Master's Thesis of Global Sport Management

Esports and Social Capital:

Exploring the Social Outcomes of Online and On-site Esports Participation in the Arab World

이스포츠와 사회자본: 아랍에서의 온라인과
오프라인 이스포츠 참여의 사회적 영향 탐색

2023 년 8 월

서울대학교 대학원

체육교육과 글로벌스포츠매니지먼트

Momin A.M Alhasan

이 논문은 문화체육관광부와 국민체육진흥공단 지원을 받아 수행된 연구임
This work was supported by the Ministry of Culture, Sports, and Tourism and Sports Promotion Foundation

Esports and Social Capital:

Exploring the Social Outcomes of Online and On-site Esports Participation in the Arab World

Advisor: LEE Okseon

Submitting a master's thesis of Global Sport Management

August 2023

The Graduate School

Department of Physical Education

Seoul National University

Global Sport Management Major

Momin A.M Alhasan

Confirming the master's thesis written by

Momin A.M Alhasan

August 2023

Chair	Kang, Joon-ho	(Seal)
Vice Chair	Kim, Kihan	(Seal)
Examiner	Lee, Okseon	(Seal)

Table of Contents

List of Tables

List of Figures

Abstract

Esports and Social Capital:

Exploring the Social Outcomes of Online and On-site Esports Participation in the Arab World

Momin A.M Alhasan

Global Sport Management, Department of Physical Education

The Graduate School

Seoul National University

This research's main objective is to examine the effects of esports on Arab players' social capital. The study discusses the relationship between bonding social capital, bridging social capital, and online and on-site esports. This study adopted quantitative research methods and examined this relationship following two main steps. First, a questionnaire was developed to measure the variables of interest using questionnaire scales and items modified from past literature focusing on online esports, on-site esports, involvement, bridging and bonding social capital, and demographic information with 418 respondents. Secondly, the collected data was analyzed through descriptive statistics, reliability tests, Confirmatory Factory Analysis,

convergent and discriminant validity, and Structural Equation Modeling. Data collection results illustrate the significance and correlation among all variables with variation between them. Bridging social capital shows significance with online esports, on-site esports and esports involvement, same significance was with Bonding social capital. In summary, online esports, onsite esports, and esports involvement all have a positive impact on the Arab players' bonding social capital, and bridging social capital.

Keyword: Esports, Social Capital, Arab

Student Number: 2021-20259

Chapter 1. Introduction

1.1. Research Background

The world of esports has grown significantly in the world, the spread percentages are mind blowing. Technological development has played a big role in the improvement of video games around the world, players are allowed to share their gaming experience across the world through different platforms.

he size and significance of the esports industry is demonstrated by the esports market, which was estimated to be worth 2 billion USD in 2021. This market is predicted to grow by 22% by 2030, with revenue generated from a variety of sources, including sponsorships, advertisements, merchandise, tickets, publisher fees, and media rights (Grand View Research, 2022).

According to Insider Intelligence (2022), the number of monthly esports viewers is expected to increase by 11.5% to 29.6 million in 2022. Twitch, one of the most popular gaming platforms, reported that there were 91,735 streamers on their platform in 2022, with an average of 2.4 million viewers, and more than 2.5 million total viewers. The average number of online channels was 94,029 per week, and viewers spoke 50 different languages (Twitch Statistics & Charts, 2022).

After the worldwide pandemic Covid-19, many industries were damaged and faced existing threats due to such issues especially the sports industry, major leagues were stopped, and Tokyo 2020 Olympics was postponed, and financial damages occurred to professional clubs(Wijman, 2020). Esports had a different situation regarding the pandemic, consuming hours increased by individuals as a way to past time during quarantine and curfew. The numbers were highly praised and the popularity of esports was shocking (Wijman, 2020).

Such rapid development and popularity were also evident in the Arab world. Arab world illustrated some good numbers regarding consuming esports, North African countries like Egypt and Algeria, the Middle East like Palestine and Jordan, and Gulf countries Like Saudi Arabia. The gaming industry in the Middle East is expanding quickly, moving from simple games to virtual reality titles and competitive sports. The gaming and esports industries in the MENA region are expected to thrive in the future due to growing a community of gamers and a high internet interaction rate (Bhawna Singh, 2020). Several projects and ideas are under process or development in the Arab countries such as The Dubai-based W Ventures stated in October 2019 that it would invest $50 million across the Middle East and North Africa to create a local esports and gaming ecosystem (Radcliffe, 2021).

According to Radcliffe (2021), Activision has launched dedicated servers for Call of Duty in MENA, located in Riyadh and Jeddah, in collaboration with the Saudi Telecom Company. As for gamer awareness and interaction with the system, the United Arab Emirates and Saudi Arabia are one of top 10 high markets for YouTube Gaming, Game developers and console manufacturers have a great opportunity because of the region's extremely active gaming community (Radcliffe, 2021). “Egypt has the highest population of gamers at 68%, followed by UAE (65%) and KSA (61%)” among MENA countries (Radcliffe, 2021). Middle Eastern markets may not be as familiar with esports as more aware western markets like the United States, United Kingdom, and other European nations, but involvement is still significantly higher there. Implying a promising future for gaming and esports in the area, this means locals are more likely to participate in these activities once they learn more about them (Bhawna Singh, 2020).

Despite the strong advancements in esports, previous literature on esports demonstrate that esports participation is associated with both positive and negative social outcomes. According to prior studies, there are two conflicting points of view about the effects of esports participation on players. Some say the relations between bonding and bridging social capital and esports are positive and it helps in building social support, others say that

esports have a major negative influence on individuals' social capital (Cole & Griffiths, 2007; Trepte et al., 2012a; Utz, 2000; Yee et al., 2007).

According to Cole and Griffiths (2007), high percentages of players who play MMORPGs, end up finding lifelong friends and even partners, making them extremely social games. 81 % of participants play with real friends and family members in addition to making close online friends, indicating that massive multiplayer online role-playing games are neither an inherently asocial activity nor do the players tend to be socially introverted. Trepte and colleagues (2012a, 2012b) discuss that physically challenged people who have limited moving ability and a lack of social connection and social capital may benefit especially from the social aspects of gaming. On the other hand, addiction is one risky side effect that could arise from playing esports. Although there is likely a difference between those who play excessively and those who are addicted (Cole & Griffiths, 2007). Griffiths and colleagues (2004) hypothesize that youth may be more susceptible to OVG addiction. Additionally, it should be noted that MMORPGs can be as goal-oriented or as laidback as the player desires (Krotoski, 2004), furthermore, the chance to design a one of a kind, personalized in-game experience is part of the appeal. While they should not be exaggerated, the

potential drawbacks of the games should also not be ignored (Cole & Griffiths, 2007).

1.2. Research Significance

According to previous studies, there are two conflicting points of view about the effect of esports on players. The first one is, esports helps players to be more socially interactive and it refines their social skills, whereas the other point of view argues that esports, has a bad effect on players' social interaction as spending a lot of time behind a screen becomes more preferable interaction environment for a player than the real environment with family and friends (Cole & Griffiths, 2007; Trepte et al., 2012a, 2012b; Utz, 2000; Yee et al., 2007).

While extant literature exists on esports participation and its social outcomes, previous studies have mainly been studying the European and American contexts, with very few if any in the Arab context. Therefore, this study will provide a new set of information on esports trajectory in the Arab world. To fill this gap in the literature this study examines whether esports have positive or negative effects on Arab players' bonding and bridging social capital. This field has grown a lot in the Arab world and this thesis will discuss whether this phenomenon has a positive or negative effect on the Arab player's social capital. It will give evidence about the situation of the Arab

world esports status which will help to develop new projects and policies that aims to attract Arab talents in this field and help them to refine their skills, in addition, will grant policy and decision makers the needed information when it comes to developing esports field in the Arab world with new projects. Furthermore, it will cover a big population and space in the world, as the Arab world has a lot of common denominators, language, traditions, and beliefs.

1.3. Research Objectives

This research's main objective is to examine the effects of esports on Arab players' social capital. The study discusses the relation between bonding social capital and bridging social capital, and online and on-site esports. Thus to conduct such research a model was created based on past literature will be applied to this study to aid the researcher to examine how much the variables are affected by each other. This model hypothesizes that the amount of esports consumption will positively impact social capital. More specifically, the amount of online esports consumption will have a positive impact on bonding and bridging social capital. Moreover, the amount of on-site esports consumption will have a positive impact on bonding and bridging social capital.

Chapter 2. Literature Review

2.1. Esport Participation

Esports has a varaiaty of defenitions but according to war it is "a form of sports where the primary aspects of the sport are facilitated by electronic systems; the input of players and teams as well as the output of the eSports system are mediated by human-computer interfaces." In more concrete terms, eSports are tense competitions with players are pro or amateur that are frequently organized by various leagues, and championships. Players typically participate in esports as individuals or teams and sometimes supported by higher umbrella organizations (Warr, 2014).

