

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

Shivani Parupudi^{1*}, Geeta Sunkarapalli²

ABSTRACT

Kuss and Griffiths in their “Online gaming addiction in children and adolescents: A review of empirical research” state that Cailois (1961) defined play as an innate human drive that begins in very early childhood. According to dictionary.com, video games can be defined as any of the various interactive games played using a specialised electronic gaming device or a computer or mobile device and a television or other display screen, along with a means to control graphic images or any of various games played using a microchip-controlled device, as an arcade machine or handheld toy. This study aims to observe emotional symptoms, conduct problems, hyperactivity, peer relationship problems and prosocial behaviour along with decision making styles in adolescent boys and girls in the age group of 15-18 years. The sample was further divided on the basis of whether or not they played video games. The sample was administered two questionnaires, Strengths and Difficulties Questionnaire (Goodman et al, 1998) which contains items that relate to emotional symptoms, conduct problems, hyperactivity, peer relationship problems and prosocial behaviour and Decision Making Questionnaire (DMQ) that contains items that relate to an individual’s decision making styles. Data analysis was done using IBM SPSS version 22. No significant difference in the levels of decision making styles and strengths and difficulties was found between adolescent video gamers and non gamers.

Keywords: *Video Games, Strengths and Difficulties, Decision Making Styles*

Over the last few years it has been seen that video games have grown in popularity worldwide. According to a 2009 report by the Entertainment Software Association 68 percent of American households have members that play them. Video games started off as PC or console games but have now progressed to being available even on mobile phones and other mobile devices like game boys. The graphics are several times better and closer to reality. That’s what the young generation looks for, a relatability factor in the games that they are indulging in. The latest technology is ‘virtual reality’ (Lanier, 1987) where through the use of a specific device, an individual can be transported into the world of their video game (like an Alice in Wonderland situation) This is the latest fad and seems to be catching on like fire. More and more brands are working on releasing virtual reality

¹Student, Dept of Psychology, St. Francis College for Women, Begumpet, Hyderabad, Telangana, India

²Head of Department, Dept of Psychology, St. Francis College for Women, Begumpet, Hyderabad, India

*Corresponding Author

Received: January 21, 2022; Revision Received: June 20, 2022; Accepted: June 30, 2022

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

versions of their games or applications to try to gain control over the market and capitalise on the situation. The common view point with respect to playing video games is that it is intellectually lazy. However, various researches, conducted over the span of several years, on the effect of video games on cognitive and social abilities suggest that video game play may provide learning, health and social benefits. Playing video games, including violent shooter games may boost children's learning, health and social skills. The more adolescents reported playing strategic video games, such as role-playing games, the more they improved in problem solving and school grades the following year. Children's creativity was also enhanced by playing any kind of video game, including violent games but not when they used other forms of technology such as a computer or cell phone.

Merriam-webster.com defines video game as an electronic game played by means of images on a video screen and often emphasizing fast action. The most essential distinguishing feature of video games is that they are interactive; players cannot passively surrender to a game's storyline.

Instead, video games are designed for players to actively engage with their systems and for these systems to, in turn, react to players' agentive behaviours (Granic, Lobel & Rutger 2014).

Adolescents may use online games as a way of coping with stressors (Thalemann, 2009). The consistent blocking out of and passive coping with stressful experiences may be successful in the short term but when viewed from a long-term perspective, it may limit the potential to have fundamental experiences that are necessary for developing a healthy way to cope (Wölfling & Müller, 2009). Gamers are individuals who play video games regularly, more than one hour every day (Granic, Lobel & Rutger, 2014). Non gamers are those who don't.

