Attitude Towards Video Game Genre and Five-Trait Personality

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ABSTRACT

Video games can be categorized into various types, commonly referred to as genres. The variety of video game genres in circulation has also attracted the attention of consumers with diverse personalities and preference for certain video game genres. Therefore, this study aims to examine the relationship between the personalities of video game consumers and their attitudes towards certain video game genres. This study involved 93 participants in the young adult age range who played video games for at least two hours a week, acquired using purposive sampling and snowball sampling techniques. Personality traits were measured using the Big Five Inventory which has been adapted by the Universitas Tarumanagara research team, while attitude towards the video game genre was measured using an instrument compiled by the author. The findings showed that extraversion personality trait is positively related to attitude towards the sports genre ($r = 0.383$, $p < 0.05$), extraversion personality trait is negatively related to attitude towards the RPG genre ($r = -0.234$, $p < 0.05$), and openness personality trait is positively related to attitude towards the sports genre ($r = 0.298$, $p < 0.05$).

Keywords: Five trait personality, attitude, video game genre

1. INTRODUCTION

The video game industry has been around since the 1950s, almost a decade after the introduction of the first digital computers in 1940 [1]. Computers at that time were very expensive and scarce, which led many people to think that developing games on computers for entertainment was difficult and unimportant, and that making computer games was highly discouraged [2]. However, many video game programmers and enthusiasts believe that there are several other reasons for developing computer video games apart from entertainment, and that they can have a variety of benefits for players, including using them as an educational tool for students, children, even the military, to understanding. human thought processes [2].

This study aims to examine the relationship between personality as described by the five-trait model with the attitudes of video game players towards certain video game genres. This research was conducted considering that psychological research on video games in Indonesia mostly examined the negative effects of video game dependence [10][11][12]. The authors saw the need for a different psychological study of video games which does not discuss video game dependence. This then encourages the author to examine the relationship between five trait personality and the attitude of video game players towards certain video game genres. It is suspected that this relationship comes from the individual's dominant personality traits that are compatible with one or more video game genres. For example, individuals with high openness personality types may like the adventure genre because they enjoy exploring and looking for new experiences. Individuals with high agreeableness personality types may avoid the racing genre because they tend to avoid hostility. Individuals with high extraversion personality types may like the action genre and / or sports because they are full of energy and ambition. Individuals with low conscientiousness personality types may find it difficult to play the strategy genre and avoid it because low conscientiousness is characterized by impulsivity and easily discouraged. This is because the strategy genre itself requires persistence and good planning. Meanwhile, individuals with low neuroticism may be better at playing action video games because they are more alert and are not easily influenced by events that spark negative emotions that are common in the action genre.

1.1. Related Work

Individual thought process is inseparable from the individual's personality. Personality is the dynamic order within the individual from the psychophysical system which determines the characteristics of his/her behavior and thought [17]. One of the most researched personality types is the big five personality which consists of the following: neuroticism (the level of emotional stability),

extraversion (assertiveness, sociability, sense of energy, enthusiasm), openness (artistic, imaginative), agreeableness (kindness, cooperation), and conscientiousness (reliable, responsible) [3].

Openness refers to intellectual curiosity, with a habit of seeking new experiences and exploring new ideas. Individuals with high openness are usually considered innovative, imaginative, and creative. Although these individuals tend to be viewed as intelligent, this does not necessarily mean that individuals with low openness are the opposite. Individuals with low openness think more conventionally and dislike different perspectives and aesthetics.

Agreeableness defines the interpersonal level and orientation of an individual [4]. It also measures how much a person is being antisocial, or prosocial. A high score indicates that the person is generally friendly, caring, cooperative, trusting, and gullible. On the other hand, people who have low agreeableness scores are selfish, hostile, cold, and suspicious [5].

Extraversion shows the extent to which an individual is energetic, assertive, talkative or enthusiastic [5]. In addition, extraversion can also be interpreted as the level of sociability of an individual. Individuals with high extraversion scores often show ambition, energy, affiliation, and positive emotions. However, individuals with low extraversion are usually aloof, reserved, have no desire to engage in social activities, and are often shy.

Conscientiousness shows the extent to which a person is self-disciplined, obedient, orderly, and competent. This trait also shows the level of hard work, persistence and motivation [5]. Individuals with high conscientiousness score are often motivated to achieve a goal whereas a low score indicates that the individual is impulsive and hopeless [6].