2.1.1. Motivation for E-Sport Participation

Many theories support the motivation behind playing video games (Legault, 2017; Ryan & Deci, 2000; Weiss, 2011). For example, self-determination theory (SDT) focuses on the human personality and motivation by taking into consideration how the person interacts with the social environment and counts on it. SDT distinguishes the motivation types into an intrinsic level and several types of extrinsic. SDT addresses the psychological needs of autonomy, competence, and relatedness, with the idea of their role in self-determination motivation, well-being, and growth. Social and cultural

contexts have a big impact either in a good way or bad way on psychological needs (Legault, 2017; Ryan & Deci, 2000).

Another theory that is used for esport consumption is the “uses and gratifications theory” which looks at how people's media consumption needs vary throughout the course of their lives, along with the related changes in attitudes and needs (Weiss, 2011). It is centered on three necessary columns , 1) beliefs and evaluations, 2) need gratifications sought, and 3) need gratification obtained(Weiss, 2011). The motivations behind playing video games according to Bekhtina (2002) are, (a) curiosity, astonishment, and interest; (b) cognitive stimulation; (c) enjoyment of a different lifestyle in virtual environments; and (d) recreational refreshment, and according to Carras and colleagues (2017), the reasons people play games, such as playing for enjoyment rather than for success or obsession, have a significant role in how gaming affects their well-being.

Control over the virtual world of the game, entertainment and enjoying the outcome of the game, escapism from everyday life, Competitive sense among players, and Pastime through the game. These five reasons are the motivation behind players doing esports or video games (Jansz & Martens, 2005).

In field observation sessions and interviews with ten professional esports players, Seo (2013) discovered that while players were amateurs, they observed playing video games as a casual hobby (i.e., for enjoyment) and developed interpersonal bonds inside the esports community, and esports increasingly take on a significant role in their lives and identities as they advance in knowledge and skill. Additionally, it was determined that the key traits of esports players who decide to pursue competitive gaming as professional life are skill mastery, the pursuit of self-improvement, the significance of fairness, equality, and respect in the community, and having a strong sense of self-worth, success, and recognition.

Cole and Griffth's (2007) study about Massive Multiplayer Online Role Play Games States that females are more than mails to claim that their motivation for MMORG is "therapeutic refreshment," while males reported that their motivation is "curiosity, astonishment, and interests." There was also a major relationship found between players' type and motivations for playing. In comparison to other motivations, gamers were substantially more likely to be driven by curiosity, astonishment, interest, and attention, as well as by logic, creativity, and problem-solving. Role-players were much more likely to be driven by the desire to live a different lifestyle in a virtual setting than by any other motivation. Thus "Around a third of gamers (34.6%)

reported they could be more themselves in the game than in real life. There was no significant difference between males (35%) and females (33.3%) in terms of being themselves within the game". Previous Studies discussed the motivation behind playing video games relies on Social outcomes, escape from reality, a sense of control, belonging to a specific community or a group, also the feeling of winning or victory (Bekhtina, 2002; Carras et al., 2017; Cole & Griffiths, 2007; Jansz & Martens, 2005; Seo Y., 2013).

According to Weiss's (2011) "Study about fulfilling the needs of esports consumers: A uses and gratifications perspective", there are ten gratification needs, five competitive and five hedonic, Competitive, Competition, Achievement, Challenge, Reputation, Reward, Hedonic, Social relationship, Escapism, Self-Fulfillment, Fun and Virtual Identity.

2.1.2. Types of ESports Games

There are many different types of esport games and previous studies have distinguished these games into various genres and classifications. For example first person shooter, third person perspective and Racing (Call et al., 2012; Denisova & Cairns, 2015; Fischer P et al., 2009). Yet, a universal classification of the different types of esports is still to be confirmed. However, due to the vast number of global competitions and events held by the esports International Federation, the classification proposed provides a

strong general distinction of the main types of esport games. The four types of esports games include Tactical shooters, MOBA, Sports sim and Fighting.

Tactical shooters: Tactical shooter games involve either first person perspective or third person perspective. In first-person perspective video games, the action takes place in a 3D environment where the player faces off against enemies while completing game objectives such as call of duty or battlefield. The gaming environment contains pickups like health packages, guns, and ammo. Real players have to get familiar with the advantages and disadvantages of each weapon, become familiar with the landscape and become proficient with the game controls in order to navigate and engage in combat. The most basic game type is a Death-match, where each player's primary goal is to eliminate every other player present. There are many other games kinds available as well (Glavin & Madden, 2018).

A third-person point of view (POV) enables the player to see the lead character in action without feeling like they are the protagonist. While a greater range of vision of the surroundings is provided by such camera positioning, the avatar struggles to determine its point of interest (Call et al., 2012).

MOBA: MOBA games are based on teamwork, users are divided into two camps 5 players per team, and they compete against each other to gain gold and experience points to increase their level. The main goal is to demolish the opponent's buildings. Users control only one player called a "hero" with specific abilities and powers to use (Huang & Bruda, 2020). Huang and Bruda (2020) used DOTA 2 for example, each game has 10 players and is divided into 2 camps. Users have to pick their hero at the start of the game. The camps have an "ancient building" within their bases that is located on high ground, and a three-lane highway to the opposite side. There are three defense towers on each lane, two melee, and ranged barracks for each side. Every 30 seconds, the barracks generate three different types of "creeps" (melee, range, and siege). Additionally, there are two jungles on each side, with several neutral creeps. To acquire gold and experience, players command their heroes to defeat creeps and opponent heroes. Gold is used to create equipment that makes heroes stronger. Heroes may obtain one spell unit at each level for one of their four abilities when they level up through experience (three basic abilities and one ultimate ability which can only be gained on certain levels). The opponent's ancient structure at the center of their base must be destroyed to win (Huang & Bruda, 2020).

Sport Sim: This type of esports is “virtual simulation games of existing sports such as football, basketball, cycling and others” (International Esports Federation, n.d.). There are many popular sports games such as FIFA, NBA, and need for speed. Since the release of FIFA 22 over 9 million individuals played that game and over 7.6 million ultimate team teams were created.

Sport racing games are one example, this genre of esports is characterized by aggressive driving, having the player race around cities and landscapes at high speeds while adopting the driver's perspective, many of these games appear to be racing cars at high speeds in reality thanks to their realistic graphics, which many of these games provide. Many of the games have fast-paced music and realistic engine noise (Fischer P et al., 2007, 2009).

Fighting: According to Harper (2014), in a fighting game, two combatants are set against one another over the course of timed rounds to bring their opponent's health down to zero using a variety of moves and special attacks. This set of guidelines concluded with "whoever won two rounds first" being "considered the winner”.

Harper (2014) presents a five-part working description of fighting games based on this. The first sentence states that "these are games of close-

quarters fighting," distinguishing the genre from, for instance, first-person shooters and defining the standard parameters of competition for players. The second is that characters in such gameplay have "moves," also known as normal and special assaults. This lays out the set of guidelines and strategies that players must follow. The third is that "match parameters are quantified on-screen in some way," either by timers, counters, or some other method. The fourth point is that "combat games are competitive," enabling players to engage in confrontation with one another and have a clear winner at the end. The fifth and most significant factor is that these games provide multiplayer competition, which is vital to lovers of fighting games.

2.1.3. Online and On-Site Esports

Esports games can be played in different environments according to the desired setting by the player. The first environment is playing online with other players in different places such as massive multiplayer online games or MUD. Second is on-site games where players play esports in the same room, in other words with physical existence (Bekhtina, 2002; Cole & Griffiths, 2007; Curtis & Nichols, 1993; Jansz & Martens, 2005).

Online games mode allows players to play together. Networks of connections with other gamers so take on a crucial role. While some games,

like first person shooters (FPS), are played in transient settings, Massive multiplayer online role playing games (MMORPGs) use a permanent universe that exists even when the user isn't playing (van Rooij, 2011).

Yee (2007) explains the only environment in which millions of users regularly and freely immerse themselves in a graphical virtual environment and communicate with one another through avatars. Research conducted by him concluded with MMORPGs enable new types of social interaction and social identity. It reaches adults and teenagers from different backgrounds. According to his research, players spend on average, more than half a working week in these environments.

According to Griffiths (2004), massively multiplayer online role-playing games (MMORPGs) are completely realized multi-player universes with a sophisticated and realistic audiovisual environment where players can build unique characters. Since MMORPGs demand a lot of players to cooperate and work as a team simultaneously, positive social interaction is crucial (Cole & Griffiths, 2007).

Curtis and Nichols (1993) state that multi user dungeons are "programs that accept network connections from multiple simultaneous users and provide access to a shared database of "rooms", "exits", and other

objects." Users access the database from within the rooms, viewing just objects that are present in that space and primarily navigating between them via the exits that divide them. MUDs are thus a type of virtual reality where users can travel to an electronically portrayed environment.

In a research by Utz (2000), 77% of participants said they were in some way connected to other multiuser dungeons (MUD) players. While MUDs and MMORPGs share the use of instant messaging for multiplayer and role-playing systems, they differ in that MUDs are primarily text-based and lack a visual depiction of the role-playing environment.

