

Impact of Advergames on Brand Outcomes among Saudi Players

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Abstract

Advergames presents a unique, yet an effective way of advertising owing to a high level of players' engagement with online games. This preliminary study sought to explore the impact of advergames on brand outcomes among Saudi players. This research has capitalized the flow theory to examine the phenomenon in Saudi consumers. A questionnaire was formulated for Saudi players to ascertain the motivation behind the adoption of advergames. The sample is drawn from 200 Saudi participants falling in the 18-45 age bracket. The findings of the study showed association among age, brand outcomes, flow and brand experience. Outcomes that are more positive are achieved among those who play less frequently; younger respondents experience greater immersion and are motivated to play advergames, whereas female players are linked with intentionally ignoring ads. These findings may be significantly useful for the gaming industry.

Keywords: Advergames, Saudi Players, Brand Outcomes

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Introduction

This review was conducted to examine previous studies conducted in the field of advergames. Those studies were selected and examined, which focused on addressing the impact of advergames on brand outcomes. Also, the researcher found several studies that considered influences of aspects other than consumption such as; exposure to advertising, referring to online video games advertisements and also advergames.

Advergames

According to the literature, advertising via games takes place in two ways: in-game advertising (Diaa Ramzy et al., 2019), and designing games using characters with brand-related markers (Al-Meshal, 2020; Panic et al., 2013; Wise et al., 2008). Additional aspects of games that convey advertising content can include the design of the game, the user's experience with the game, type of message/advertisement placement, and the categories of product or brands advertised.

Experience with the Game

Experience with the game is mainly concerned with flow and other factors associated with user's engagement. Several authors examined the concept of flow (Catalán et al., 2019a; Catalán et al., 2019b; Chia-Wen et al., 2017; Gurău, 2008; Ham et al., 2016; Hartini, 2020; Hernandez, 2011; Renard & Zhao, 2016). Renard and Zhao (2016) conducted a research in which they compared flow with boredom, anxiety or apathy, while Chia-Wen et al. (2017) measured flow in relation to either high or low engagement. Meanwhile, Catalán et al. (2019b) defined flow as a measure of total enjoyment. Another study by Ham et al.'s (2016) supports connection between flow and entertainment. Based on these views and definitions, the concept of flow was characterized by high level of control and skill, telepresence, focused attention, involvement in the game, as well as high degree of challenge, playfulness, concentration levels, and arousal (Catalán et al., 2019b; Çadırcı and Gungor, 2019; Goh and Ping, 2014; Sukoco and Wu, 2011; Vashisht and Sreejesh, 2015). One author also examined the opposite of flow, defined as intrusiveness (Martí-Parreño et al. 2013).

Advertisement placement

Two types of placements were evaluated in the literature; i.e., prominent placement and subtle placement (Redondo, 2012; Sung & Lee, 2020; Vashist, 2018; Vashisht & Sreejesh, 2015). Some authors also examined time when the advertisement appeared, the position of the advertisement, the number of brand elements within the game, and advertisement breaks (An & Stern, 2011; Diaa Kinard & Hartman, 2013; Dia Ramzy et al., 2019). Finally, in-game advertising was also evaluated on the impact of advergames on brand outcomes. The outcomes measured in the studies reviewed included awareness, attitudes, intent to purchase, actual purchase, loyalty and other behaviours. Among all these outcomes, attitudes were most frequently evaluated; including attitude towards advergames and brand. Each of these outcomes assessed are discussed below.

Recall

Recall (part of awareness) was examined in two ways: in general, and specifically (i.e., brand recall). Authors that studied brand recall established that playing advergames could increase brand recall. Advergames related factors that influence recall have also been established in previous studies. Typically, these include appropriate congruence (high product-advergame congruence), game flow (higher concentration levels and arousal), and effective product placement (in-game advertising) (Akcan, 2019; Çadırcı & Gungor, 2019; Gross, 2010; Waiguny et al., 2011). In the case of specific brand recall, Cauberghe & De Pelsmacker (2010) found that (prominent) placement has the most positive impact.

This finding is similar to that presented by Vashisht & Sreejesh (2015), who added that it is most often inexperienced gamers who play games with prominent brand placement that experience high brand recall. Vashist (2018) and Vashisht & Pillai (2017) further added another condition for high recall, which was low involvement. However, when discussing high game involvement, Vashisht & Pillai explained that their findings show the condition for high recall which is that gamers are highly persuasive. The type of message was also found to enhance brand recall. For instance, Chiu (2019) found that social advergames are mostly associated with high brand recall. In addition, certain factors had no relationship with brand recall. Repeatedly playing the same game, for instance, had no measurable impact on recall (Cauberghe & De Pelsmacker, 2010).

Attitudes

In their research, Paramitra et al. (2017) established that game-brand congruity impacts players' attitudes towards particular brands. This impact was found to be negated when the brands embedded were congruent with the game content, and was enhanced by incongruity. Game design was additionally found to influence attitudes. Chen (2017) found that players had more favourable attitudes towards those advergames they considered to be more attractive. According to Paramitra et al. (2017), players' attitudes were affected by game-self congruity, the relationship then being mediated by perceived enjoyment (flow). This was also established by Waiguny et al. (2011) and Hartini (2020); however, the author found that flow directly impacts attitudes towards advergames, and not brand attitude. This was supported by the findings of Hernandez (2011), which revealed that arousal (a component of flow) has a significant impact on the attitude towards advergames. Moreover, entertainment, telepresence, and playfulness (components of flow) were established as major drivers of brand attitudes (Bellman et al. 2014; Catalán et al., 2019b; Martí-Parreño et al. 2013; Renard & Zhao, 2016).

Moreover, attitude was also impacted by the type of message. According to Sung & Lee (2020), advergames with prosocial narratives were typically evaluated more favourably. Tuten & Ashley (2016) identified evidence that social advergames positively influenced attitudes towards advergames and game sponsors. Moreover, competitive advergames were found by Chiu (2019) to positively influence attitudes towards advergame. The findings further revealed favourable attitudes towards non-commercial brands with certain perceived benefits (Ham et al., 2016). Some relationships were also not confirmed. For example, Cauberghe & De Pelsmacker (2010) established that placement (prominent placement) did not affect brand attitude. In contrast, Vashisht & Pillai (2017) observed that when the product advertised was distinguished according to level of involvement in purchasing (low versus high involvement products), prominent placement with low game involvement generated a less favourable brand attitude, as did prominent placement with high brand involvement among subjects with high

persuasion knowledge (awareness of the intent of advergame). Other factors leading to negative attitudes included escapism (motivation), intrusiveness, and increased brand elements (Hernandez, 2004; Hernandez, 2008; Kinard & Hartman, 2013).