An article published in 2013 on PsychCentral states how new research suggests that video game play may actually strengthen a range of cognitive skills such as spatial navigation, reasoning, memory and perception. Simple games that are easily accessible and can be played quickly such as "Angry Birds" can improve players' moods, promote relaxation and ward off anxiety. There is a possibility that video games are effective tools to learn resilience in the face of failure. Multiplayer games become virtual social communities, where decisions need to be made quickly about whom to trust or reject and how to lead a group (Nauert PhD, R. 2015, Video Games Can Help Boost Social, Memory & Cognitive Skills. Psych Central) It has been covered in several studies that individuals who play video games, even if they are violent, that encourage cooperation are more likely to be helpful to others while gaming than those who play the same games competitively (Granic, Lobel & Rutger, 2014) Video games could provide a potent training regimen for speeding up reactions in many types of real-life situations.

Most teens do not limit themselves to just a few game genres, instead choosing to play many different types of games. Daily gamers are more likely to play a wider range of game genres than non-daily gamers. 80% of teens play five or more different game genres, and 40% play eight or more types of games. 55% of daily gamers play eight or more types of games; just 33% of less frequent gamers do so. Girls play an average of 6 different game genres; boys average 8 different types. In multiplayer game play, different people control different characters in the game, and make individual choices about how to act and what to say in the context of the game. Nearly two-thirds (63%) of teens who play games report seeing or

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

hearing “people being mean and overly aggressive while playing,” and 49% report seeing or hearing “people being hateful, racist, or sexist” while playing. However, among these teens, nearly three-quarters report that another player responded by asking the aggressor to stop at least some of the time. 85% of teens who report seeing these behaviors also report seeing other players being generous or helpful while playing (Lenhart, et.al, 2008)

Kuss and Griffiths in their “Online gaming addiction in children and adolescents: A review of empirical research” state that Cailois (1961) defined play as an innate human drive that begins in very early childhood. Evolutionary psychology has long emphasized the adaptive functions of play (Bjorklund & Pellegrini,2010), and in developmental psychology, the positive function of play has been a running theme for some of the most respected scholars in the field (Erikson, 1977; Piaget, 1962; Vygotsky, 1978). Erikson (1977) proposed that play contexts allow children to experiment with social experiences and simulate alternative emotional consequences, which can then bring about feelings of resolution outside the play context. Beyond social cognition, developmentalists have emphasized that play constitutes an emotionally significant context through which themes of power and dominance, aggression, nurturance, anxiety, pain, loss, growth, and joy can be enacted productively (e.g., Gottman, 1986).

In positive psychology, strengths are built-in capacities for certain thoughts, feelings, and behaviours (Siegel, 2014). Difficulties are any activities that hinder functionality of an individual. The Strengths and Difficulties Questionnaire talks about various different aspects of human functionality. Emotional problems measures the emotional stability of an adolescent and how easy it is for them to get emotionally affected. Conduct problems are behavioural problems that adolescents may face as it is a transition phase. Hyperactivity is extra energy that an adolescent may possess and needs to find an outlet for it. It usually results in extra active behaviour. Peer problems may be cause by pressure from other adolescents. The behaviour or activity may not always be healthy or correct and it depends on the individual how they handle these situations. Prosocial behaviour is any action intended to help others. One motivation for prosocial behavior is altruism, or the desire to help others with no expectation of reward. In this lesson, we explore prosocial behavior and the elements that social psychologists have identified as predicting it.

Decision theory describes the steps involved in making any decision, including recognizing that a decision must be made, understanding the goals that one hopes to attain, making a list of options, determining the consequences—both positive and negative—of each option, determining the desirability of each consequence, evaluating the likelihood of each consequence, and integrating all the information. The entire process occurs within a context or situation that may influence the options available and their consequences. Decision making styles differ from individual to individual. Everyone approaches a situations differently, understands it differently and reacts differently. Decision making can be defined as the cognitive process which makes an individual choose from among several alternative scenarios his selection of a course of action. The rational decision maker follows four steps to making a decision. First, identify the problem, then generate multiple possible solutions for the problem. Then select the solution deemed most likely to solve the problem. Then implement the solution and evaluate its effectiveness. Decision making can be grouped into four main styles. The four styles are, Directive style, Analytic style, Conceptual style, and Behavioral style. Although no one fits completely into just one style category, you should have characteristics that fit, more or less, into one or two styles. Each style looks at

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

decisions in a somewhat different way. Each style deals with processing the information on which the decision is based differently.