Curtis and Nichols (1993) explain three ground specifications of MUD that Distinguish it from any other type. To involve the user in a sensually realistic virtual environment, MUDs don't require expensive visuals or specialized position-sensing technology; instead, they just use plain, unformatted text. For this reason, MUDs are frequently referred to as text based virtual realities. MUDs may be expanded from the inside; users can use an embedded programming language to add new rooms and other elements to the system and give those things specific virtual behavior. MUDs often have a large amount of users at once connecting. These users may interact with one another and their freshly produced objects since they are all exploring and

altering the same database. MUD users may also interact with one another in real time and directly by entering messages that are visible to everyone else in the same room.

On-site esports players do esports with physical existence in the same room where they can see each other and have eye contact with their teammates or competitors using Local Area Network (LAN). Jansz and Martens (2005) state in their research about LAN games under the title of "Gaming at a LAN event: The social context of playing video games", "At a LAN event, state of the art information and communication technology (ICT) is employed for entertainment purposes. Computers and servers are linked in a LAN, offering a high speed of communication. The local network at a LAN event is up and active for 24 hours a day, mostly on weekends or for a couple of days in a holiday period." There are no lags or latencies in a high-quality LAN, unlike on the internet. The effects on the actual gaming experience (gameplay) are extensive: a LAN enables quick gameplay because the server's and other PCs' reaction times are low.

The LAN is frequently connected to the internet (Wide Area Network, WAN). LAN events are a desirable venue for activities other than gaming, such as downloading movies and software, due to the high-speed

connectivity. LANs often have a connection speed of 100MB, which is 1800 times faster than a 56K modem connection and 100 times faster than ADSL (1MB) (Jansz & Martens, 2005). Swalwell (2003) states that "lan'ers see each other face-to-face quite often and get to know each other. From a lan'ers point of view, if you just lock yourself in a room and play games on the net and not get out and LAN then that's lame."

2.1.4. Esports Involvement

Research have showed that there are many different reasons why players participate in esports. Some people's key motivations for participating in sports are their love of the game and their desire to compete at a high level. Some find financial incentives, including prize money and sponsorship deals, to be a powerful motivator (Hamilton & Thompson, 2020). Additionally, taking part in esports can give gamers a chance to escape from the pressures of everyday life, feel accomplished, and interact socially with others who share their interests (Yee & Bailenson, 2007).

Players' participation in esports can improve their general well-being. According to studies, taking part in esports can boost one's sense of self-worth, social connectedness, and general happiness (Wu & Wang, 2019). In addition, taking part in esports can offer players chances to gain respect and

recognition as well as the chance to pursue professions in the gaming and technology industries.

However, taking part in esports also presents a number of difficulties. For instance, professional athletes must frequently put in lengthy hours of practice and competition and must perform well under pressure. (Nguyen et al., 2020). The intense competition in esports may also lead to high levels of stress and burnout, which causes some players to leave the profession too soon. In addition to the personal challenges faced by players, the commercialization of esports has raised ethical concerns. According to a research that appeared in the Journal of Business Ethics, the esports industry's explosive expansion has resulted in player exploitation, an absence of just pay, and insufficient assistance for their health and well-being (Lau & Lee, 2020).

2.2. Social Capital

Social Capital is considered a multidimensional concept that includes many cultural and social value systems. This concept became very popular among social scientists. Several different economic and social outcomes were explained by political scientists, anthropologists, and sociologists by

employing this concept. It is believed that social capital's fundamental notion is to explain development outcomes through the incorporation of social-cultural factors (Bhandari & Yasunobu, 2009).

It has become a point of controversy among academics, development experts, and decision-makers. The origins of social capital can be found in the work of classical economists like Adam Smith and John Stuart Mill as well as sociologists like Max Weber, who gave economic phenomena a cultural explanation (Guiso et al., 2006).

According to Van Schaik (2002), the idea of social capital as a current concern didn't surface until the late 1980s, and study interest in it increased after that. Although the scientific study of social capital is still in its infancy, the amount of literature on the subject is expanding rapidly. There isn't a single, agreed-upon definition of social capital despite a wealth of literature. It is frequently described and assessed in an unstructured, pragmatic manner. The concept of trusts, norms and unofficial networks are particularly crucial to the theory of social capital, which holds that "social ties are valuable resources." According to a broad definition, “social capital is a multifaceted phenomenon that includes a stock of social norms, values, beliefs, trusts, obligations, relationships, networks, friends, memberships, civic engagement, information flows, and institutions. Social capital promotes cooperation and

collective actions for mutual benefit and aids in the development of the economy and society" (Bhandari & Yasunobu, 2009). Lyda J. Hanifan used the idea of "social capital" for the first time in 1916 to highlight the value of community involvement in boosting academic performance. Having long vanished, the idea of social capital was revived by a group of Canadian sociologists (Bhandari & Yasunobu, 2009; Seely et al., 1956).

Economic, cultural, and social capital are the three types of capital that Bourdieu separates. For him, social capital is "the sum of the actual or potential resources that are linked to the possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition, in other words, to membership in a group" (Bhandari & Yasunobu, 2009; Bourdieu, 1986).

The advantages of belonging to a group form the cornerstone of the solidarity that enables these benefits. The size of the network and the level of trust within it determine how rich social capital is. the amount of capital (economic or cultural) that these links own. As long as members keep making investments in their connections, the capital is preserved and strengthened. Bourdieu's concept of social capital emphasizes class tensions since it is a personal advantage in the battle between people who want to elevate their positions relative to others (Bhandari & Yasunobu, 2009).

Despite the vast conceptualizing of social capital by different scholars, this study focuses on the social capital defined by Putnam. Putnam defines social capital as “connections among individual's social networks and the norms of reciprocity and trustworthiness that arise from them” and argues that there are four particular ways to gain value from social relationships (Putnam, 2000).

First, the flow of information is the way or channel that social capital works through, for example seeking information about a specific job or understanding ideas from a colleague. Second is norms of reciprocity (mutual aid), Social networks are essential to reciprocity standards. Similarity based bonding networks preserve specified reciprocity. Diverse persons are linked by bridging networks that uphold broad reciprocity. Collective action relies on existing social networks, while it can also help create new ones. Fourth, Social networks that assist in transforming an "I" mentality into a "we" mentality promote broader personalities and unity (Putnam, 2000). Putnam also states that there are two distinct types of social capital bridging and bonding social capital.

2.2.1. Bonding Social Capital

Bonding social capital refers to relationships within a group or community that are marked by a high degree of similarity in their

demographics, attitudes, and the information and resources they have access to. Between "those like us," who are "in it together" and who often have strong, tight relationships, there is bonding social capital. Family members, close friends, and neighbors are a few examples. A different illustration would be communication within and between organizations. A corporation whose employees share an identity, have common ground on ideas and feel a feeling of belonging would have bonding social capital. Within the organization, relationships are close-knit and inward-looking, and networks are dense with many people knowing one another. Depending on the size of the organization (Claridge, 2018).

According to Putnam (2000), bonding social capital is “a kind of sociological super glue” that links people who are very familiar with one another and near to one another, such as close friends, family members, and neighbors. Key personal traits like class, color, ethnicity, education, age, religion, gender, and political affiliation are frequently shared by members of bonding networks. It is better for supporting specific reciprocity and fostering informal solidarity because it is more inward-looking, protective, and actively engages in intimate membership (van Oorschot et al., 2006). Country clubs, church vases women’s reading groups, and ethnic fraternal are examples of bonding by Putnam (2000). Putnam (2000) states that “Bonding social capital,

by creating strong in-group loyalty, may also create strong out-group antagonism." And also bonding may strong ties with friends may benefit people with close relationships.

Bonding encourages the relationships and communication needed to work toward shared objectives. Additionally, it affects the development and sustainability of neighborhood associations and self-help groups. Bonding with closely-knit people can act as a social support safety net (Bhandari & Yasunobu, 2009).

By offering a crucial source of support to those who experience socioeconomic hardship or poor health, bonding social capital can fulfill a positive social role. People tend to "get by" with the support of bonding social capital, which also offers the norms and trust needed for cooperative action (Claridge, 2018).

2.2.2. Bridging Social Capital

According to Putnam (2000), Bridging social capital is a network of external assets and information based on weak ties with acquaintances to gain benefits better than strong ties, for example, seeking a job, understanding the requirement of the task, or seeking political allies. In terms of social capital, Relation between individuals of various cultural origins, social statuses, or ages, who may then provide access to information and other groups or people

the other was previously unfamiliar with(Claridge, 2018). Casual friendships and coworkers are examples of more remote links between like-minded individuals (van Oorschot et al., 2006). According to Putnam (2000), Bridging can develop broad identity and reciprocity and may help with a job offer or meeting new people for example. People in bridge networks frequently disagree on important personal traits. Bridging narrows the divide between various groups and engages in civic activity. It also allows for open membership, which is essential for organizing solidarity and pursuing shared objectives (van Oorschot et al., 2006). Putnam sets different examples for bridging social capital, such as civil rights movement, youth service groups and religious organizations (2000).