Attitude was also found to affect other brand outcomes. For instance, Panic et al. (2013) and Waiguny et al. (2011) found that attitudes influence persuasibility. Moreover, attitudes towards advergames were linked to perceptions about the brand (Hartini, 2020; Vanwesenbeeck et al., 2017; Waiguny et al., 2011; Wise et al., 2008). Attitude towards advergames was also found to influence brand image, and concepts of flow including customer engagement and entertainment (Al-Meshal, 2020). Additionally, Martí-Parreño et al. (2015) found that attitudes towards in-game advertising (product placement) significantly impacted acceptance of advergames.

Finally, Hernandez & Chapa (2010) established that attitudes towards advergames can influence recall. Brand attitude was established to have a tertiary impact on purchase intention (Goh & Ping, 2014). These findings reveal that attitudes are impacted by congruity, flow, type of message, game design, persuasiveness, perceptions about the brand (which further impacts purchase intention), brand recall, and brand image.

Persuasion

In a study by Waiguny et al. (2011), persuasion was considered a pestering behaviour linked to flow (enjoyment). Similarly, Waiguny et al. (2014) linked flow (telepresence) with persuasion. These findings were also supported by Ham et al. (2016), who established that flow influences persuasion. Design (slow-paced advergames) was also established to inform persuasion (Vashisht & Sreejesh, 2017), and which impacts other brand outcomes. Waiguny et al. (2014) found that higher degrees of persuasion in the form of increased knowledge led to intent to purchase.

Purchase Intention

Although purchase intention apparently originated from brand attitude and persuasion, other authors found advergames can directly trigger a purchase intention. For instance, Catalán et al. (2019b) found that flow has an impact on both positive attitude and purchase intention, although the author did not specify whether purchase intention is associated with enhanced attitude, or is merely dependent on flow. In their research, Catalán et al. (2019a) however, clarified that flow significantly influences purchase intention. The type of message (non-commercial with certain benefits such as healthy food) also has an effect on purchase intention. Furthermore, Adis (2020) found that congruity (gamer-brand) influences purchase intention.

Purchase was conceptualized by the authors differently. While some studied the effects of advergames on purchasing, others considered impulse purchases. For example, Gurău (2008) found that in-game flow significantly influences purchase frequency. Meanwhile, Chen (2017) reported that attractive advergames (advergame design) positively influence impulse purchases. It was deemed to be an important factor in advert placement (Diaa Ramzy et al., 2019). In specific relation to advergames, it has been found that heavy gamers are more likely to have a stronger recall of the brands promoted in advergames compared to infrequent players (Al-Meshal, 2020). As this study focuses on Saudi Arabia, it is important to look at how Saudi advergames are likely to perceive the promotions of brands through advergames. Gillespie & Hennessey (2016) observe that the Middle East is a growing market for online advertising due

to high use of the internet and mobile phone technology in the region. For example, in Saudi Arabia there are, on average, two smartphones per person (Gillespie & Hennessey, 2016). Significantly, Al-Meshal (2020) observes that a survey of Saudi Arabian advergaming users showed that there is a positive relationship between advergaming, brand image, entertainment, and consumer engagement within this subset of advergaming. Furthermore, the study found that high levels of entertainment within advergaming are associated with a positive player perception of the brand being promoted (Al-Meshal, 2020).

Flow Theory

Human nature has always sought activities that generate pleasure and provide rewarding experiences, even if they do not receive an apparent external reward. To better understand these behaviours, Csikszentmihalyi explored possible answers to explain how these activities work, for which he postulated a theory known as the 'flow theory' describing that the activities carried out are usually very motivating, and when the experience lived by the person is optimal, it is known as 'flow' (Catalán et al., 2019a).

Flow is defined as a holistic sensation that people experience when they fully engage in an activity. That is, it can be considered a state of total immersion in an activity (Vanwesenbeeck et al., 2015). Flow, therefore, consists of the execution of an action to which the person directs their maximum concentration for a certain period. Flow is also described as an experience composed of absorption, enjoyment, and intrinsic interest, which generates a feeling of satisfaction for the participant from having an optimal experience with the activity (Waiguny et al., 2012).

The state of flow is characterized by inducing moments of attention focused on an activity that creates flow, in which the person spends time, withdraws from self-awareness, feels gratified, and experiences pleasure in having control over actions. As a result, a positive experience is obtained, and the person develops positive affection for the activity and the elements involved (Waiguny et al., 2012). As previously mentioned, for a game to have proper flow, it must motivate players to challenge their own skills and experience improvement as they progress through the game. In the same way, to maintain the flow state, players must be offered experiences that generate pleasure, such as exploring control, which is shown to keep both adults and children entertained for a prolonged period (Roettl et al., 2016).

Getting players to reach the flow is shown to improve people's attitudes towards advergaming and has a positive impact on their perception of the associated brands (Vanwesenbeeck et al., 2015). In a study by Vanwesenbeeck et al. (2015), it was shown that advergaming with good flow have the potential to persuade children by blurring the existing boundaries between entertainment and commercial messages, because players focus so much on the game that they are unaware of the advertising message hidden in it.

Findings

This analysis was conducted with participants from Saudi Arabia. The data was first sorted then recorded and those who did not continue were removed. Furthermore, the records of the participants who did not play advergaming were excluded from the study. Then the data were coded based on the conventional coding systems, and entered into SPSS analysis software. The analysis methods included; frequency, descriptive, multiple response analysis (MRA), correlation and regression. The correlation analysis was used mainly to determine the linearity

between dependent and independent variables to fulfil the assumptions of linear regression.

A General Outlook of the Data

Participant Demographics

Demographics comprised of only age and gender. 115 out of the 200 participants met the inclusion criteria (Saudi citizens and residents, and play advergames), and more than half (53%) were aged between 18 to 25 years (Figure 1). The proportions kept diminishing by age, with those over 55 years were negligible (less than 1%). Female participants formed almost two thirds of the total population (63%) (Figure 2).