During adolescence, there is an increasing capacity for abstract reasoning, counterfactual reasoning, reasoning from premises that are not true, systematic reasoning, and a growing capacity for probabilistic reasoning. These abilities are all relevant to decision making. An increased ability to grasp the concept of probability should encourage a more realistic understanding of the chance of various outcomes occurring. An increased capacity for systematic reasoning should provide teenagers with the ability to imagine future outcomes and transpose them into the present, thereby enabling them to assess the consequences of their actions. An increased ability to coordinate independent pieces of information should encourage teenagers to attend to all relevant aspects of choices. Adolescents' social cognition—the way they think about their social world, the people they interact with, and the groups they participate in—may differ from that of adults and influence their decision-making skills (Fischhoff, Crowell & Kipke, 1999)

Piaget (1947) sees adolescence as a "decisive turning point at which the individual rejects, or at least revises his estimate of everything that has been inculcated in him, and acquires a personal point of view and a personal place in life." There also is agreement by theorists that, during adolescence, the time perspective expands, and past and future assume greater importance and become clearly differentiated. Piaget (1947) says that the adolescent can build theories and reflect beyond the present. And, according to Muuss (1975), this corresponds to a more definite planning of vocational activities, preparation for marriage, and the establishment of more specific and lasting life goals, including the need for achieving emotional and economic independence. Adolescence describes the teenage years between 13 and 19 and can be considered the transitional stage from childhood to adulthood. However, the physical and psychological changes that occur in adolescence can start earlier, during the preteen years (ages 9 through 12). Adolescence can be a time of both disorientation and discovery. The transitional period can bring up issues of independence and self-identity; many adolescents and their peers face tough choices regarding schoolwork, sexuality, drugs, alcohol, and social life. Peer groups, romantic interests, and external appearance tend to naturally increase in importance for some time during a teen's journey toward adulthood.

Older generations lacked the understanding that video games in a certain amount were actually healthy and helped children develop cognitive and social skills which are necessary to survive in the outside world. There is so much negative thought and talk about video games that more research in the field is necessary and in different age groups and backgrounds to study in depth how much of an adverse effect it has on our brain and health and how we can use video games in a constructive manner to make education more enjoyable. There are infinite possibilities to what can be done using software, coding, programming and a screen. A few of those possibilities could be tapped into to see what the outcomes may be. Till very recently research was being done to talk about the adverse effects of video games and how unhealthy they are. As new research has revealed contradictory views we need to now look at what the positive effects can be. Everything can have a positive spin if used correctly. There is need for more research in this field involving more groups and different kinds of variables that test cognitive abilities, spatial abilities, social abilities, psychomotor skills, etc. This is a correlation study to observe the different strengths and difficulties faced by gamers and non gamers and the different decision making styles used by the two groups.

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

Research Questions

1. Is there a difference in Internalising factors between gamers and non gamers?
2. Is there a difference in Externalising factors between gamers and non gamers?
3. Is there a difference in Prosocial Behaviour between gamers and non gamers?
4. Is there a difference in Decision Making Styles between gamers and non gamers?

Objective

1. To study the difference in Internalising factors in gamers and non gamers.
2. To study the difference in Externalising factors in gamers and non gamers.
3. To study the difference in Prosocial Behaviour in gamers and non gamers.
4. To study the difference in Decision Making Styles of gamers and non gamers.

Hypotheses

1. There will be a difference in Internalising factors in gamers and non gamers.
2. There will be a difference in Externalising factors in gamers and non gamers.
3. There will be a difference in Prosocial Behaviour in gamers and non gamers.
4. There will be a difference in Decision Making Styles of gamers and non gamers.

METHODOLOGY

Research Design

The present study is a quantitative study in which the strengths & difficulties and decision making styles of adolescent gamers and non-gamers is observed.

Sample

For the present study, 170 adolescents in the age group of 15-17 years old were administered the two questionnaires. The sample was divided on the basis of whether or not they played video games. Those who were categorised under 'gamers' played video games for 2-4 hours a day or 14-28 hours a week. 'Non gamers' are those individuals who play video games for less than 2 hours a day or don't play video games at all.