Through relationship development, information sharing, information mobilization, and knowledge sharing, bridging is essential for addressing issues in communities. Creating connections with people on the other side of various social divides can give access to institutions and processes and allow individuals and communities to take advantage of a variety of local resources (Bhandari & Yasunobu, 2009).

According to Claridge (2018), Bridging social capital refers to relationships that bring individuals together across cleavages that frequently divide society (such as those based on race, class, or religion). Communities,

clubs, or organizations can "bridge" through associations. It differs from bonding social capital, which occurs within social groups and is marked by dense networks and a sense of shared identity and belonging among participants. A variety of relationship and network features can be used to differentiate between bonding and bridging.

2.2.3. Influence of Esports Participation on Social Capital

In past literature, many researchers approached the effect or influence of esports on social capital from two types, the effect of esports on bonding social capital and bridging social capital (Cole & Griffiths, 2007; Trepte et al., 2012a).

Trepte's (2012a) article "The social side of gaming: How playing online computer games creates online and offline social support" approached the effect of esports on social outcomes based on three variables. First, physical proximity, which focuses on the physical distance between two or more individuals. The second is social proximity, and it's about how strong the relationship ties between individuals. Finally, familiarity, the more the individuals are physically and socially close the more they become familiar with each other. Trepte used those three variables and their effect on bonding and bridging social capital.

If acquiring emotional, practical, or substantive support is the barometer for bonding social capital, then MMOGs are not well suited for the task: Steinkuehler and Williams argue that the absence of physical existence may be the key limiting element for emotional reinforcement in online game environment. Although deep emotional connections between players are possible, due to the geographical dispersion of players, these connections are rare to have the same amount of bonding advantages as real world connections. Therefore, it makes sense that physical contact is a necessary prerequisite for building social capital (Williams & Steinkuehler, 2006).

In Trepte's (2012a) study on how online video games affect offline social support using social proximity, physical proximity, and familiarity, major relation was found between Physical proximity and clan bonding social capital, whereas a negative relation between physical proximity and clan bridging social capital, and there was a positive relation between bridging and bonding social capital and social proximity. Furthermore, a positive relation was between familiarity and bonding and bridging.

Esport players agreed that both clan bonding and bridging are significant for offline social support, and there is an indirect positive effect from physical, social proximity and familiarity on offline social support by

the mediation of bonding and bridging clan social capital (Trepte et al., 2012a). Esports players that are actively involved in running their clan should see a rise in social capital due to the connection with all clan members, enhancing bridging (Trepte et al., 2012a).

According to Uz and Cagiltay (2015), by providing the chance to develop deep connections with other players, these games foster group engagement and pave the way for new types of social interaction. In his study about Social Interaction and Games, half of the multiplayer players who established friends in-game met those friends in real life, making up 57% of the group. On the other hand, 86% of them preferred not to talk about delicate subjects with their online acquaintances. Although almost half of the players formed acquaintances in the game, they preferred not to broach sensitive subjects with their online mates. It is impossible to assert that engaging in multiplayer video games always produces deep connections.

The more people interact in both online and offline contexts, the greater the positive benefits online gaming is anticipated to have on both social capital and social support. esports in particular, as well as gaming in general, may thus become important social resources due to mutual actions that go beyond gameplay (Trepte et al., 2012a).

Physically challenged people who are unable to physically move and have a lack of social relations and social capital may gain benefits especially from the social aspects of gaming. Concerning theory development, our scientific understanding of the outcomes of video games, also the usage of games as social facilitators, furthermore "a more advanced understanding of the factors influencing the formation of bridging and bonding social capital in the context of gaming as well as offline social support appears highly promising" (Trepte et al., 2012a).

Cole and Griffth's (2007) study about MMORG showed that 76.2 % of male players and 74.7 % of female players said they had developed close friends while playing the game. This shows that MMORPGs have a strong focus on social benefits. Additionally, one in five individuals (20.3%) thought that playing MMORPGs negatively impacted their relationships with non-players.

A significant but weak negative correlation between the impact playing the game has had on relationships and the number of hours played per week was discovered, providing evidence that playing MMORPGs for many hours a week may have a negative impact on relationships with people who do not play the same game. Males and females had a little stronger

relationship than the other gender, perhaps because playing online takes up more time than spending time with real-life friends and family (Cole and Griffiths, 2007).

Addiction is one risky side effect that could arise from playing MMORPGs. Although there is likely a difference between those who play excessively and those who are addicted (Cole & Griffiths, 2007). Griffiths and colleagues hypothesize that adolescents may be more susceptible to online video game addiction than adults (Griffiths et al., 2004). Additionally, it should be noted that MMORPGs can be as goal-oriented or as laidback as the player desires (Krotoski, 2004). Furthermore, the chance to design a one of a kind, personalized in-game experience is part of the appeal. While they shouldn't be exaggerated, the potential drawbacks of the games should also not be ignored (Cole & Griffiths, 2007).

High percentages of players who play MMORPGs end up finding lifelong friends and even partners, making them extremely social games. 81 percent of gamers play with real-life friends and family in addition to making close online friends, indicating that MMORPGs are neither an inherently a social activity nor do the players tend to be socially introverted (Cole & Griffiths, 2007).

2.3. Research Model & Hypotheses

Based on the past literature a research model is designed to examine the relation between on-site and online esports participation on bonding social capital and bridging social capital. Moreover, research hypotheses to test the relationship between the variables are listed below:

H1: The amount of online esports consumption will have a positive impact on bridging social capital.

H2: The amount of online esports consumption will have a positive impact on bonding social capital.

H3: The amount of on-site esports consumption will have a positive impact on bridging social capital.

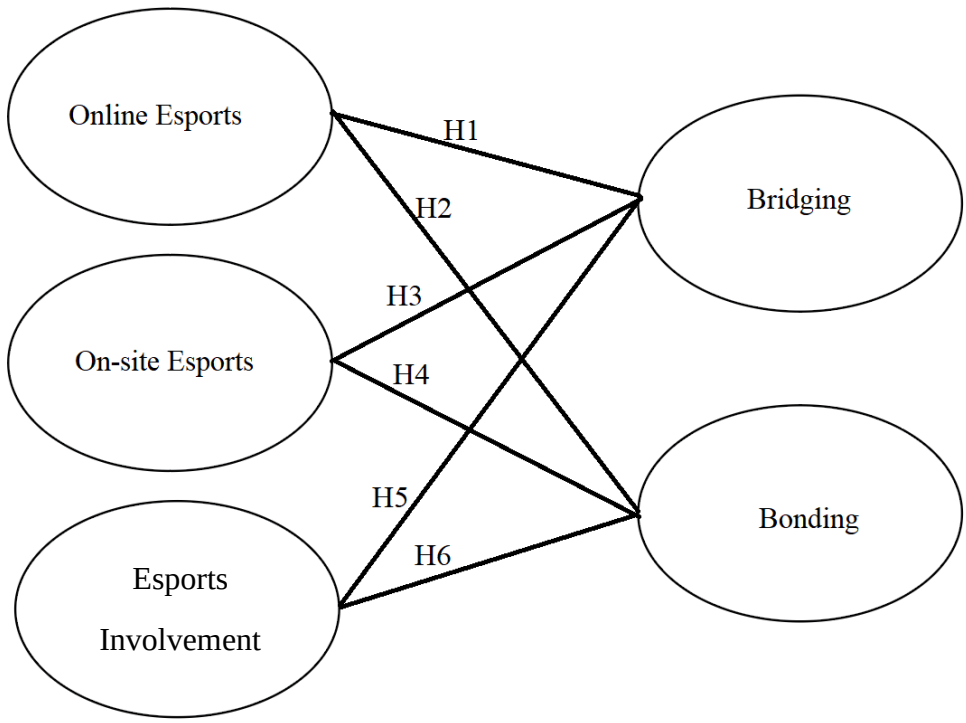
H4: The amount of on-site esports consumption will have a positive impact on bonding social capital.

H5: Esports involvement will have a positive impact on bridging social capital.

H6: Esports involvement will have a positive impact on bonding social capital.

Figure 1.

Research Model



Chapter 3: Method

3.1. Participants and Data Procedure

This research examined the relationship between esports participation and involvement with social capital. More specifically, explored whether

social outcomes are different for esports participation played online and on-site. This study adopted quantitative research methods and examined this relationship following two main steps. First, a questionnaire was developed to measure the variables of interest using questionnaire scales and items modified from past literature focusing on online esports, on-site esports, involvement, bridging and bonding social capital, and demographic information. Second, the collected data was analyzed through descriptive statistics, reliability test, Confirmatory Factory Analysis, convergent and discriminant validity and Structural Equation Modeling.

Research data was collected from participants based on an online survey that was distributed through esports social media groups using convenient sampling. Group members are over two million members and the actual sample is 418 participants, moreover, it is easy to reach the targeted population through social media groups because Arab players spend a lot of time on internet and especially these groups.