Neuroticism shows how a person feels and how they adjust to different emotional situations. Neuroticism measures a person's tendency to experience feelings of distress and to behave according to this tendency [6]. Individuals with high neuroticism tend to suffer persistent feelings of guilt, self-awareness, depression, and other negative emotional effects. In contrast, people with low neuroticism scores are generally calmer, more alert, and more emotionally stable.

Attitudes are psychological tendencies that are expressed by evaluating one particular thing positively or negatively [18]. Attitude is made up of three aspects, which are cognitive, affective, and conative.

Meanwhile, video game genre is a category of video games that are related based on similar gameplay characteristics. The genre of video games is usually not determined by the setting or story of the game or the media of the game, but by how the player interacts with the game [19]. For example, a racing video game is still a racing video game regardless of whether the video game is based on F1 or MotoGP, as long as the player drives a vehicle in a race.

Previous research by Braun et al. [7] which compared the personalities of gamers based on their video game genre preferences found that respondents who had the highest scores on certain personality traits preferred certain video game genres. For example, respondents who scored high on extraversion but low on neuroticism preferred action video games, while respondents who scored high on conscientiousness preferred simulation video games. This is supported by Peever et al. [8] who found that respondents who scored high on conscientiousness adored simulation video games.

Another research conducted by Zammitto [9] found that the first person shooter and third person shooter subgenres, which are part of the action genre, are positively correlated with extraversion and neuroticism, indicating that players who score high in these two traits prefer action video games compared to other genres. Additionally, one respondent in Zammitto's study listed examples of video games like Call of Duty as their favorite video game, and that respondent also showed high scores of extraversion and neuroticism. This evidence suggests that there is a difference between Zammitto's findings and those of Braun et al. where in Zammitto's research, action video game players had high neuroticism scores, while Braun found that action video game players had low neuroticism scores.

Behaviorists believe that individual actions can be predicted by their attitudes. There have been a number of attempts to improve the ability to predict individual behavior and various factors that influence it have also been put forward, including factors that can be classified as dispositional or situational. Spruyt et al. [13] said that prediction of behavior directly depends on the attitude of the individual which is related to the personal knowledge and experience that the individual possesses. Fazio et al. [14] also stated certain conditions in which behavior and attitudes can be consistent, namely when attitudes affect perceptions. So when an individual forms a pleasant (or unpleasant) attitude towards an object, the object will automatically appear as an object that has many characteristics that are pleasing (or unpleasant) to that individual. This in turn may incite a behaviour of purchasing said object, which in this case, video game of certain genres, leading to individuals having preference towards certain genres, or "favourite" genres.

1.2. Our Contribution

This research is expected to serve as a reference for future researchers to improve upon. This research contributed towards improving knowledge in the fields of personality psychology and social psychology about the personality of video game players in Indonesia, and their attitudes towards various video game genres. This information is valuable for the video game industry, specifically video game developers, to identify the percentage of video game consumers that are the market for a particular genre, relative to the consumer's personality.

1.3. Paper Structure

The rest of the paper is organized as follows. Section 2 introduces the research methods, including sampling

methods and an overview of the participants. Section 3 presents the correlation test results between the two variables. Then, the findings are discussed further in Section 4. Finally, Section 5 concludes the paper and presents direction for future research.

2. METHODS

This study uses a quantitative, non-experimental approach. The aim of this study is to examine the relationship between five personality traits and attitude towards video game genre. Participants were selected through purposive sampling and convenience sampling technique. The criteria for the subjects in this study were young adults aged 18-35 years who play video games regularly for at least two hours a week, and were not limited by race, ethnicity, religion, and socio-economic status.

Attitude towards video game genre is measured using an instrument that have been developed by the researcher. This instrument is made up of seven dimensions, each of which represents attitude towards one of the seven main genres the researcher has chosen. The seven genres are action, adventure, sports, racing, RPG, strategy and simulation. This measuring instrument consists of 21 items in the form of statements, where participants are asked to rate how much they agree or disagree with the statements on a 5-point scale (1-strongly disagree to 5-strongly agree).