Inclusion Criteria:

- Age of the subjects: 15-17 years
- Educational qualification of the subject: Students in grades 10, 11 and 12.
- Students who have been playing video games for more than 6 months.

Exclusion Criteria:

- Students who play video games for less than 2 hours/ day
- Students who are professional video gamers.
- Students who play video games occasionally.

Instruments

1. **Informed consent form** - This form contained details about the researcher, the study that was going to be conducted, the process of the study and the risk (if any) to the participant. It was to be signed by participants who were willing to be a part of the study.
2. **Demographic data sheet** - This data sheet was used to collect personal information about the participant such as their age, gender, country of birth, religion, number of siblings (if any), their living arrangements, their physical health status and their video game affinity.

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

3. **Strengths and Difficulties Questionnaire (Goodman et al, 1998)** - The Strengths and Difficulties Questionnaire (SDQ) is a brief behavioural screening questionnaire for children and adolescents. The SDQ asks about 25 attributes, some positive and others negative. These 25 items are divided between 5 scales:

1. Emotional Symptoms (5 items)
2. Conduct Problems (5 items)
3. Hyperactivity/Inattention (5 items)
4. Peer Relationship Problems (5 items)
5. Prosocial Behaviour (5 items)

These 5 sub-scales can be further categorised into 3 scales. Conduct problems and Hyperactivity become Externalising problems. Emotional problems and Peer problems become Internalising problems and Prosocial behaviour is seen separately.

4. **Decision Making Questionnaire (1993)** - The Decision Making Questionnaire (DMQ) has been used by the Psychology Department, Royal Holloway and Bedford New College, University of London, UK to study decision-making style, driving style, and self-reported involvement in road traffic accidents by individuals. The questionnaire consists of 21 questions in total. They involve questions about the personal decision making styles of the participant and their thought process while making decisions. The questionnaire clubs certain questions to form sub-scales.

The sub-scales of the DMQ are :

1. **Thoroughness** - How thorough the participant is in decision making.
2. **Control** - How much control the participant needs to have over a situation where a decision needs to be made.
3. **Hesitancy** - How hesitant the participant is when suddenly asked to take a decision and stick to it.
4. **Social Resistance** - How social the participant is when it comes to decision making
5. **Optimising** - To what extent does the participant take decisions which can give him optimum results
6. **Principled** - To what extent does the participant follow his personal principles when making decisions.
7. **Instinctive** - How quick and instinctive the participant is in a situation that requires him to make a decision.

Procedure

After the researcher finalised the variables to be tested, arrangements were made to collect data. A questionnaire comprising of the Informed consent form, Demographic data sheet, Strengths and Difficulties Questionnaire (SDQ) and Decision Making Questionnaire (DMQ) was compiled. The researcher approached various schools around Hyderabad, India. She administered the questionnaire to students of grades 10, 11 and 12. The students who met the sampling criteria were screened. The students were asked to carefully read the questionnaire before recording their responses. There was no time limit imposed. The participants filled out the questionnaire in about 15 minutes average time.

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

The questionnaires and Information Schedule were organised

The researcher visited schools on the scheduled dates. Rapport was established with the students and it was made clear to them that their participation was purely voluntary

The students who agreed to participate in the study were requested to fill out an Informed Consent Form

The Information Schedule was then administered. Students who met the sampling criteria were screened.

The instructions for the questionnaires (SDQ and DMQ) were given and participants were asked to fill them out.

The questionnaire was also uploaded online and students who met the criteria were asked to fill out the form.

Statistical Analysis of Data

Statistical Analysis of data was done using IBM SPSS version 20. t values were computed.

