

QATAR UNIVERSITY

COLLEGE OF BUSINESS AND ECONOMICS

A COMPARISON OF SPORTS MARKETING AND SPORTS PSYCHOLOGY

APPROACHES TO ACHIEVE GYM MEMBERS LOYALTY IN QATAR

BY

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the College of Business and Economics
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ABSTRACT

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Title: A Comparison of Sports Marketing and Sports Psychology Approaches to Achieve Gym Members' Loyalty in Qatar

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This thesis investigated the effects of two different pathways to achieve gym members loyalty. The first path is a marketing path that is built around the customer engagement concept, driven by perceived quality, satisfaction, involvement. The second path is adapted from the sports psychology field, which concentrates on exercise persistence and its antecedents: intrinsic motivation, self-efficacy, and outcome expectation. Member's loyalty was studied as an outcome of customer engagement and exercise persistence. The thesis also explored the moderating effects of gender and age generation. Data were collected in Qatar (n = 443) and analysed using SPSS and Smart PLS3. The results revealed that the two pathways explained a significant amount of variance in loyalty, but the marketing path had a higher explanatory power than the sports psychology path. The results showed that three predictors—perceived quality, satisfaction, and involvement—significantly influence customer engagement. Intrinsic motivation and self-efficacy had significant influence on exercise persistence, whereas outcome expectation was not a significant predictor. The findings show that customer engagement and involvement have significant effects independently of gender and generation (generation 1 vs. generation 2). Based on the results, key theoretical and managerial implications are proposed.

Keywords: gym loyalty, customer engagement, exercise persistence, self-determination theory, social cognitive theory.

DEDICATION

To my parents, who taught me the value of hard work

Whose love for me knew no bounds.

Thank you.

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CHAPTER 1: INTRODUCTION

1.1 Overview

The sports and fitness services industry has been growing significantly during the past decades. The global market size of the gym and fitness industry exceeded \$87 billion in 2019. This massive expansion is in line with the public, who has more health awareness and increasingly values physical appearance (Markula, 2017). This growth needs to keep patronaging current customers (Hurley, 2004). The main challenge of fitness centres and gyms is enhancing customer loyalty and keeping the current customer active. Some scholars argue that applying marketing strategies is the best way to keep current customers, while for others, understanding exercise motives and patterns (attendance frequency and duration) should be of utmost importance to managers.

Hurley (2004) claimed that success in the gym industry depends on managers' ability to retain their customers by improving customer retention strategies. According to the author, the framework of gym productivity should consider customer service, customer retention, and management techniques. García-Fernández et al. (2018) argued that managers should find diverse customer retention strategies to keep their customers loyal.

By contrast, Ferrand and his colleagues (2010) claimed that customer-fitness club relationships, commitment, and the frequency of weekly attendance to the fitness centre to exercise are what affect a customer's decision to keep his/her membership. Pickett and Cunningham (2016) pointed out that when aiming for physical fitness or planning to generate profits from such an aim, it is of utmost importance to understand people's motives behind being physically active. Knowing what pushes customers to

exercise and participate in a gym or fitness club should be on the top list for managers to achieve success (Schroeder et al., 2017).

The success of fitness centres and gyms depends on recurring revenue from current members. Therefore, this study aims to broaden the scope and consider both marketing and sports perspectives in maintaining the loyalty of current members. To explain loyalty, this study presents a psychological path focusing on what motivates customers to exercise persistently and a marketing path built around customer engagement. To link the two spheres, we first define the two fields.

The Association for Applied Sport Psychology (AASP) has defined sports psychology as a field that involves extending theories and research to educate various stakeholders, such as coaches, exercisers, athletes, and sports professionals, about the psychological dimensions of performing exercise or engaging in activity. The initial goal for professionals in the applied field of sports and exercise psychology is to ensure that performance and enjoyment are at optimal levels (Portenga, Aoyagi, & Cohen, 2016). Sports and exercise are different concepts because sports emphasise competition and performance, whereas exercise could include the performance element, but it is not as competitive as sports. Although, participants in both of these activities are involved in movement, they have different types of goals and contexts (Portenga, Aoyagi, & Cohen, 2016). In exercise psychology, the main goal is positive health outcomes, such as exercise behaviour adoption and health-related outcomes (Acevedo, 2012). Despite the logical fit and similarities in terms of their research and academic programme development, in practice, they are different concepts (Portenga, Aoyagi, & Cohen, 2016).