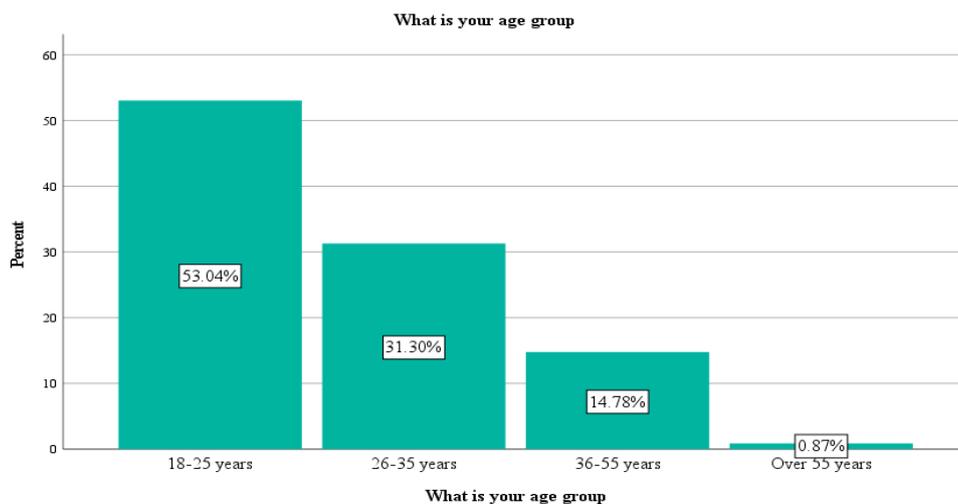


Figure 1: The Distribution of Participants by Their Age Groups

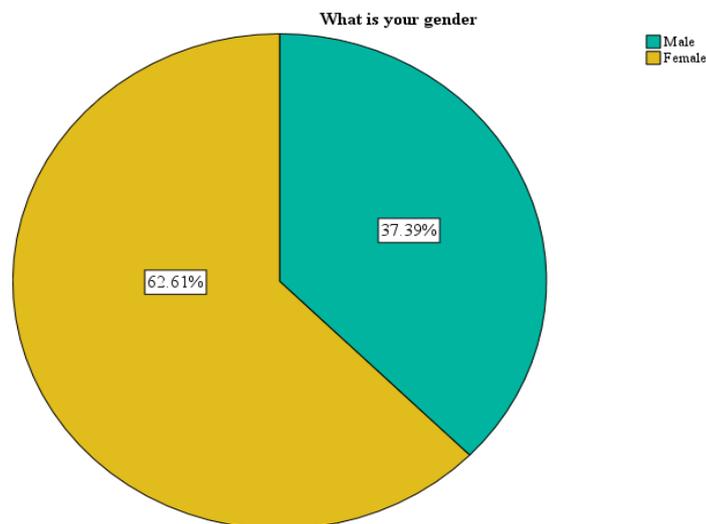


Figure 2: The distribution of Participants by Gender

Information about Advergames

Two questions sufficed the enquiry about advergames: the advergame played, and the frequency of playing advergames. The most played advergame is call of duty, followed by GTA5. Super Monkey Ball had no player in Saudi Arabia. Other games with very few players

included Jawaker, Genshin impact, and Fate Grand Order (Figure 3).

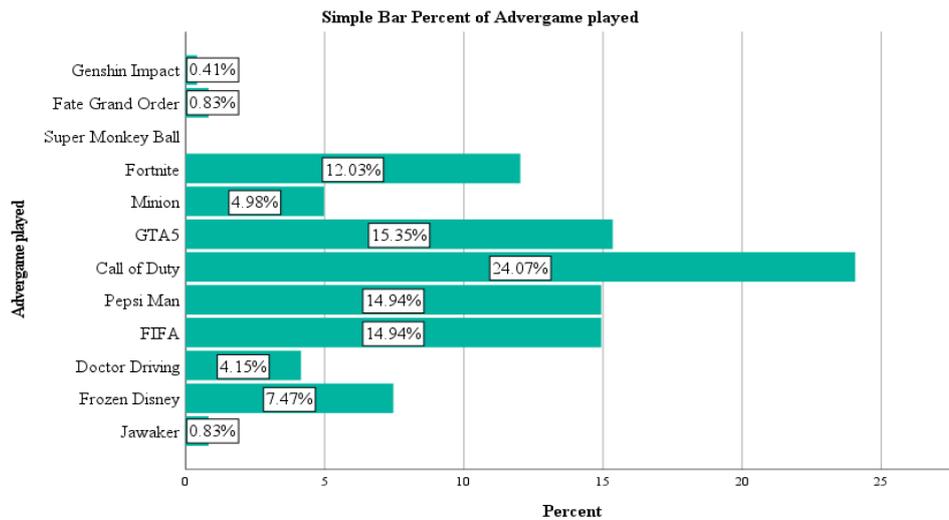


Figure 3: Multiple Response Analysis (Mra) of the Games Played by the Respondents

About two in every five respondents indicated they occasionally played games. However, there were notable numbers of respondents that played games more frequently, for longer period of time each day (Figure 4).

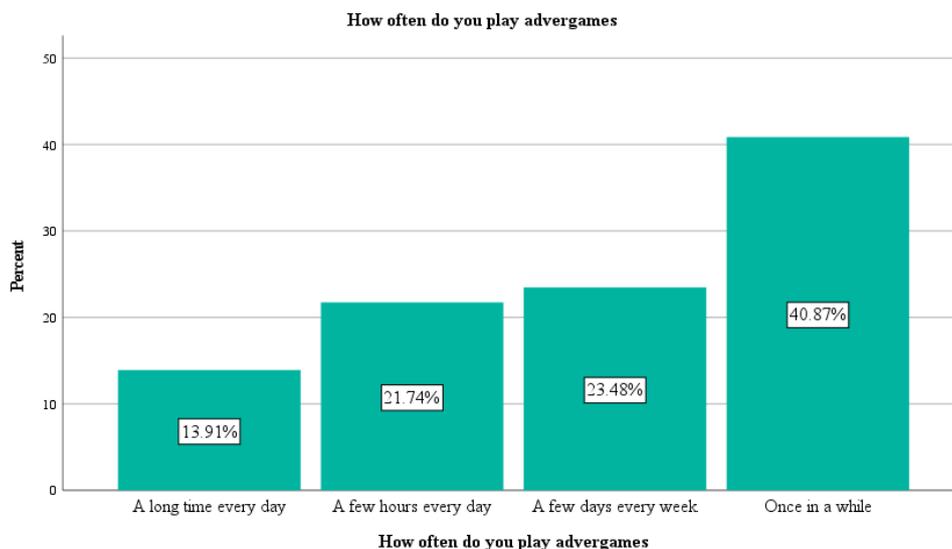


Figure 4: Distribution of Respondents by the Frequency of Playing Advergames

Motivation for Playing Advergames

The motivation for playing advergames was measured based on the reasons provided by the respondents playing advergames. Based on the aggregation of the findings using MRA, most respondents played games for entertainment, followed by those who used it as a pastime activity. A notable proportion (16.27%) also played games to interact with other players (Figure 5).

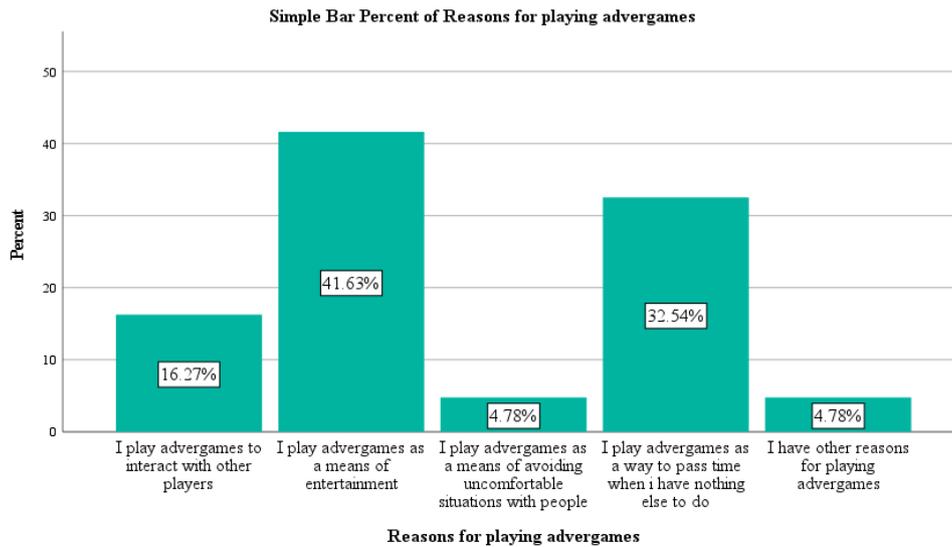


Figure 5: MRA of the Motivation Underlying Playing Advergames

Brands/Adverts in Advergames

The respondents were asked to indicate whether they had experienced the companies whose brands are presented in the games they play. More than half of the respondents responded affirmatively, while the remaining 42.61% denied having experienced the companies whose brands are on advergames (Figure 6).