Meanwhile, to measure participants' personality traits, this research uses the Big Five Inventory (BFI) by John et al. [15] which has been adapted by Universitas Tarumanagara Research Team. This instrument consists of 44 statements representing the five dimensions of personality traits, which are extraversion, agreeableness, conscientiousness, neuroticism, and openness. participants are instructed to react to these statements with the number 1 to 5, with number 1 being 'strongly disagree', and number 5 being 'strongly agree'. After reliability testing, the researcher discarded 9 items in order to raise the reliability of the instrument. Data collection was conducted from November 2020 to December 2020. The final number of respondents was 93 people with 70 of them male (75.3%) and 23 of them female (24.7%). The participants were contacted through social media, and given the link to the questionnaire in personal chat. The researcher also asked the participants to send the questionnaire link to other friends and family who might fit the criteria.

Table 1 Participants by gender

Gender	Frequency	Percentage
Male	70	75.3
Female	23	24.7
Total	93	100.0

Table 2 Participants by time spent playing weekly

Time Spent (hours/week)	Frequency	Percentage
2-4	27	29.0
4-8	16	17.2
8+	50	53.8
Total	93	100.0

Table 3 Participants by favorite video game genre

Video Game Genre	Frequency	Percentage
Action	39	41.9
Adventure	8	8.6
Sports	4	4.3
Racing	5	5.4
RPG	21	22.6
Strategy	8	8.6
Simulation	7	7.5
Others	1	1.1
Total	93	100.0

The description of participants' five personality traits based on mean was calculated. It was found that on average, the participants showed higher scores across all five personality traits when compared to the hypothetical mean.

Table 4 Description of five trait personality

Variable	Mean	Min.	Max.	SD
Extraversion	2.61	1.14	4.00	0.54
Agreeableness	3.24	1.75	4.00	0.49
Conscientiousness	2.61	1.29	3.57	0.43
Neuroticism	2.57	1.38	3.75	0.50
Openness	3.09	2.11	4.00	0.43

The description of participants' attitude towards video game genre based on mean was calculated. It was found that on average, the participants showed higher scores across all seven video game genres when compared to the hypothetical mean.

Table 5 Description of Attitude towards Video Game

Variable	Mean	Min.	Max.	SD
Action	3.85	1.00	5.00	0.94
Adventure	3.77	1.33	5.00	0.94
Sports	3.14	1.00	5.00	1.31
Race	3.36	1.00	5.00	1.15
RPG	3.67	1.00	5.00	1.13
Strategy	3.41	1.00	5.00	1.01
Simulation	3.57	1.00	5.00	1.01

Due to the lack of norm for the measuring instrument, in this study for the five trait personality variable the

participant is considered to have high level of certain personality trait if the score falls on the third quartile and above. If the score falls on the first quartile and below, it is considered low. Likewise, for the variable of attitude towards video game genre, positive attitude is characterized by a score that is on the third quartile and above, while negative attitude is characterized by a score that is on the first quartile and below.

Data analysis was conducted using SPSS version 23.0 to discover the relationship between five trait personality and attitude towards video game genre. First, normality testing was conducted which found that the data is not normally distributed, leading the data analysis to use Spearman Correlation.

3. RESULT

Spearman Correlation test was conducted to see the strength of the relationship between variables. Spearman Correlation was used because the data is not normally distributed. The researcher tested the correlation between the five personality traits and the attitude towards the seven video game genre. Based on the results of the correlation test, several significant relationships were found. First, extraversion trait is positively correlated with the attitude towards the sports genre ($r = 0.383$, $p < 0.05$), and negatively correlated with attitude towards the RPG genre ($r = -0.234$, $p < 0.05$). Then, the openness trait has a positive correlation with attitude towards the sport genre ($r = 0.298$, $p < 0.05$). These relationships are significant, yet weak in nature. Meanwhile, relationships between the rest of the dimensions of Big Five Personality and attitude towards video game genre are found to be insignificant.