RESULTS

Table 1 showing Mean and Standard Deviation and t-values for Strengths and Difficulties and Decision Making Styles

	Gamers		Non Gamers		t-value
	Mean	SD	Mean	SD	
Externalising	19.47	2.95	18.67	3.29	0.87
Internalising	18.37	3.01	17.93	3.52	1.66
Prosocial Behaviour	11.04	2.08	11.47	2.08	-1.34
Thoroughness	15.43	3.50	15.12	4.13	0.52
Control	17.76	4.26	17.66	4.32	0.14
Hesitancy	11.32	2.68	11.55	2.44	-0.58
Social Resistance	9.88	2.79	10.59	2.85	-1.62
Optimising	7.32	2.14	7.33	2.32	-0.29
Principled	7.10	1.97	6.63	1.93	1.53
Instinctive	7.60	2.42	7.74	2.63	0.36

There is no significant difference in Strengths and Difficulties dimensions and Decision Making Styles dimensions between the two groups. There is, however, a slight variation in the means.

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

Externalising factors include conduct problems and hyperactivity in adolescents. It is seen in this sample that video gamers have a higher level of externalising factors in comparison to non video gamers. This means that those who play video games have more problems with their conduct and are more hyperactive than non gamers. Internalising factors include emotional problems and peer problems. In this sample it is seen that gamers have a higher mean in comparison with non gamers. This means that gamers are more emotional and get influenced by those around them more easily than non gamers. Prosocial behaviour refers to "a broad range of actions intended to benefit one or more people other than oneself - behaviors such as helping, comforting, sharing and cooperation." (Batson, 2016). In this sample it is seen that there is a minor difference in the mean between the two groups. Non gamers have a slightly higher score than gamers. This means that non gamers are more likely to be helpful, sharing, comforting and cooperative in a situation than non gamers by a very small margin.

Thoroughness means the need of the individual to be clear and thorough in decision making. In this sample it is seen that gamers have a slightly higher score than non gamers. This means that gamers make sure that they understand the situation and have considered all possible consequences before making a decision more than non gamers. Control refers to the need of the individual to exert authority over any given situation. In this sample it is seen that gamers have a higher mean by a minor margin. This means that adolescents who indulge in video game play have more of a need to show authority and exert control over any decision making that involves them, than those who don't indulge in video game play. Hesitancy is a state of being hesitant or unsure. In this sample it is seen than non gamers have a slightly higher mean than gamers. This means that those who don't play video games take a little time to make decisions. Those who play video games are quicker in decision making. Social Resistance is a state of secluding oneself from social groups. In this sample it is seen that non gamers have a higher mean than gamers. This means that non gamers have higher social resistance. They don't indulge in social groups to the extent that gamers do. Gamers have lower social resistance which means that they are more social and may be more susceptible to peer pressure. To optimise is to make the best use of a resource or situation at hand. In this sample it is seen that there is a 0.01 difference between the two groups. This means that non gamers make better use of a situation or resource when they have to make a decision, in comparison with gamers.

Principles are the basic moral values that an individual adheres to in his daily life. In this sample it is seen that gamers have a higher mean than non gamers. This means that gamers stick to their principles in situations where they might be challenged or questioned. Non gamers are more likely to conform to the situation and take a decision accordingly. Instinct is an innate, typically fixed pattern of behaviour in response to certain stimuli. In this sample it is seen that non gamers have a higher mean, by a minor margin, than non gamers. This means that non gamers follow their instinct or 'gut feeling' while making decisions, more than gamers, who make more calculated decisions.

DISCUSSION

Violent video games have previously been identified to be the most popular video games played by consumers. Research into the effect of violent video games on levels of aggression has led to concerns that they may pose a public health risk. Indeed, cross-sectional studies have found positive correlations between violent video game play and real-life aggression. Longitudinal studies showed that habitual violent video game play predicts

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

later aggression even after controlling for initial levels of aggressiveness (Hollingdale & Greitemeyer, 2013).

The present study was conducted to observe the levels of strengths and difficulties in adolescent gamers and non gamers. The different kinds of decision making styles between the two groups were also recorded. Supporting previous research it is seen that video games do not have a positive effect on emotional stability, conduct, hyperactivity, peer pressure or prosocial behaviour of an individual. There is no significant difference between the two groups. So it can be understood that whether video game play is involved or not, these factors remain more or less the same in adolescents (15-17 year olds).