Table (9) illustrates the demographics of this study, five demographics categories were collected. First, the gender of respondents shows a significant rate for males (N= 353) whereas the females are (N=65). Second, the age of the respondents shows high numbers for 20-29 years old participants with

(N=246) and then 10-19 years old (N=125), 30-19 years old (N=41) and finally 40-50 years old (N=6). Third, the majority of respondents hold undergraduate degree as the highest level of education with (N=204), school degree with (N= 132), Graduate (N=76) and PHD (N=6). Fourth, among twenty two Arab countries, Palestinians are the majority of this study with number of participants (N=80), then Syria (N=55), Jordan (N=44) and Saudi Arabia (N=32) and the rest of participants are from fifteen Arab countries. Finally, (N=345) of participant are single, (N=60) are married) and (N=13) are divorced.

Table 11.

Demographics

Item	Frequency	%
Gender		
Male	353	84.4%
Female	65	15.6%
Age		
10-19 Years Old	125	29.9%
20-29 Years Old	246	58.9%
30-39 Years Old	41	9.8%
40-50 Years Old	6	1.4%
Level Of Education		
School	132	31.6%
Undergraduate	204	48.8%
Graduate	76	18.2
PHD	6	1.4%
Nationality		
Palestine	84	20.1%
Syria	55	13.2%
Jordan	44	10.5%
Saudi Arabia	32	7.7%
others	-	

Marital Status		
Single	345	82.5%
Married	60	14.4%
Divorced	13	3.1%

Tactical shooting is the most played esports in the Arab world with number of participant who choose it as the most genre they play (N=159), sports comes next with (N=109), MOBA is third with (N=96) and fighting with (N=54). Most of the participant spent 5 days per week playing esports with (N=205) and (N=290) as 10-15 hours per week as its shown in table (10).

Table 12.

Esports general information in the Arab world

Genre	**Frequency**
Tactical Shooting	**159**
Sim Sports	**109**
MOBA	**96**
Fighting	**54**

Days per week (IG)	Frequency
4	15
5	205
6	160
7	38

Hours per week	Frequency
10-15hrs	**290**
15-20hrs	**59**
+20hrs	**69**

3.2. Item Development

This section illustrates the different variables of this research and the developed instrument and the corresponding questionnaire items used to measure each variable. The developed questionnaire consists of five main sections measuring the amount of esports participation, esports intensity, social capital, demographic information.

Online esports, on-site esports and involvement are the independent variables of this study and they were measured by five items for each of online and onsite esports and six items to measure the esports intensity, all the items were generated based on past literature in order to develop the

measuring tool.

Table 1.

Measurement Items of Independent Variables.

Variable	Questions	Scale
Online Esports Participation	- How often do you participate in online esports on your own? - On average. how many days you play esports online per week ? - On average, how many hours you play esports online per day?	1-7 Likert
On-site Esports Participation	- How often do you participate in on-site esports on your own? - On average. how many days you play esports on-site per week ? - On average, how many hours you play esports on-site per day?	1-7 Likert
Esports Involvement	- Esports is part of my everyday activity. - I feel satisfied when playing esports. - Esports have become part of my daily routine. - I feel I am missing something if I do not play esports. - I feel I am part of the esports community.	1-7 Likert

To measure the dependent variables using the scale developed by Williams (2006) which is modified appropriately to the research to measure bridging and bonding social capital. Ten Questions were developed for bridging social capital focusing on, outward looking, contact with a broader range of people, a view of oneself as part of a broader group and diffuse reciprocity with a broader community. Ten questions were also developed to identify the level of bonding social capital of Arab players, focusing on measuring emotional support, access to scarce or limited resources, ability to mobilize solidarity and out-group antagonism.

Table 2.

Measurement Items of Dependent Variables.

Variable	**Questions**	**Scale**
Bridging Social Capital	1. There are several people I trust to help solve my problems. 2. There is someone I can turn to for advice about making very important decisions. 3. When I feel lonely, there are several people I can talk to. 4. The people I interact with would put their reputation on the line for me.	1-7 Likert

Bonding Social Capital	1. Interacting with people makes me interested in things that happen outside of my town. 2. Interacting with people makes me want to try new things. 3. Interacting with people makes me interested in what people unlike me are thinking. 4. Talking with people makes me curious about other places in the world. 5. Interacting with people gives me new people to talk to. 6. I come in contact with new people all the time.	1-7 Likert

In addition, questions related to preferred types of esports were also developed to identify what type they consume the most, how many hours and days they participate . Furthermore, demographic information will be collected to categorize the age, nationality, level of education, martial status and occupation.

Table 3.

Measurement Items for General Esports and Demographic Information.

Item	**Questions**
General Esports Information	1. What type of esports genera you prefer? 2. In general, how many hours do you play esports per week? 3. In general, how many days do you play esports per week?
Demographic Information	1. Which age group are you? 2. What is your gender? 3 What is your nationality? 4. What is your highest level of education? 5. What is your current occupation? 6. What is your martial status?

The procedure of the data analysis was conducted on STATA in order to calculate descriptive statistics and the normality of the questionnaire, reliability test, confirmatory factor analysis, model reliability, convergent validity, discriminant validity, and structural equation modeling.

3.3. Relatability Test

Cronbach alpha was used to measure the internal consistency and the reliability of the questionnaire, The Cronbach alpha runs from 0 to 1 and is an adjusted percentage of the total variance of the item scores explained by the sum of covariances between item scores. Based on the scale, if the alpha score is less than 0.5 it is unacceptable, 0.5-0.6 poor, 0.6-0.7 acceptable, 0.7-0.9 good and above 0.9 is excellent (Heo 2015).

3.4. Confirmatory Factory Analysis

Confirmatory factor analysis (CFA) is used to evaluate the structural model of a collection of observed data. The researcher can examine the idea that there is a connection in between variables that are seen. The method uses 5 indices to examine model fit through goodness of fit test. Chi square, CLI, TLI, RMSEA, and SRMR are the indices for the test (Suhr, n.d.).

Model reliability and validity measurement were also conducted in this study. First, reliability was checked through composite reliability and

refred to as (CR) with a recommended creteria above (0.7) then a convergent validity was also checked through the Average Variance Extracted (AVE) with a recommended value above (0.5). Discriminant validity was also conducted with the square root of AVE and recommended that the results are higher than the correlation between variables (Suhr, n.d.).

3.5 Structural Equation Modeling

structural equation modeling was used in order to measure the interrelationships between the online esports, on-site esports and esports involvement, with bridging social capital and bonding social capital, and to check the hypothesis of this study after CFA test and goodness of fit test (Stein et al., 2012).

Chapter 4 : Results

4.1. Descriptive Statistics

The average often participation in online esports is (M=5.49) and 1.23 as standard deviation, on the other hand, the average often participation in on-site esports is(M= 4.39) with 1.83 SD, involvement mean is (M=6.17) with 0.76 SD.. Regarding bonding and bridging social capital, participants' bridging social capital mean is (M= 4.30) and 2.07 SD, whereas bonding social capital mean is (M= 5.06) with 1.46 SD.

Skewness and kurtosis test was conducted to check the normality of the variables, all of the variables are accepted based on the scale of the test, the below table (4) shows the descriptive information of this study's variables.

Table 4.

Descriptive statistics

Variable	obs	mean	Std. dev.	Pr(skewness)	Pr(kurtosis)	min	max
Online	418	5.49	1.23	0.00	0.00	1	7
On-site	418	4.39	1.83	0.04	0.00	1	7
Involvement	418	6.17	0.76	0.00	0.00	1	7
Bridging	418	4.30	2.07	0.74	0.00	1	7
Bonding	418	5.06	1.46	0.00	0.80	1	7

4.2. Reliability Test

The reliability of the survey was examined using Cronbach coefficient alpha (Cronbach α) Table (5) illustrates that item online esports Cronbach α is (0.78) which is considered acceptable according to the scale, involvement and on-site esports, Cronbach α is above 0.8 which is good according to Cronbach α scale, meanwhile bridging and bonding Cronbach α is above 0.9 which means excellent according to Cronbach α scale (Heo 2015).

Table 5.

Reliability Statistics (Cronbach Alpha)

Item	Cronbach α	Items
Online esports	**0.78**	**3**
On-site esports	**0.81**	**3**
Involvement	**0.87**	**6**
Bridging	**0.95**	**4**
Bonding	**0.91**	**6**

4.3. Confirmatory Factory Analysis:

In order to test if this study's model fits well regarding the effectiveness of extracting valuable information, a confirmatory factory analysis was conducted. This test included five indices that assess the model,

Chi-Square, Comparative Fit Index (CFI), Tucker-Lewin Index (TLI), Root Mean Square of Approximation (RMSEA), and Standardized Root Mean Squared Residual (SRMR) (Hurley, et al 1997). The recommended criteria for the test as its shown on the below table, the model fits for extracting the necessary information, table (6) illustrated the goodness of fit test that provided the seeking values.