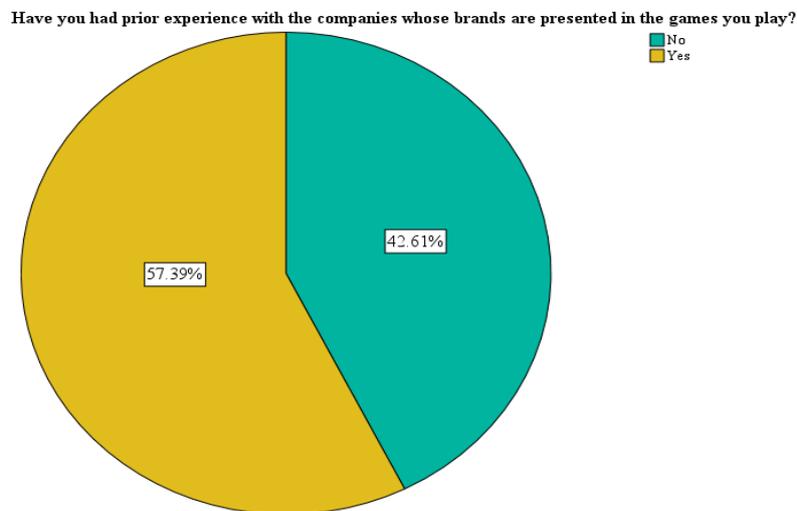


Figure 6: Distribution of Respondents by Experience with Companies Whose Brands Are on Advergames

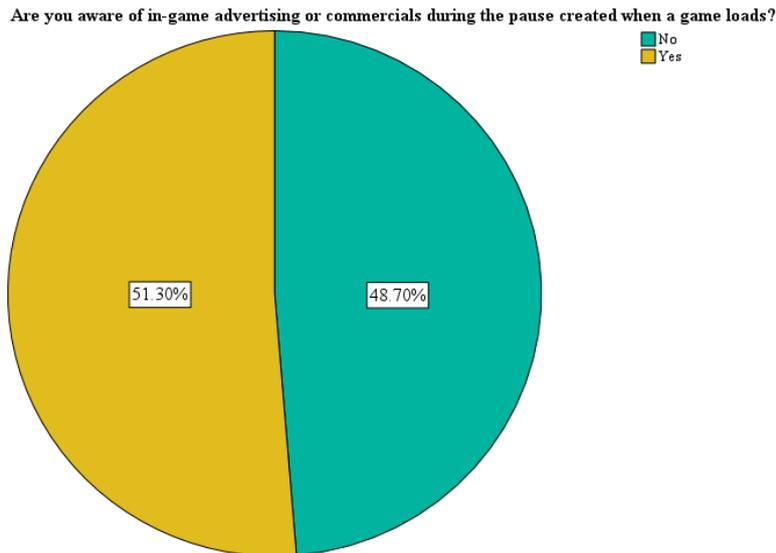


Figure 7: Distribution of Respondents by Awareness of In-Game Advertising/Commercials

Flow in Advergames

Flow was measured using three variables: feeling distracted by ads (state of no flow), feeling engrossed (the state of complete flow), and enjoying the game (moderate flow). Participants were neutral about feeling distracted (mean=3.4609±1.31980) or feeling engrossed in the game (mean=3.3391±1.23464). However, the high value of standard deviation shows dispersion of responses with both agreement and disagreement. Indeed, for those who feel distracted, most of the respondents were either neutral. For being engrossed in the game, the respondents who were neutral were the highest in percentage, and those who agreed or strongly agreed were more than those who disagreed or strongly disagreed (Figure 8).

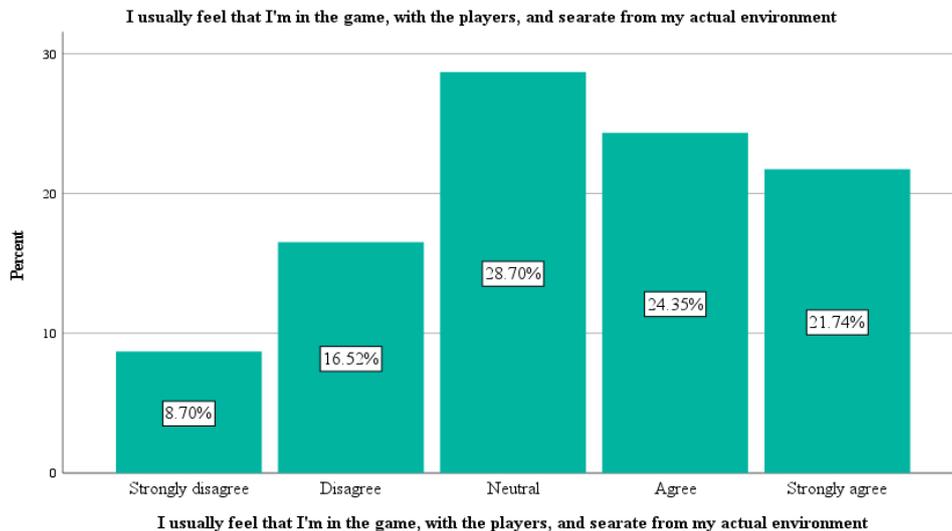


Figure 8: The Distribution of Responses by Feelings of Being Engrossed in the Game

Lastly, the respondents tended to agree that they found the games enjoyable (mean=4.3565±0.93838). Three in every five respondents strongly agreed, while those that disagreed or strongly disagreed were just handful (2.61% and 1.74% respectively) (Figure 9).

