are continuously taking to your people. Thus, socialization increases. when you add random playing, if you keep playing random people will add you. so, if you keep doing that your contacts increase."

Following organizing themes adds to our comprehension of how socialization takes place through videogame playing.

Organizing theme 4.1: Teaming provides sense of social support

The sense of involvement helps people feel that they have someone to talk to. Individuals feel that they are a part of social groups. It could also be noted that individuals believed that by helping others in the game they felt like they supported their friends in real-life and similarly when helped by a friend in game they gain a sense of support during the times of crises.

Participant 6: "it feels good. Winning feels amazing always. And sometimes if you talk to that person, they say that you play amazing pool."

Basic Theme 4.1.1: Virtual help amongst player

Participants specified that helping or receiving help in games enhances their sense of self and helped them believe that they have a support system. According to Ewoldsen et al., 2012 players acquire prosocial skills while playing games especially the ones designed to reward support, cooperation and helping behaviours.

Basic Theme 4.1.2: Feeling of connectedness with friends

Participants believed that games help them to increase their friend circle. Participants reported that playing games with friends makes games makes them feel more involved in group. Individuals also mentioned recommendations by friends for playing games to be one of the reasons for indulging in online games.

Basic Theme 4.1.3: Heightened sense of involvement

Games also help people to feel more involved and makes games more interesting. Participants mentioned that they enjoyed playing in games more even they played with their friends.

Basic Theme 4.1.4: Widened social circle

Multi-playing helps gamers to increase their social circle. Some participants reported playing with friends while some also play with unknown players connected all over the world. Various participants mentioned talking about games with other which helped them in increasing their social circle.

Organizing theme 4.2: Comparison among players enhances social status

Participants reported that winning from other people boosts their status as a player. People challenge other players so as to boost their image in front of others. People choose to talk about their wins and levels that they have reached so as to feel superior from other players. Various participants mentioned posting about their game and wins on social media. Some individuals also compare themselves with non-gamers just to increase their self-worth and enhance their status in the eyes of others. The following excerpts highlights the essence of this theme.

Participant 6: "yes. It's there in the game you can challenge others. People think that they are better but sometimes you need to rectify people's perception of themselves."

Basic Theme 4.2.1: Posting wins on social media

Participants believed that winning in games provide them with status. Therefore, they tend to share it with others. Participants reported posting about their winning status on social networking sites so show others that they play extremely well.

Basic Theme 4.2.2: Winning shared offline with family and friends

Winning is not just shared through social networking sites but also offline with friends and family. This helps them in enhancing their social status.

Basic Theme 4.2.3: Challenging and winnings adds to superiority

Participants mentioned that challenging other and winning from them helps them to feel that they are superior to others. It provides them a sense that they are better than others. Games becomes a source of competition and winning themhelps players feel better about themselves.

Basic Theme 4.2.4: Sharing of social media ID's boosts social identity

Various other participants mentioned that they also share social media id's to boosts their social identity. This helps them to show others that they are good players which enhances their social image. The following excerpt adds to our understanding of the theme.

Organizing theme 4.3: Team playing builds social skills

Playing in teams helps in learning certain skills that prove to be very useful in social setting. By talking to unknown individuals, gamers learn the skill to communicate effectively. The leadership phenomenon is also learnt through gaming. They tend to learn co-operation and play together to win in the game. In accordance to Smith et al. (1995) better social skills develop among children who play these games than those who do not.

Participant 7: "I think my social life gets better because I have legit met some friends through gaming only like on Pub-g. like from auto tuning or auto-matching a lot of different people come into your friend list or contact list who were not there, from anywhere who were just online in the game at that time so a team is formed automatically, then we talk to each other on mic and I think our communication skills also enhance, confidence level also improves that we are teaming up with someone unknown to us because when we play with someone known or a friend it is very easy to explain them and we say absolutely anything that do this, do that, play like this, cover from there but when we play with unknown people our confidence and communication skills improve. We get socially more open."

Basic Theme 4.3.1: Multi-playing improves Communication skills

Participants mentioned that playing games in groups and conversing with other players enhanced their communication skills. It helps them in understanding the importance of verbal communications and helps them wisely chose their words.

Basic Theme 4.3.2: Co-operation intensifies team spirit

Participants also recognize the importance of co-operation among team members and mention that they learn how to be unified in a team. They report that harmony in games help them to defeat their opponents and win in the game.

Basic Theme 4.3.3: Group playing inculcates Leadership qualities

Leadership qualities are also learnt in the process of playing games in teams. Participants mentioned that these skills are also transferred to our real-lives.

Conclusion

The research being qualitative in nature doesn't prioritise generalizability. This research is context-based. However, this doesn't undermine the reliability and validity of the data. The method of triangulation was used in the research. Along with seeking in-depth interviews, the

participant's behaviour was also observed in the natural setting to support the validity of the data.