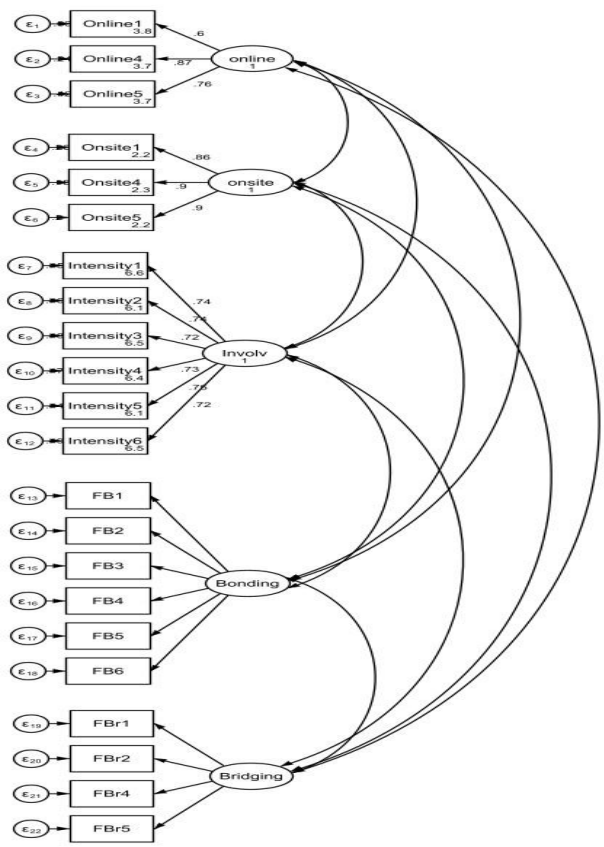
Table.6.

CFA Indices

Indices	**Recommended Criteria**	**Observed Values**
Chi-Square	<3.0	1.9
Comparative Fit Index(CFI)	>0.90	0.96
Tucker- lewis Index(TLI)	>0.90	0.95
Root Mean Square Error of Approximation (RMSEA)	<0.1	0.05
Standardized root mean squared residual (SRMR)	<0.08	0.04

Figure2.

Measurement Model (CFA)



Reliability and convergent validity were measured for this research through two indices, the composite reliability measurement with recommended results higher than 0.7 for all variables, as for the convergent validity it was measured through the average extracted variance (AVE) with a recommended above 0.5 for all variables factor loadings. The results of the

CR illustrates that the model is liable, also AVE results for factor loadings above 0.5 for all variables was achieved, thus reliability and convergent validity was achieved for the model as it is shown in table number (7) below

Table 7.

Reliability and Convergent Validity test

Variable	**Indicator variables**	**Factor loading >5**	**Composite Reliability < 0.7**	**AVE < 0.5**
online	Online1	0.60	0.79	0.57
	Online2	0.87		
	Online3	0.75		
Onsite	Onsite1	0.86	0.91	0.78
	Onsite2	0.90		
	Onsite3	0.89		
Involvement	Involvement1	0.74	0.87	0.53
	Involvement2	0.73		
	Involvement3	0.71		
	Involvement4	0.73		
	Involvement5	0.74		
	Involvement6	0.71		
Bridging	FBR1	0.92	0.95	0.85
	FBR2	0.93		
	FBR3	0.92		
	FBR5	0.91		
	FBR6			
Bonding	FB1	0.83	0.91	0.64
	FB2	0.83		
	FB3	0.80		

	FB4	0.86
	FB5	0.81
	FB6	0.66

Discriminant validity was measured through the calculation of the Squared root of AVE to measure and foresee that the results for each variable is higher than the correlation of variables as its shown in table(8), thus Discriminant validity illustrated that there is difference between the variables.

Table 8.

Discriminant Validity test

	Online	**On-site**	**Involvement**	**Bridging**	**Bonding**
Online	**0.7552**				
On-site	0.0301	**0.8870**			
Involvement	0.0455	0.0620	**0.7338**		
Bridging	0.0854	0.1693	0.3749	**0.9238**	
Bonding	0.1523	0.1611	0.2631	0.6842	**0.8059**

4.4. Structural Equation Modeling

As its shown in figure (3) structural equation modeling was used in order to measure the interrelationships between the online esports, on-site esports and esports involvement, with bridging social capital and bonding social capital.

Figure 3.

SEM

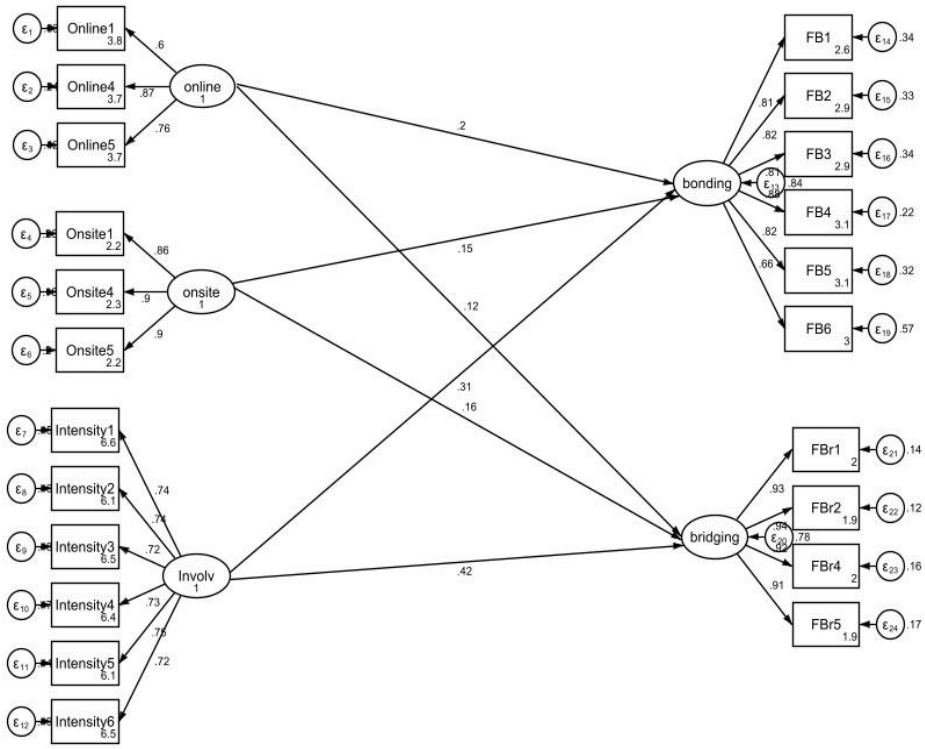


Table (9) illustrates the goodness of fit test for this model and the ability to extract information from it. The chi-square results, CFI, TLI, RMSEA and SRMR are all fitted according to the recommended values.

Table 9.

Goodness of fit test

Indices	**Recommended Criteria**	**Observed Values**

Chi-Square	<3.0	1.9
Comparative Fit Index(CFI)	>0.90	0.96
Tucker- lewis Index(TLI)	>0.90	0.95
Root Mean Square Error of Approximation (RMSEA)	<0.1	0.05
Standardized root mean squared residual (SRMR)	<0.08	0.04

The model shows significant for all variables and supports all six hypothesis this study suggests. The first supported hypothesis is a positive association between online esports and bonding social capital with (0.20**) coefficient relationship, third hypothesis illustrates also good coefficient relation between on-site esports and bonding social capital with (0.15**), whereas esports involvement has the highest coefficient (0.31**) and thus the fifth hypothesis was also supported.

SEM results also illustrates positive significance with bridging social capital as the second hypothesis came positive between online esports and bridging social capital with (0.11*), and on-site esports with bridging social capital came also positive significane with (0.16**) which supports the fourth hypothesis, finally the sixth hypothesis was highly significant as the involvement and bridging social capital with (0.42**) and that supports the

sixth hypothesis. The bellow table (12) illustrate the results of SEM model based on the path of the variables and the supported hypothesis.

Table 10.

Summary of Path Coefficients for Structural Model

	Path	**Coef.**	**S.E**	**P**	**Hypothesis**
Bonding social Capital	Online Esports	0.20	0.05	**	Supported
	On-stie Esports	0.15	0.04	**	Supported
	Involvement	0.31	0.04	**	Supported
Bridging Social Capital	Online Esports	0.11	0.04	*	Supported
	On-stie Esports	0.16	0.04	**	Supported
	Involvement	0.42	0.04	**	supported

*P<0.5, **P<0.1

Chapter 5. Discussion

The results of this study illustrated a positive relation between online, onsite esports and esports involvement with bonding social capital and bridging social capital, several past literature supports the results and the hypothesis of this study, which is principally how esports participation and involvement have a positive impact on Arab players bonding social capital and bridging social capital, the below subtitles will explain and show the support of previous literature with this study's results.