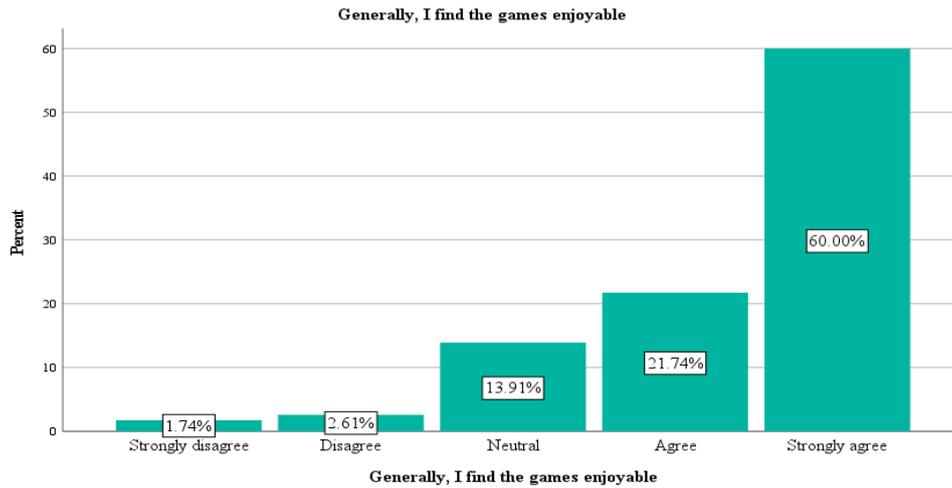


Figure 9: Distribution of Respondents by Enjoyment of AdvergAMES

Brand Outcomes of AdvergAMES

Brand outcomes examined included recall, brand liking, confidence in the product, and purchase. Almost half (49%) of the respondents indicated they do not give any attention to adverts. Among those who give attention, more participants remembered brands compared to those who are too engrossed to notice (Figure 10).

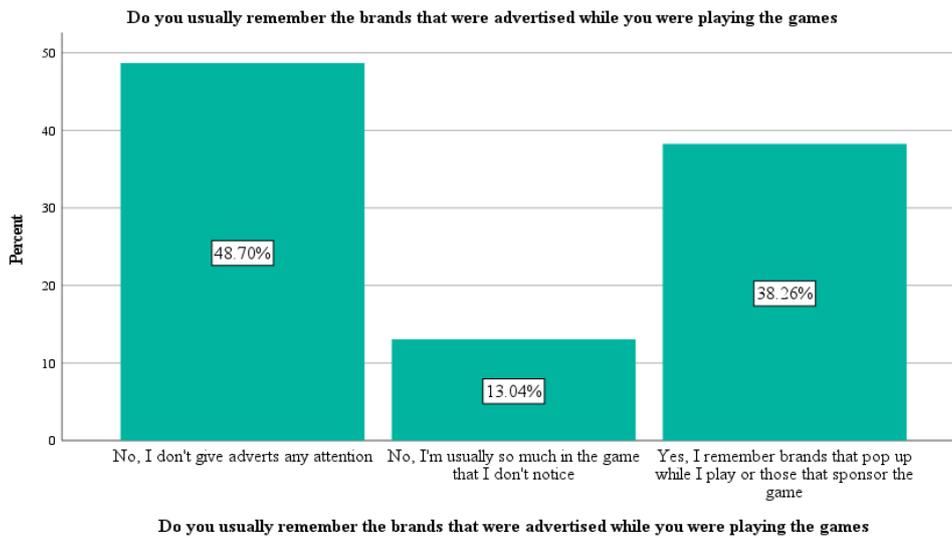


Figure 10: Distribution of Respondents by Brand Recall

Respondents were also asked to indicate whether they had grown to like the brand because of the game. Most tended to either disagree or strongly disagree (Figure 11).

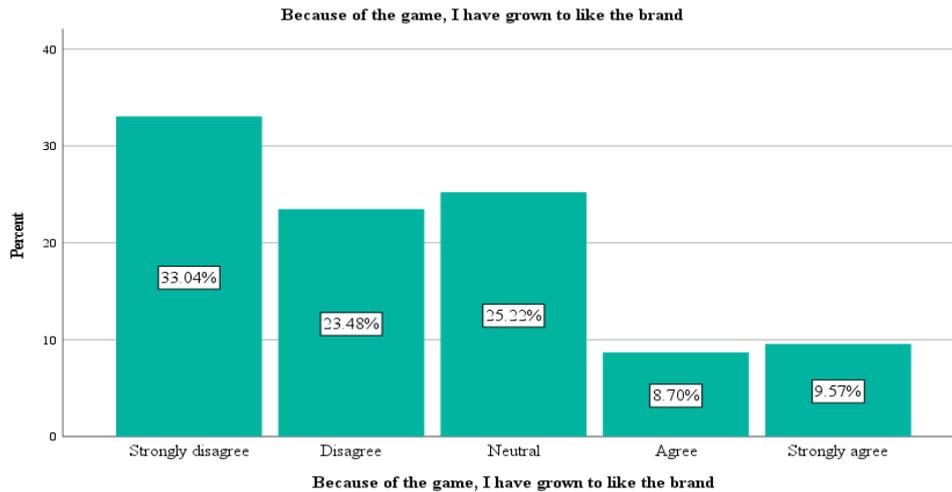


Figure 11: Distribution Responses by Attitude towards the Brand

Furthermore, the respondents indicated their agreement with statements that point to being convinced that the product is great and worth buying. Most of the participants strongly disagreed or disagreed (Figure 12).

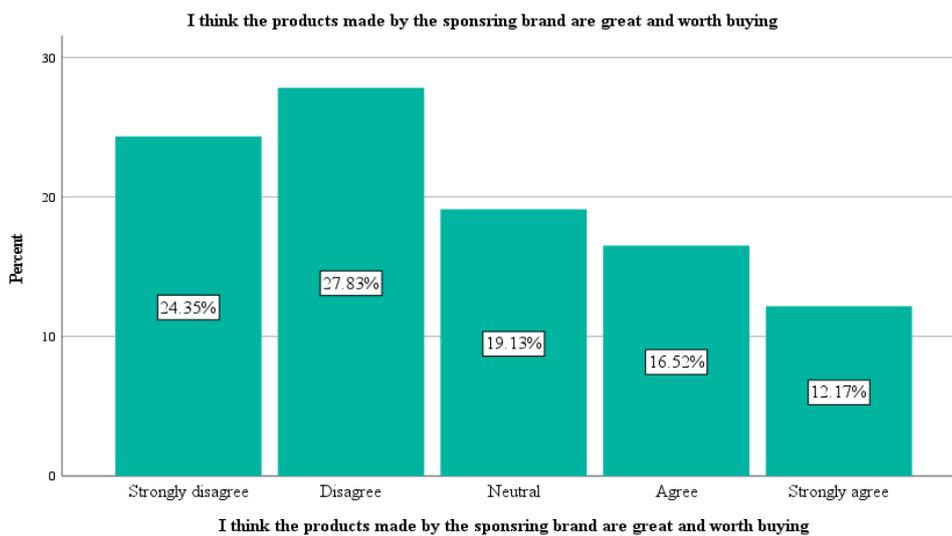


Figure 12: Distribution of Responses by Attitude towards Products by Sponsoring Brands

Lastly, respondents were asked to indicate whether they had purchased products from the sponsoring brand. Still, the majority either disagreed or strongly disagreed (Figure 13).