References

- Adams, E., & Dormans, J. (2012). *Game mechanics: Advanced game design*. Berkeley, CA; New Riders.
- Chen, J. (2007). Flow in games (and everything else). *Communications of the ACM*, 50 (4), 31-34.
- Cunningham, H. (1994). Gender and computer games. *Media Education Journal*, *17*(Winter), 13–15.
- Davies, D., & Dodd, J. (2002). Qualitative research and the question of rigor, *Qualitative Health Research*, 12(2), 279-289.
- Debold, E. (2002). Flow with soul: an interview with Dr. Mihaly Csikszentmihalyi. What Is Enlightenment Magazine, 21.
- Ewoldsen, D. R., Eno, C. A., Okdie, B. M., Velez, J. A., Guadagno, R. E., & DeCoster, J. (2012). Effect of playing violent video games cooperatively or competitively on subsequent cooperative behavior. *Cyberpsychology, Behavior, and Social Networking*, 15(5), 277–280.
- Favaro, P. J. (1982). Games for co-operation and growth–an alternative for designers. *Softside*, 6(2), 11982.
- Ferguson, C. J., Trigani, B., Pilato, S., Miller, S., Foley, K., & Barr, H. (2016). Violent video games don't increase hostility in teens, but they do stress girls out. *Psychiatric Q*, 87(1), 49–56.
- Fileni, F. (1988). Educational and cognitive aspects of videogames. In D. Crookall et al. (Eds.), Simulation-gaming in education and training. Oxford: Pergamon Press
- Green, C. S., & Bavelier, D. (2012). Learning, attentional control, and action video games. *Current Biology*, 22(6), 197–206.
- Hasan, Y., Begue, L., & Bushman, B. J. (2013). Violent video games stress people out and make them more aggressive. *Aggressive behavior*, 39(1), 64-70.
- Jackson, L. A., Witt, E. A., Games, A. I., Fitzgerald, H. E., Von Eye, A., & Zhao, Y. (2012).
 Information technology use and creativity: Findings from the Children and
 Technology Project. Computers in Human Behavior, 28(2), 370–376.
- Juul, J. (2005). Half-real: Video games between real rules and fictional worlds. Cambridge, MA, USA, MIT Press.

- Kathawala, K. A., Chaplot, V., & Soni, R. (2018). Casual Video Games: Stress Management Technique in Women. *International Journal of Advance Research in Computer Science and Management Studies*, 6(3), 54-56.
- Manos, N. (1988). Basics of clinical psychiatry. University Studio Press. Thessaloniki.
- Papathanasiou, I. V., Tsaras, K., Neroliatsiou, A., & Roupa. A. (2015). Stress: Concepts, Theoretical Models and Nursing Interventions. *American Journal of Nursing Science*. Special Issue: Mental Health Care: Aspects, Challenges and Perspectives, 4(2-1), 45-50.
- Prensky, M. (2012). From digital natives to digital wisdom: Hopeful essays for 21st century learning. Thousand Oaks, CA: Corwin Press.
- Przybylski, A., Rigby, C. S., & Ryan, R. M. (2010) A Motivational Model of Video Game Engagement. *Review of General Psychology American Psychological Association*, 14(2), 154–166.
- Reinecke, L. (2009). Games and Recovery: The use of video and computer games to recuperate from stress and strain. *Journal of Media Psychology*, 21(3), 126-142.
- Roy, A., & Ferguson, C. J. (2016). Competitively versus cooperatively? An analysis of the effect of game play on levels of stress. *Comput. Hum. Behav*, 56(C), 14–20.
- Russoniello, C. V., O'Brien, K., & Parks, J. M. (2009). The effectiveness of casual video games in improving mood and decreasing stress. *Journal of CyberTherapy and Rehabilitation*, 2(1), 53-66.
- Smith, R., Curtin, P., & Newman, L. (1995). Kids in the 'kitchen': the social implications for schooling in the age of advanced computer technology. In *Australian association for research in education annual conference* (27-30).
- Uttal, D. H., Meadow, N. G., Tipton, E., Hand, L. L., Alden, A. R., Warren, C., & Newcombe, N. S. (2013). The malleability of spatial skills: A meta-analysis of training studies. *Psychological Bulletin*, *139*(2), 352–402.
- Van Looy, J. (2015). Online games characters, avatars, and identity. In R. Mansell & P. Hwa Ang (Eds.), *The international encyclopedia of digital communication and society* (pp. 748–758). Hoboken, NJ: Wiley-Blackwell.
- Yee, N. (2007). Motivations of Play in Online Games. Journal of Cyber Psychology and Behavior, 9(6), 772-775.