5.1. Online and on-site esports and esports involvement influence on bridging social capital:

The second hypothesis of this study shows that esports have a positive impact on arab players bridging social capital which is supported by the results of SEM that was done in chapter four which illustrates positive

coefficient between the two variables. Thus arab player are able to make bridging ties and acquaintances with individuals across online esports. According to Putnam (2000) bridging social capital is a relation between individuals of various culture origins, social statuses, or ages, who may then provide access to information and other groups or people the other was previously unfamiliar with. According to Uz & Cagiltay (2015), by providing the chance to develop deep connections with other players, these games foster group engagement and pave the way for new types of social interaction. In their study about Social Interaction and Games, half of the multiplayer players who established friends in-game met those friends in real life, making up 57% of the group. On the other hand, 86% of them preferred not to talk about delicate subjects with their online acquaintances. Although almost half of the players formed acquaintances in the game, they preferred not to talk sensitive subjects with their online mates.

Hypothesis number three is also supported by SEM results and it illustrate that on-site esports has a positive impact on arab players bridging social capital. The physical existence that on-site provides makes it easier for players to establish bridging ties with individuals. Trepte's (2012a) article "The social side of gaming: How playing online computer games creates online and offline social support" approached the effect of esports on social

outcomes based on three variables. First, physical proximity, which focuses on the physical distance between two or more individuals. The second is social proximity, and it's about how strong the relationship ties between individuals. Finally, familiarity, the more the individuals are physically and socially close the more they become familiar with each other. Trepte used those three variables and their effect on bonding and bridging social capital.

SEM results supported the fifth hypothesis of this study which states that there is a positive relation between esports involvement and bridging social capital. According to Griffiths (2004), massively multiplayer online role-playing games (MMORPGs) are completely realized multi-player universes with a sophisticated and realistic audiovisual environment where players can build unique characters. Since MMORPGs demand a lot of players to cooperate and work as a team simultaneously, positive social interaction is crucial (Cole & Griffiths, 2007). The more esports players are involved in esports the more their bridging social capital is positively affected.

5.2. Online and on-site esports and esports involvement influence on bonding social capital:

It is hypothesized that bonding social capital is affected positively by online esports, on-site esports, and esports involvement, which is supported

by the results of SEM analysis that was conducted in chapter four. According to Putnam (2000), bonding social capital is "a kind of sociological super glue" that links people who are very familiar with one another and near to one another, such as close friends, family members, and neighbors. Key personal traits like class, color, ethnicity, education, age, religion, gender, and political affiliation are frequently shared by members of bonding networks. It is better for supporting specific reciprocity and fostering informal solidarity because it is more inward-looking, protective, and actively engages in intimate membership (van Oorschot et al., 2006).

According to the finding of chapter four and the positive relation between bonding social capital and online esports is supported by previous literature and explains how esports impacts players' bonding social capital and how the results of the arab players are the same. (Trepte et al., 2012a) explains that Physically challenged people who have limited mobility and a lack of social interactions and social capital may benefit especially from the social aspects of gaming. Concerning theory development, our scientific understanding of the effects of video games, as well as the practical use of games as social interaction facilitators, a more advanced understanding of the factors influencing the formation of bridging and bonding social capital in the context of gaming as well as offline social support appears highly promising.

Cole and Griffth's (2007) study about MMORG showed that 76.2 % of male players and 74.7 % of female players said they had developed close friends while playing the game. This shows that MMORPGs have a strong focus on social benefits. Additionally, one in five individuals (20.3%) thought that playing MMORPGs negatively impacted their relationships with non-players. High percentages of players who play MMORPGs end up finding lifelong friends and even partners, making them extremely social games. 81 percent of gamers play with real-life friends and family in addition to making close online friends, (Cole & Griffiths, 2007).

On-site esports has a positive impact on bonding social capital is the fourth hypothesis of this study which is supported also by the results of SEM analysis, (Williams & Steinkuehler, 2006) argue that the absence of physical proximity may be the key limiting factor for deep emotional support in online game communities. Although deep emotional connections between players are possible, due to the geographical dispersion of players, these connections are less likely to have the same range of bonding advantages as real-world connections. Therefore, it makes sense that physical contact is a necessary prerequisite for building social capital. Trepte (2012) used physical proximity, social proximity, and familiarity to measure the effect of esports

in on social outcomes, and he found major relation between social and physical proximity with bonding social capital.

The results of SEM illustrates a positive coefficient between involvement and bonding social capital which indicates a positive relationship between the variables, and esports involvement affects bonding social capital. Yee (2007) explains the only environment in which millions of users regularly and freely immerse themselves in a graphical virtual environment and communicate with one another through avatars. The research concluded how MMORPGs enable new types of social interaction and social identity. It reaches adults and teenagers from different backgrounds. According to the research, players spend on average, more than half a working week in these environments.

5.4. Implications

This study provides both theoretical and practical implications. First, the practical implication for this study provides evidence to esports policy makers in the arab world that esports has a positive effects on arab player, and the fact that esports has a major role in their life and social outcomes, such data might help sports policy makers to give more attention to the importance

of esports in the Arab world, especially the rapid growth of such sport in the region.

Also this study covers a new targeted region and population that no previous study had done it before, most previous papers covers the western countries when it comes to esports and how it affects the social outcomes of the player, this study covers the arab world for the first time ever.

Such data might be used from esports federations also in the arab world for new recruiting projects for players, and help them to refine their skills and actually make them represent the country in continental and international competitions.

5.5. Limitations and future research

The limitation of this study mainly focuses on covering a large area of targeted population, the arab world consist of twenty two countries, this made data collection process little bit hard in such short time.The language of the questionnaire had to be changed as the players could not understand the English version of the questionnaire, thus an Arabic version was created for the participants.

In total, chapter four and chapter five proves that online, on-site esports and esports involvement have positive impact on bonding and bridging social

capital in the Arab world and to the players, which is something that was missing in previous literature about this region. Further investigation for which genre of esports affects social capital of arab players might be done as a continuous study to this research, also this study's data might be helpful for national esports federations to expand and create new programs regarding recruiting new players for esports.

Chapter 6. Conclusion

This research's main objective was to examine the effects of esports on Arab players' social capital. The study discussed the relation between bonding social capital and bridging social capital, also online and on-site esports. Thus to conduct such research a model was created based on past literature using STATA analysis software applied to this study to aid the researcher to examine how much the variables were affected by each other. This model hypothesizes that the amount of esports consumption impacted positively the social capital. More specifically, the amount of online esports consumption would had have a positive impact on bonding and bridging social capital. Moreover, the amount of on-site esports consumption would have a positive impact on bonding and bridging social capital. While extant literature exists on esports participation and its social outcomes, previous studies have mainly been analyzing the European and American contexts, with very few if any in the Arab context. Therefore, this study will provide a

new set of information on esports trajectory in the Arab world. To fill this gap in the literature this study examined whether esports have a positive or negative effect on Arab players' bonding and bridging social capital. This field has grown a lot in the Arab world and this thesis discussed whether this phenomenon has a positive or negative effect on the Arab player's social capital. It provided evidence about the situation of the Arab world esports status which would help to develop new projects and policies that aims to attract Arab talents in this field and help them to refine their skills, in addition grant policy and decision makers the needed information when it comes to developing esports field in the Arab world with new projects. The results of this research are as follows.

Esports was distinguished in two types, online esports and on-site esports, online esports has a positive relation bonding social capital with high significance and coefficience which proves the online esports affects positively bonding social capital. On-site esports also have positive relation with bonding social capital which supports the hypothesis of the research that on-site esports have positive impact on bonding social capital. Online esports has positive impact on bridging social capital which is proven through the SEM results in chapter four, they have positive relation among each other. Onsite also has a positive relation with bridging social capital. Esports

involvement was also included as an independent variable and according to SEM results there is a high positive coefficient with bonding and bridging social capital.

References

Bekhtina, V. J. (2002). *Psychological research of MUD gamers. Unpublished diploma thesis*.

Bhandari, H., & Yasunobu, K. (2009). What is social capital? A comprehensive review of the concept. In *Asian Journal of Social Science* (Vol. 37, Issue 3). Brill Academic Publishers. https://doi.org/10.1163/156853109X436847

Bhawna Singh. (2020). *Middle Eastern countries rank among the leading video game streaming markets in the world* . YouGov, Https://Mena.Yougov.Com/En/News/2020/11/02/Middle-Eastern-Countries-Rank-among-Leading-Video-/.

Carras, M. C., van Rooij, T., van de Mheen, D., Musci, R., Xue, Q. L., & Mendelson, T. (2017). Video gaming in a hyperconnected world: A cross-sectional study of heavy gaming, problematic gaming symptoms, and online social-izing in adolescents. *Computers in Human Behavior, 68, 472–479.* .

Claridge, T. (2018). Functions of social capital – bonding, bridging, linking. *Social Capital Research & Training, Dunedin, New Zealand*.

Cole, H., & Griffiths, M. D. (2007). Social interactions in massively multiplayer online role-playing gamers. *Cyberpsychology and Behavior*, *10*(4), 575–583. https://doi.org/10.1089/cpb.2007.9988

Curtis, P., & Nichols, D. A. (1993). *MUDs Grow Up: Social Virtual Reality in the Real World*.