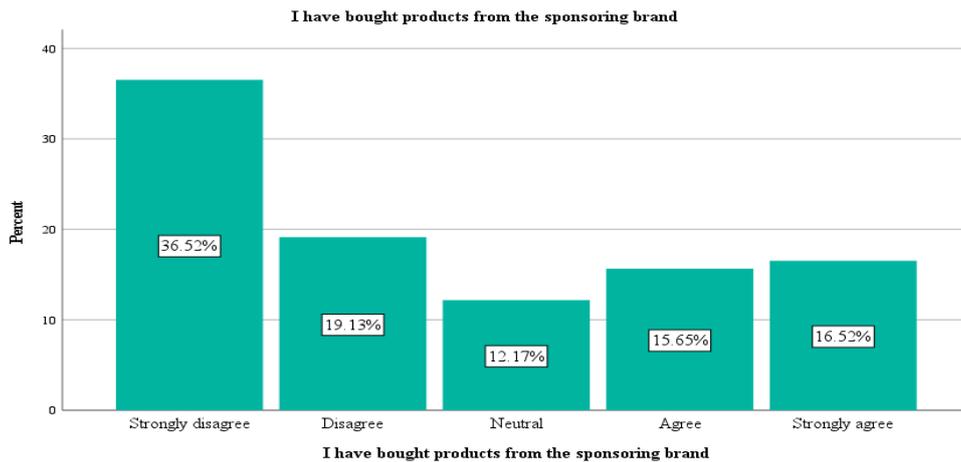


Figure 13: The Distribution of Respondents by Past Purchase of the Products from the Sponsoring Brand

Relationships between Variables

The relationships between variables were established mainly to determine the factors that influence (a) motivation to play advergaming, (b) flow, and (c) brand outcomes. First, the researcher conducted correlation analysis to determine linearity. Then the variables that correlated with the dependent variables were used in the regression model.

Factor Influencing Motivation to Play Advergaming

The factor influencing the motivation to play advergaming were examined in this hypothesis:
H1: Previous exposure influences the motivation to play advergaming

The correlation analysis in Table 1 showed linear association between motivation to play advergaming and other variables. Particularly, interaction was positively associated with call of duty (0.299, $p = 0.001$, 99%CI), GTA5 (0.247, $p = 0.008$, 99%CI), brand experience (0.327, $p = 0.000$, 99%CI) and in-game advertising (0.288, $p = 0.002$, 99%CI) and negatively associated with age group (-0.265, $p = 0.004$, 99%CI) and gender (-0.248, $p = 0.008$, 99%CI). Entertainment was positively associated with GTA5 (0.261, $p = 0.005$, 99%CI), and negatively associated with gender (-0.187, $p = 0.045$, 95%CI).

		Interaction	Entertainment	Avoidance	Pastime	Other
What is your age group	PC	-0.265**	-0.006	-0.014	-0.236*	0.148
	Sig.	0.004	0.949	0.881	0.011	0.114
What is your gender	PC	-0.248**	-0.187*	-0.017	0.016	0.047
	Sig.	0.008	0.045	0.860	0.869	0.617
Doctor Driving	PC	-0.065	0.031	0.124	0.257**	-0.095
	Sig.	0.492	0.740	0.187	0.006	0.311
Call of Duty	PC	0.299**	0.127	0.121	0.273**	-0.250**
	Sig.	0.001	0.178	0.199	0.003	0.007
GTA5	PC	0.247**	0.261**	-0.213*	0.194*	-0.014
	Sig.	0.008	0.005	0.023	0.038	0.879
Fortnite	PC	0.063	0.096	0.105	0.279**	0.034
	Sig.	0.506	0.307	0.264	0.003	0.718

Fate Grand Order	PC	-0.086	0.075	-0.041	-0.160	.431**
	Sig.	0.360	0.423	0.663	0.088	0.000
Genshin Impact	PC	-0.061	0.053	-0.029	0.078	.303**
	Sig.	0.519	0.573	0.759	0.408	0.001
Jawaker	PC	-0.086	-.235*	.431**	-0.160	-0.041
	Sig.	0.360	0.012	0.000	0.088	0.663
Have you had prior experience with the companies whose brands are presented in the games you play?	PC	.327**	-0.120	0.141	-0.180	-0.109
	Sig.	0.000	0.201	0.133	0.055	0.248
How often do you play advergmes	PC	-0.001	-.195*	-0.146	-0.034	0.082
	Sig.	0.994	0.037	0.119	0.718	0.385
Are you aware of in-game advertising or commercials during the pause created when a game load?	PC	.288**	0.015	-0.008	0.039	-0.008
	Sig.	0.002	0.875	0.932	0.676	0.932

Table 1: Significant Correlations for Motivation to Play Advergmes

For the regression analysis, Table 2, the dependent variable was motivation to play advergmes, which comprised of five factors such as; interaction, entertainment, avoidance, pastime, and others. The independent variables were prior brand experience and awareness of in-game advertising. Age and gender (demographic attributes), frequency of playing advergmes, and advergmes played were included as control variables.

According to the findings, the independent variables contribute 25.5% to the variation of interaction as the motivation for playing advergmes, and the model is significant ($F(6) = 7.513, p = 0.000, 99\%CI$). The findings further show that there is a negative and significant association between age group and playing advergmes to interact with others ($0.114, p = 0.048, 95\%CI$). This implies that younger participants' motivation to play advergmes is interaction.

The findings also indicate that 13% of independent variables contribute to the variation of motive for playing advergmes, and the model is significant ($F(5) = 5.246, p = 0.001, 99\%CI$). Playing GTA5 is positively related to entertainment as motivation for playing advergmes ($0.183, p = 0.042, 95\%CI$), while playing Jawaker is negatively related ($-0.883, p = 0.004, 99\%CI$). Furthermore, there is a negative relationship between frequency of playing advergmes and the motive of entertainment ($-0.090, p = 0.020, 95\%CI$). These findings imply that those who play GTA5 but not Jawaker, and who play for less time are more motivated to play advergmes for entertainment.

Playing advergmes as an avoidance strategy, the findings indicate that 20.2% of the variation in the variable is contributed by the independent variables, and the model is significant ($F(2) = 15.432, p = 0.000, 99\%CI$). Playing GTA5 is negatively related with avoidance strategy ($-0.105, p = 0.040, 95\%CI$), while playing Jawaker is positively related ($0.895, p = 0.000, 9\%CI$). This implies that those who play Jawaker and do not play GTA5 have higher avoidance strategy motives for playing advergmes.

Further, 23.2% of the independent variables explain the variation of the motive of playing advergaming as pastime, and the model is significant ($F(5) = 6.578, p = 0.000, 99\%CI$). Playing Doctor Driving (0.456, $p = 0.002, 99\%CI$), Call of Duty (0.182, $p = 0.050, 95\%CI$), and Fortnite (0.248, $p = 0.012, 95\%CI$) is positively related with higher motives of playing advergaming as pastime. This implies those who play advergaming as pastime are players of Doctor Driving, Call of Duty, and Fortnite.