Research on exposure to television and movie violence suggests that playing violent video games will increase aggressive behaviour. A meta-analytic review of the video-game research literature reveals that violent video games increase aggressive behaviour in children and young adults. Playing violent video games also decreases prosocial behaviour (Anderson & Bushman, 2001). Like many other issues these days, the concept of video games is wrapped in controversy. There is a thin line between a healthy amount and an excessive amount of gaming. This line is usually crossed when video games are as addicting as previous studies claim. It is necessary for parents to find moderation in all things. Banning video game play entirely may be good for some households, but for others where gaming may not be as prevalent, it may socially isolate their children. The children may feel like a source of joy is being taken away. This can lead to complications in the parent-child relationship also. However, opening the door to the good, will also allow access to the bad including exposing the children's minds to violence in different ways, taking their free time away from doing other extra curricular activities, and putting them at risk for obesity.

There are various types of video games available in the industry today. Video games are intended to target different aspects of a player's life. Video games comprise several different types of educational, serious and casual games, but in reality, what adolescent is going to choose a game about learning versus a game where they can kill zombies or drive cars at unruly amounts of speed? These are activities that they cannot do in their real life so they try to get the thrill of it through the virtual world presented to them through these video games. Studies have shown the negative effects violent video games have on younger generations. Calvert and Tan did a study on young adults, where they compared the differences between playing and observing violent video games. Studies found that "students who had played a violent virtual reality game had a higher heart rate, reported more dizziness and nausea, and exhibited more aggressive thoughts in a post-test than those who had played a non-violent game" (Cesarone, 1998).

Another negative aspect of video game play is the amount of time that is spent indoors staring at a screen. Video games are most played in early adolescence to early adulthood. This is also the time when the human body has the most amount of changes and growth (physical and mental). So when children are spending all their time indoors, not moving any part of their body other than their fingers, it is definitely going to lead to health complications and problems at a later stage in their life. Long exposure to a screen can damage eye sight. This is why it is necessary for those who do indulge in video game play to also have an equal or higher level of physical exercise to maintain a certain balance.

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

In conclusion it can be said that video games have their own negative effects and benefits. When used in moderation they may help in cognitive development but over use may lead to health complications.

REFERENCES

- Anderson, C. A., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological science, 12*(5), 353-359.
- Bakewell, C., & Mitchell, V. W. (2003). Generation Y female consumer decision-making styles. *International Journal of Retail & Distribution Management, 31*(2), 95-106.
- Bakewell, C., & Mitchell, V. W. (2004). Male consumer decision-making styles. *The International Review of Retail, Distribution and Consumer Research, 14*(2), 223-240.
- Bates, L. (1998). UK consumer decision-making styles. *Journal of Marketing Management, 14*(1-3), 199-225.
- Batthyány, D., Müller, K., Benker, F. et al. *Wien Klin Wochenschr* (2009) 121: 502.
- Calvert, S. L., & Tan, S. L. (1996). Impact of virtual reality on young adults' physiological arousal and aggressive thoughts: Interaction versus observation. *Interacting with video, 67-81*.
- Cesarone, B. (1998). *Video games: research, ratings, recommendations*. ERIC Clearinghouse on Elementary and Early Childhood Education, University of Illinois.
- Deniz, M. (2006). The relationships among coping with stress, life satisfaction, decision-making styles and decision self-esteem: An investigation with Turkish university students. *Social Behavior and Personality: an international journal, 34*(9), 1161-1170.
- Dodge, K. A., Pettit, G. S., McClaskey, C. L., Brown, M. M., & Gottman, J. M. (1986). Social competence in children. *Monographs of the society for research in child development, i-85*.
- Edwards, W. (1954). The theory of decision making. *Psychological bulletin, 51*(4), 380.
- Fischhoff, B., Crowell, N. A., & Kipke, M. (1999). Adolescent Decision Making: Implications for Prevention Programs. Summary of a Workshop.
- Gardner, M., & Steinberg, L. (2005). Peer influence on risk taking, risk preference, and risky decision making in adolescence and adulthood: an experimental study. *Developmental psychology, 41*(4), 625.
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: a research note. *Journal of child psychology and psychiatry, 38*(5), 581-586.
- Goodman, R. (2001). Psychometric properties of the strengths and difficulties questionnaire. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*(11), 1337-1345.
- Goodman, R., Ford, T., Simmons, H., Gatward, R., & Meltzer, H. (2000). Using the Strengths and Difficulties Questionnaire (SDQ) to screen for child psychiatric disorders in a community sample. *The British Journal of Psychiatry, 177*(6), 534-539.
- Granic, I., Lobel, A., & Engels, R. C. (2014). The benefits of playing video games. *American Psychologist, 69*(1), 66.
- Hollingdale, J., & Greitemeyer, T. (2013). The changing face of aggression: The effect of personalized avatars in a violent video game on levels of aggressive behavior. *Journal of Applied Social Psychology, 43*(9), 1862-1868.

Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers

- Kuss, D. J., & Griffiths, M. D. (2012). Online gaming addiction in children and adolescents: A review of empirical research.
- Lenhart, A., Kahne, J., Middaugh, E., Macgill, A. R., Evans, C., & Vitak, J. (2008). Teens, video games, and civics: teens' gaming experiences are diverse and include significant social interaction and civic engagement. *Pew internet & American life project*.
- Lysonski, S., Durvasula, S., & Zotos, Y. (1996). Consumer decision-making styles: a multi-country investigation. *European journal of Marketing*, 30(12), 10-21.
- Muuss, R. (1975). Theories of adolescence. Random House. *New York*.
- Nauert PhD, R. (2015). In New Study, Video Games Not Tied to Violence in High-Risk Youth. *Psych Central*. Retrieved on January 9, 2017, from <https://psychcentral.com/news/2013/08/27/in-new-study-video-games-not-tied-to-violence-in-high-risk-youth/58934.html>
- Piaget, J. (1947). *The moral development of the adolescent in two types of society, primitive and "modern"*. Unesco
- Scoring the SDQ - sdqinfo.org www.sdqinfo.org/py/sdqinfo/c0.py
sdqinfo.org - Information for researchers www.sdqinfo.org
- Shim, S. (1996). Adolescent consumer decision-making styles: the consumer socialization perspective. *Psychology & Marketing*, 13(6), 547-569
- Siegel, J. T., Thomson, A. L., & Navarro, M. A. (2014). Experimentally distinguishing elevation from gratitude: Oh, the morality. *The Journal of Positive Psychology*, 9(5), 414-427.
- Sproles, E. K., & Sproles, G. B. (1990). Consumer decision-making styles as a function of individual learning styles. *The Journal of Consumer Affairs*, 134-147.
- Sprotles, G. B., & Kendall, E. L. (1986). A methodology for profiling consumers' decision-making styles. *Journal of Consumer Affairs*, 20(2), 267-279.
- Steuer, J. (1992). Defining virtual reality: Dimensions determining telepresence. *Journal of communication*, 42(4), 73-93.
- Tamminen, K. A., & Holt, N. L. (2012). Adolescent athletes' learning about coping and the roles of parents and coaches. *Psychology of sport and exercise*, 13(1), 69-79.
- Wang, C. L., Siu, N. Y., & Hui, A. S. (2004). Consumer decision-making styles on domestic and imported brand clothing. *European Journal of Marketing*, 38(1/2), 239-252.

Acknowledgement

The author(s) appreciates all those who participated in the study and helped to facilitate the research process.

Conflict of Interest

The author(s) declared no conflict of interest.

How to cite this article: Parupudi S. & Sunkarapalli G. (2022). Strengths and Difficulties & Decision Making Styles in Video Gamers and Non Gamers. *International Journal of Indian Psychology*, 10(2), 849-859. DIP:18.01.086.20221002, DOI:10.25215/1002.086