Table 6 Spearman correlation results

	Action	Adventure	Sports	Racing	RPG	Strategy	Simulation
EXT	-.046	-.114	.383**	.012	-.234*	.126	.020
AGR	.088	.202	.093	.095	-.152	.068	.036
CON	-.092	.008	.133	.189	-.056	.162	.054
NEURO	.009	-.046	-.050	-.139	.025	-.150	.011
OPEN	.104	.162	.298**	.161	.026	-.037	.106

EXT   =   Extraversion
AGR   =   Agreeableness
CON   =   Conscientiousness
NEURO   =   Neuroticism
OPEN   =   Openness
Action   =   Attitude towards the Action genre
Adventure =   Attitude towards the Adventure genre
Sports   =   Attitude towards the Sports genre
Racing   =   Attitude towards the Racing genre
RPG   =   Attitude towards the RPG genre
Strategy   =   Attitude towards the Strategy genre
Simulation =   Attitude towards the Simulation genre

4. FINDINGS AND DISCUSSIONS

The result shows relationships between some personality traits and attitude towards video game genre, however it differs from previous studies due to several new findings. Research by Braun et al. [7] found high extraversion and low neuroticism in action game players, while respondents who were high on conscientiousness scores preferred simulation video games. Another study by Zammitto [9]

also found high extraversion, but low neuroticism in action game players. This study did not find the same relationships as what these previous studies had found. These differences might be attributed to differences in the location and / or culture of the participants.

In addition, the positive relationships between sports genre and extraversion and openness personality traits, and the negative relationship between RPG genre and extraversion trait are all found to be quite weak. It is assumed that

attitudes towards the video game genre are more attributable to other variables or other factors, for example, peer influence. If one's friends prefer to play a certain video game genre, or a specific video game, one is inclined to play the same video game in order to keep their friendship. Another factor can be the amount of free time available to play video games because the time it takes to play a video game effectively varies depending on the genre. In most action genres, for example, each session can be completed in a relatively short time, no longer than 30 minutes. Meanwhile, the adventure and RPG genres tend to take a long time to play meaningfully. This might lead to players with less free time gravitating towards action games instead of adventure or RPG games.

Individuals who show a positive attitude towards the sport genre are found to score high on openness and extraversion because sports games require flexibility and creativity in order to be able to adapt to situations that may occur, just as sports is like in the real world. Apart from adaptability, players in the sports genre also need enthusiasm and ambition to win in order to play effectively. A positive attitude towards the RPG genre is shown by individuals with low extraversion scores or, in other words, introverts. Introverted individuals tend to be lacking in social interaction, so to meet their social needs, they choose to play RPG games and interact with non-player characters (NPCs) in the video game rather than interacting with other people in real life.

The authors analysed the conscientiousness variable in terms of demographic data. The results showed that there was no significant difference in conscientiousness based on gender. These findings are supported by research conducted by Costa et al. [16] who examined adult participants across cultures. The study found that there was no significant difference in conscientiousness in terms of gender.

In this study, out of 93 participants, a total of 25 participants showed positive attitudes towards the sport genre (26.8%). This illustrates that 26.8% of gamers are the audience of sports video game. Of these 25 participants, 12 participants had a high extraversion score. This illustrates that 12.9% of gamers who have a high extraversion trait score are the market for sports video game. Meanwhile, nine participants who had positive attitude towards sports genre also had a high openness score. This finding illustrates that 9.47% of gamers who have a high openness personality factor are market for sports video game.

Meanwhile, of the 93 participants, 29 participants showed positive attitudes towards the RPG genre (31.18%). This means that 31.18% of video game players are RPG video game market. Of the 29 participants, 14 participants had a low extraversion personality factor. This finding illustrates that 15.05% of video game players who have a low extraversion score are the market for RPG video game.

The authors realize that there are still a number of limitations in this research that can be further investigated or corrected in future studies. This research is limited in acquiring participants due to time constraints and limited access caused by the COVID-19 pandemic, so the number of participants is limited.

5. CONCLUSIONS

This study aims to determine the relationship between five personality traits and attitude towards video game genre. This study involved 93 research participants obtained through purposive sampling and snowball sampling methods. The research was conducted with a non-experimental quantitative research design. This study found that attitude towards the sports genre is positively correlated with extraversion personality trait and openness personality trait, and attitude towards the RPG genre is negatively correlated with extraversion personality trait. Based on the research results, it can be concluded that there is a relationship between personality based on the five personality traits and attitude towards video game genres.

Future research can examine external aspects that might be related to attitude towards certain video game genres. In addition, similar research can be conducted by the video game industry in Indonesia in order to direct itself and continue to develop in the right direction according to the research findings. Consumer demographics are vital information that must be understood by industry, or more specifically, companies, in order to create a product and market it.

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