Finally, 29% of the independent variables account for the variation of other motives of playing advergaming, and the model is significant ($F(3) = 16.487, p = 0.000, 99\%CI$). While playing Call of Duty is negatively associated with other motives ($-0.094, p = 0.040, 95\%CI$), playing Fate Grand Order (0.889, $p = 0.000, 99\%CI$) and Genshin Impact (0.889, $p = 0.000, 99\%CI$) have positive associations. These imply that participants who play Fate Grand Order and Genshin Impact but not Call of Duty have other motives for playing advergaming. Among the independent variables, only prior experience with companies whose brands are presented in advergaming positively influence the motive of playing advergaming that is, for interaction.

	Interaction	Entertainment	Avoidance	Pastime	Other
Demographics					
What is your age group	-.114**			-.080	
What is your gender	-.119	-.005			
About advergaming					
Doctor Driving				.456***	
Call of Duty	.164			.182**	-.094**
GTA5	.112	.183**	-.105**	.131	
Fortnite				.248**	
Fate Grand Order					.889***
Genshin Impact					.889***
Jawaker		-.883***	.895***		
How often do you play advergaming		-.090**			
Brands/ads in advergaming					
Have you had prior experience with the companies whose brands are presented in the games you play?	.275***				
Are you aware of in game advertising or commercials during the pause created when a game loads?	.106				
Model					
Constant		.982***	.105***	0.485***	.111***
Adjusted R square	.255***	0.130***	.202***	.232***	.290***

Table 2: Findings from the Regression Analysis Showing the Factors that Influence Motivation to Play Advergaming

The null hypothesis is rejected and it is inferred that previous exposure to advergaming influences the motivation to play. More specifically, brand experience was found to positively influence the interaction as the motivation to play advergaming.

Factors Influencing Brand Outcomes

The study of brand outcomes was based on the following hypothesis:

H2: Flow influences the brand outcomes

Just as in the case of motivation and flow, a correlation analysis was conducted for brand outcomes to establish linearity as an important assumption in the regression analysis. Under brand recall, intentionally ignoring is positively associated with gender (0.250, $p = 0.007$, 99%CI) and negatively associated with brand experience (-0.357, $p = 0.000$, 99%CI), awareness of in-game advertising (-0.408, $p = 0.000$, 99%CI), playing advergimes for interactions (-0.212, $p = 0.023$, 9%CI) and the experience of being engrossed in the advergime (-0.269, $p = 0.004$, 99%CI). Being too engrossed in the game to notice ads is positively associated with GTA5 (0.286, $p = 0.002$, 99%CI) and Fate Grand Order (0.344, $p = 0.000$, 99%CI) and negatively associated with gender (-0.234, $p = 0.012$, 95%CI). Recall after playing advergimes is positively associated with playing Pepsi Man (0.202, $p = 0.031$, 95%CI), brand experience (0.280, $p = 0.002$, 99%CI), awareness of in-game advertising (0.302, $p = 0.001$, 99%CI), avoidance as motivation (0.202, $p = 0.031$, 95%CI) and the feeling of being engrossed in the game (0.234, $p = 0.012$, 95%CI).

For brand attitude, liking a brand was positively associated with playing minion (0.186, $p = 0.046$, 95%CI), brand experience (0.271, $p = 0.003$, 99%CI), awareness of in-game advertising (0.277, $p = 0.003$, 9%CI), avoidance as a motivation for playing advergimes (0.269, $p = 0.004$, 99%CI), and being engrossed in the game (0.193, $p = 0.038$, 95%CI). Product reputation was positively associated with playing FIFA (0.279, $p = 0.003$, 99%CI), Fate Grand Order (0.235, $p = 0.011$, 95%CI), and Jawaker (0.235, $p = 0.011$, 95%CI), brand experience (0.231, $p = 0.013$, 95%CI), avoidance as a motivation for playing (0.268, $p = 0.004$, 99%CI), and the feeling of being engrossed (0.185, $p = 0.048$, 95%CI) and negatively associated with frequency of playing advergimes (-0.346, $p = 0.000$, 99%CI). Lastly, past purchase was positively associated with playing FIFA (0.269, $p = 0.004$, 95%CI), Fortnite (0.207, $p = 0.026$, 95%CI), and Fate Grand Order (0.214, $p = 0.021$, 95%CI), Brand experience (0.264, $p = 0.004$, 99%CI) and avoidance as a motivation for playing advergimes (0.211, $p = 0.023$, 95%CI), and negatively associated with the frequency of playing advergimes (-0.310, $p = 0.001$, 99%CI) (Table 3).

		Brand recall			Attitude		Purchase
		Intentionally ignoring	Too engrossed to notice	Recall after playing	Liking brand	Product reputation	Past purchase
What is your gender	PC	.250**	-.234*	-0.094	-0.162	-0.180	-.211*
	Sig.	0.007	0.012	0.317	0.084	0.055	0.024
Pepsi Man	PC	-0.132	-0.094	.202*	0.120	0.068	0.145
	Sig.	0.158	0.316	0.031	0.200	0.470	0.123
FIFA	PC	-0.132	0.073	0.086	0.091	.279**	.269**
	Sig.	0.158	0.441	0.361	0.333	0.003	0.004
GTA5	PC	-0.038	.286**	-0.159	0.056	0.045	-0.135
	Sig.	0.688	0.002	0.089	0.554	0.636	0.152
Minion	PC	0.009	-0.132	0.082	.186*	0.113	0.098
	Sig.	0.925	0.159	0.381	0.046	0.231	0.296
Fortnite	PC	-0.005	-0.106	0.078	-0.017	0.170	.207*
	Sig.	0.959	0.260	0.405	0.856	0.069	0.026
	PC	-0.130	.344**	-0.105	0.064	.235*	.214*

Fate Grand Order	Sig.	0.167	0.000	0.265	0.497	0.011	0.021
Jawaker	PC	-0.130	-0.052	0.169	0.168	.235*	0.126
	Sig.	0.167	0.584	0.071	0.073	0.011	0.178
Have you had prior experience with the companies whose brands are presented in the games you play?	PC	-.357**	0.125	.280**	.271**	.231*	.264**
	Sig.	0.000	0.184	0.002	0.003	0.013	0.004
Are you aware of in-game advertising or commercials during the pause created when a game load?	PC	-.408**	0.171	.302**	.277**	0.183	0.065
	Sig.	0.000	0.068	0.001	0.003	0.050	0.489
How often do you play advergames	PC	0.174	-0.112	-0.102	-0.045	-.346**	-.310**
	Sig.	0.062	0.234	0.279	0.634	0.000	0.001
I play advergames to interact with other players	PC	-.212*	0.145	0.117	0.044	0.002	-0.028
	Sig.	0.023	0.122	0.212	0.637	0.985	0.767
I play advergames as a means of avoiding uncomfortable situations with people	PC	-0.177	-0.028	.202*	.269**	.268**	.211*
	Sig.	0.058	0.767	0.031	0.004	0.004	0.023
I usually feel that I'm in the game, with the players, and separate from my actual environment	PC	-.269**	0.061	.234*	.193*	.185*	0.084
	Sig.	0.004	0.516	0.012	0.038	0.048	0.371