Grand view research. (2022). *Esports Market Size, Share & Trends Analysis Report By Revenue Source (Sponsorship, Advertising, Merchandise & Tickets, Media Rights), By Region, And Segment Forecasts, 2022 - 2030*. Https://Www.Grandviewresearch.Com/Industry-Analysis/Esports-Market.

Griffiths, M. D., Davies, M. N. O., & Chappell, D. (2004). *Demographic factors and playing variables inonline gaming. CyberPsychology and Behavior*.

Guiso, L., Sapienza, P., & The Journal of Economic Perspectives 202: 23−48. (2006). *Does Culture Affect Economic Outcomes?*

Hamilton, R. I., & Thompson, A. (2020). Esports: Examining the motivations of competitive video game players. Journal of Sports Management, 34(5), 429-439.

insider intelligence. (2022). *Esports Ecosystem in 2022: Key industry companies, viewership growth trends, and market revenue stats*. Insider Intelligence Https://Www.Insiderintelligence.Com/Insights/Esports-Ecosystem-Market-Report/.

Jansz, J., & Martens, L. (2005). Gaming at a LAN event: The social context of playing video games. In *New Media and Society* (Vol. 7, Issue 3, pp. 333–355). https://doi.org/10.1177/1461444805052280

Krotoski, A. (2004). Chicks and joysticks: an exploration of women and gaming. *London: Entertainment and Leisure Software Publishers Association.*

Lau, J., & Lee, Y. (2020). Ethics of the commercialization of electronic sports (eSports). Journal of Business Ethics, 162(2), 357-370.

Legault, L. (2017). Self-Determination Theory. In *Encyclopedia of Personality and Individual Differences* (pp. 1–9). Springer International Publishing. https://doi.org/10.1007/978-3-319-28099-8_1162-1

Nguyen, D. T., Tran, T. N., & Le, H. T. (2020). Burnout in electronic sports: An exploratory study. Journal of Gambling Studies, 36(2), 607-623.

Putnam, R. (2000a). *Bowling Alone_ The Collapse and Revival of American Community (,)*.

Putnam, R. (2000b). Bowling Alone_ The Collapse and Revival of American Community. In *Putnam*.

Radcliffe, D. (2021). *Inside the Middle East's growing love for eSports Local Journalism View project Small Market Newspapers in the*

Digital Age View project. https://www.researchgate.net/publication/349325616

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55(1), 68.*

Seo Y. (2013). Electronic Sports: A New Marketing Landscape of the Experience Economy. *J. Mark. Manag. 1542–1560*.

Stein, C. M., Morris, N. J., & Nock, N. L. (2012). Structural equation modeling. *Methods in Molecular Biology, 850*, 495–512. https://doi.org/10.1007/978-1-61779-555-8_27

Suhr, D. D. (n.d.). *Exploratory or Confirmatory Factor Analysis?*

Tom Wijman. (2020). *The World's 2.7 Billion Gamers Will Spend $159.3 Billion on Games in 2020; The Market Will Surpass $200 Billion by 2023 Tom Wijman*. Newzoo, Https://Newzoo.Com/Insights/Articles/Newzoo-Games-Market-Numbers-Revenues-and-Audience-2020-2023.

Trepte, S., Reinecke, L., & Juechems, K. (2012a). The social side of gaming: How playing online computer games creates online and offline social support. In *Computers in Human Behavior* (Vol. 28, Issue 3). https://doi.org/10.1016/j.chb.2011.12.003

Trepte, S., Reinecke, L., & Juechems, K. (2012b). The social side of gaming: How playing online computer games creates online and offline social support. *Computers in Human Behavior, 28*(3), 832–839. https://doi.org/10.1016/j.chb.2011.12.003

TWITCH STATISTICS & CHARTS. (2022). Entry Time 8/4/2022. 9:33 Pm Https://Twitchtracker.Com/Statistics .

Utz, S. (2000). Social information processing in MUDs: the development of frien dships in virtualworlds. *Journal of Online Behavior1:1. Availabl e at:Http://Www.Behavior.Net/JOB/V1n1/Utz.Html. Ac-Cessed January 22 , 2022*.

Uz, C., & Cagiltay, K. (2015). Social Interactions and Games. *Yıldız Technical University, Turkey*. http://greav.ub.edu/der/

van Oorschot, W., Arts, W., & Gelissen, J. (2006). "Social Capital in Europe. Measurement and Social and Regional Distribution of a Multifaceted Phenomenon." *Acta Sociologica: Journal of the Nordic Sociological Association: Special Issue on Social Capital 49(2): 149−166.* .

van Schaik, T. (2002). "Social Capital in the European Value Study Surveys." *Country Paper Prepared for the OECD-ONS International Conference on Social Capital Measurement, London, 25-27 September 2002. Tilburg: Tilburg University.* .

Warr, p. (2014). *"eSports in numbers: five mind-blowing stats", Red Bull, April 9, available at: www. redbull.com/en/esports/stories/1331644628389/esports-in-numbers-five-mind-blowing-stats.*

Weiss, T. (2011). Fulfilling the Needs of eSports Consumers: A Uses and Gratifications Perspective. *Association for Information Systems AIS Electronic Library (AISeL)* . http://aisel.aisnet.org/bled2011/30

Williams, D. (2006). On and off the 'Net: Scales for Social Capital in an Online Era. *Journal of Computer-Mediated Communication*, *11*(2), 593–628. https://doi.org/10.1111/j.1083-6101.2006.00029.x

Wu, Y. T., & Wang, Q. (2019). The impact of involvement in electronic sports (eSports) on overall life satisfaction. Journal of Cyberpsychology, Behavior, and Social Networking, 22(1), 1-8.

Yee, N., Schroder, R., & Axelsson, A. (2007). The psychology of massively multi-user online role-playing games: motivations, emotional investment, relationships an d problematic us-age.

Yee, N., & Bailenson, J. N. (2007). The Prote

.*Vatarsat Work and Play: Collaboration and Interaction in Share dvirtual Environments. London: Springer-Verlag*.

Appendix

Esports and Social Capital: Exploring the Social Outcomes of Online and On-site Esports Participation in the Arab World

Variable	**Questions**	**Scale**
Online Esports Participation	- How often do you participate in online esports on your own? - On average. how many days you play esports online per week ? - On average, how many hours you play esports online per day?	1-7 Likert
On-site Esports Participation	- How often do you participate in on-site esports on your own? - On average. how many days you play esports on-site per week ? - On average, how many hours you play esports on-site per day?	
Esports Involvement	- Esports is part of my everyday activity. - I feel satisfied when playing esports. - Esports have become part of my daily routine. - I feel I am missing something if I do not play esports. - I feel I am part of the esports community.	1-7 Likert

Bridging Social Capital	1. There are several people I trust to help solve my problems. 2. There is someone I can turn to for advice about making very important decisions. 3. When I feel lonely, there are several people I can talk to. 4. The people I interact with would put their reputation on the line for me.	1-7 Likert
Bonding Social Capital	1. Interacting with people makes me interested in things that happen outside of my town. 2. Interacting with people makes me want to try new things. 3. Interacting with people makes me interested in what people unlike me are thinking. 4. Talking with people makes me curious about other places in the world. 5. Interacting with people gives me new people to talk to. 6. I come in contact with new people all the time.	1-7 Likert
Item	**Questions**	
General Esports Information	1. What type of esports genera you prefer? 2. In general, how many hours do you play esports per week? 3. In general, how many days do you play esports per week?	

Demographic Information	1. Which age group are you? 2. What is your gender? 3 What is your nationality? 4. What is your highest level of education? 5. What is your current occupation? 6. What is your martial status?

국문초록

이스포츠와 사회자본: 아랍에서의 온라인과 오프라인 이스포츠 참여의 사회적 영향 탐색

Momin A.M Alhasan
글로벌스포츠매니지먼트 전공
체육교육학과
서울대학교 대학원

본 연구의 주요 목적은 아랍 게이머들의 사회 자본에 대한 e 스포츠의 영향을 조사하는 것이다. 이 연구는 온라인 e 스포츠, 현장 e 스포츠, 참여도, 브리징 사회 자본, 본딩 사회 자본 및 인구 통계 정보에 초점을 맞춘 이전 연구에서 수정된 문항과 척도를 사용하여 관심 변수를 측정하기 위한 설문지를 개발하는 것을 통해 이 관계를 조사하였다. 그 다음, 수집된 데이터는 서술 통계, 신뢰도 검사, 확인적 요인 분석, 수렴 타당도와 구별 타당도, 구조 방정식 모델링을 통해 분석되었다. 데이터 수집 결과는 모든 변수 간의 유의한 상관 관계를

나타내었으며, 브리징 사회 자본은 온라인 e 스포츠, 현장 e 스포츠 및 e 스포츠 참여와 유의한 관련성을 나타냈다. 본딩 사회 자본도 마찬가지였다. 요약하자면, 온라인 e 스포츠, 현장 e 스포츠 및 e 스포츠 참여는 아랍 게이머들의 본딩 사회 자본과 브리징 사회 자본에 긍정적인 영향을 미친다.

주요어: 이스포츠, 아랍

학 번 : 2021-20259