Table 3: Significant Correlations for Brand Outcomes

Due to its nominal nature, the measures of brand recall were split into three variables: intentionally ignoring too engrossed to notice, and recall after playing. The remaining variables included liking the brand, confidence in the products, and past purchase. All the models were significant. Independent variables contributed 27.6% to the variability of intentionally ignoring the ads ($F(5)=9.691$, $p=0.000$, 99%CI); 20% to the variability of being too engrossed to notice the ads ($F(3)=10.497$, $p=0.000$, 99%CI); 18.8% to the variability of brand recall after playing ($F(5)=6.279$, $p=0.000$, 99%CI); 18.2% to the variability of liking the brand ($F(5)=6.058$, $p=0.000$, 99%CI); 27.2% to the variability of product reputation ($F(7)=7.082$, $p=0.000$,

99%CI); and 29.3% to the variability of past purchase ($F(6)=7.474, p=0.000, 99\%CI$).

The findings indicate prior experience with companies that advertise brands ($-0.254, p=0.005, 99\%CI$), awareness of in-game advertising ($-0.240, p=0.008, 99\%CI$) and being fully immersed into the game ($-0.100, p=0.003, 99\%CI$) are negatively related to ignoring adverts while gender is positively associated ($0.196, p=0.025, 95\%CI$). The participants who intentionally ignore advergames are females, have not experienced the company that owns the brand in the adverggame, are unaware of in-game advertising, and are not engrossed in the game.

Based on the coefficients, playing GTA5 ($0.217, p=0.002, 99\%CI$) and Fate Grand Order ($0.937, p=0.000, 99\%CI$) is positively related to being too engrossed in the game to notice adverts. Thus, the type of adverggame influences the state of being engrossed in the game. Further, the findings indicate that there are positive relationships between brand recall and playing Pepsi Man ($0.199, p=0.035, 95\%CI$), awareness of in-game advertising ($0.222, p=0.013, 95\%CI$), playing adverggames as an avoidance strategy ($0.306, p=0.043, 95\%CI$), and being fully immersed in the game ($0.076, p=0.028, 95\%CI$). These relationships imply that ad recall is influenced by the game played, awareness of in-game advertising, avoidance as the intention of playing adverggames, and being in the highest state of flow - full immersion.

Furthermore, the findings show positive and significant relationships between liking the brand because of the game, and awareness of in-game advertising ($0.498, p=0.035, 95\%CI$) as well as playing games as a means of avoiding uncomfortable circumstances with people ($0.967, p=0.016, 95\%CI$). Liking the brand because of the game (brand attitude) is influenced by avoidance as the motivation for playing and the awareness of in-game advertising. There were positive and significant associations between product reputation and playing FIFA ($0.691, p=0.005, 99\%CI$) and Fate Grand Order ($2.396, p=0.006, 99\%CI$) as well as having prior experience with companies whose brands are in adverggames ($0.465, p=0.041, 95\%CI$). On the other hand, there was a negative and significant relationship between product reputation and frequency of playing adverggames ($-0.244, p=0.023, 95\%CI$). These findings imply that participants who felt the products of sponsoring brands are great and worth buying were influenced by the game played, their prior experience with the company that owns the brand, and played adverggames fewer.

Lastly, there were positive and significant relationships between purchase (measured by past purchase) and playing FIFA ($0.645, p=0.020, 95\%CI$), Fortnite ($0.747, p=0.014, 95\%CI$), and Fate Grand Order ($3.034, p=0.003, 99\%CI$) and having prior experience with the company whose brand is advertised ($0.826, p=0.002, 99\%CI$). These imply that purchase is influenced by the particular game, and prior experience with the company that owns the brand (Table 4).

	Brand recall			Attitude		Purchase
	Intentionally ignoring	Too engrossed to notice	Recall after playing	Liking brand	Product reputation	Past purchase
Demographics						
What is your gender	.196**	-.029				
About adverggames						
Pepsi Man			.199**			

FIFA					.691***	.645**
GTA5		.217***				
Minion				.710		
Fortnite						.747**
Fate Grand Order		.937***			2.396***	3.034***
Jawaker					1.178	
How often do you play advergames					-.244**	-.194
Brands/ads in advergames						
Have you had prior experience with the companies whose brands are presented in the games you play?	-.254***		.125	.405	.465**	.826***
Are you aware of in game advertising or commercials during the pause created when a game loads?	-.240***		.222**	.498**		
Motivation for playing advergames						
I play advergames to interact with other players	-.034					
I play advergames as a means of avoiding uncomfortable situations with people			.306**	.967**	.612	.624
Flow						
I usually feel that I'm in the game, with the players, and separate from my actual environment	-.100***		.076**	.092	.140	
Model						
Constant	1.276***	.092	-.493**	.244	1.822***	1.335**
Adjusted R square	0.276***	.200***	.188***	.182***	.272***	.293***

Table 4: Findings from the Regression Analysis Showing the Factors that Brand Outcomes

Based on the findings, all the null hypotheses are rejected and thus, it is inferred that previous exposure, motivation for playing advergames, and flow all influence brand outcomes. More specifically, under exposure, experience with the brand advertised in the game negatively influences ignoring ads, and positively influences product reputation and purchase while awareness of in-game advertising negatively influences ignoring ads, and positively influences recall and brand liking. Under motivation, avoidance as the motivation for playing advergames positively influences recall and brand liking. Lastly, the highest state of flow (being engrossed) negatively influences ignoring ads and positively influences recall.

Conclusion

The descriptive findings show that the main motivation for playing advergames are either for entertainment or for pastime. Although many players enjoy the game, they do not pay much attention to advertising, most do not develop strong positive attitudes towards the sponsoring

brands or products, and also have not purchased products from the sponsoring brands. When the regression analyses were conducted, the findings revealed that the game played influences motivation, flow, and brand outcomes.

Secondly, outcomes that are more positive are linked with lower frequency of playing advergames. Third, although prior experience of the company that owns the brand presented is associated with feelings of distraction and intentionally ignoring ads, it is also linked with purchase and interaction (as a motive for playing advergames). Moreover, playing advergames with the motive of entertainment influences enjoyment, while playing advergames as an avoidance strategy is linked with brand recall and positive brand attitudes.

The highest state of flow (being engrossed or immersed) is linked with reduction of intentional ignoring of ads, and enhanced brand recall. Lastly, for age, younger participants are motivated by interactive nature of advergames, and have higher state of flow (immersion) and for gender; female participants were linked with the behaviour of intentionally ignoring ads.

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