Armstrong and Kolter (2004) characterised marketing as the exchange process in which organisations work to fulfil the needs and desires of their customers. Such

definitions have been criticised, as they ignore the importance of achieving profit as a result of the exchange process and the efficiency of this relationship (Beech & Chadwick, 2007). Earlier marketing definitions like the one presented by Gronroos (1994), were more seductive in the way they emphasised the importance of enduring the relationship between organisations and customers. However, those definitions have shown their failure in including sports or differentiating it from other products and services (Beech & Chadwick, 2007). The exact definition of the sports marketing concept is ambiguous for both academics and practitioners (Fullerton & Merz, 2008). According to Schlossberg (1996), sports marketing is a business tool for improving product and service sales, for raising awareness to stimulate sports fans, and for obtaining relationship marketing for business products and services in a way that will achieve the intended marketing goal. It is a tool that allows businesses to place themselves in a favourable position using emotional devotion towards teams or athletes preferred by fans (Schlossberg, 1996).

The current study aims to bring the two approaches closer to understanding loyalty from a marketing perspective and to look in depth at the inner state of exercisers, understand their motives, and identify what drives their persistence in achieving loyalty.

1.2 Research Problem

Customers are key, valuable elements behind any business success. In the fitness industry, 80% to 90% of the total revenue comes from customer memberships (Lynch, D. 2003). Therefore, revenues are hardly expected in the fitness industry, and high expenditure of marketing costs are required to sustain the acquisition of new customers. Managers of fitness centres and gyms usually focus on attracting new customers, which

is a real problem, as they should rather be focused on keeping the current members (Fader & Toms, 2018). Because of the high marketing efforts and costs, it could be very expensive to keep acquiring new customers continuously. In such a competitive industry, it is essential to investigate strategies that focus on keeping the current customers. The serious business problem is that managers of fitness clubs must realise the importance of creating marketing strategies to increase customer retention and loyalty (Ferrand et al., 2010). Specifically, the literature lags in studying gym consumers only as regular customers, not considering the unique characteristics that make them different, since this consumption requires more physical efforts and time. We aim to address this gap by investigating the antecedents of gym customers' loyalty by combining two scopes: sports psychology and marketing. Exercise psychologists focus on the individual inner state and pay less attention to the role of marketing tools in influencing the exerciser's loyalty. By contrast, marketers usually focus on membership cards, equipment, and atmosphere with less consideration of the sports psychological approach.

There are more research gaps that the current study aims to address. First, although the established customer engagement theories have been explained conceptually, the empirical application of this concept is limited to fans in the sports domain (Yoshida et al., 2014). To our knowledge, it has not been applied to the gym context. This research aims to address gym customer engagement by considering three variables as antecedents: perceived quality, satisfaction, and involvement. Satisfaction and involvement have been conceptually discussed, but there is limited knowledge regarding the influence of quality on customer engagement (Wilert and Tripopsakul, 2014). Further, little is known about the role of exercise persistence in affecting marketing variables, such as gym loyalty. However, few researchers have studied the

influence of exercise frequency on marketing constructs, such as retention or loyalty (Ferrand et al., 2010), and very limited attention has been given to the psychological aspects of exercise and loyalty. The current study responds to this literature gap by exploring the direct effect of exercise persistence on loyalty driven by three antecedents: intrinsic motivation, self-efficacy, and outcome expectations.

1.3 Research Contributions

This research makes significant theoretical and managerial contributions to the fields of sports marketing and sports psychology. In terms of the literature, this study extends the existing knowledge by investigating eight variables that could have direct and indirect influences on gym loyalty.

Further, over the years, several scholars have pointed out the need for empirical examinations of customer engagement (van Doorn et al., 2010; Dwivedi et al., 2016; Pansari & Kumar, 2016). The research in customer theory is necessary for the advancement of its conceptual theories, which are still in their early stages. Only a few researchers have paid adequate attention to presenting service quality as an antecedent to enhancing customer engagement (Wilert & Tripopsakul, 2014). This research investigates the impact of customer-perceived quality on customer engagement. It also examines satisfaction and involvement as determinants of customer engagement (Bowden, 2009; van Doorn et al., 2010; Hollebeek, 2011). This research also addresses an important gap regarding the relationship between exercise persistence and gym loyalty. This study is theory based. Exercise persistence is explained through three antecedents driven by two theories: intrinsic motivation, which is adapted from self-determination theory (Deci & Ryan, 1985), and self-efficacy and outcome expectation, which are discussed in social cognitive theory (SCT) (Bandura, 1986).

By linking the two distinct approaches in one framework to achieve loyalty, the findings would make a great contribution for sports marketers by proposing and comparing two paths to explain gym loyalty and determining the extent to which each path could contribute to loyalty. Lastly, two moderating effects of gender and age generation were examined to provide useful insights for marketers to implement loyalty strategies. The results of this study could be very useful for the implementation of an effective segmentation strategy in the gym industry.

1.4 Research Objectives

The main objective of this research is to understand what affects customer loyalty the most to help fitness centre managers remain vibrant in the competitive environment. This study proposed and compared paths that could explain customers loyalty toward gyms. The first path is the marketing path, which deals with gym as a service and gym members as service consumers. The current study applies the customer engagement concept to the gym context, considering the gym as a service. This approach could explain customers gym loyalty. Customer engagement was studied and tested as a multi-dimensional concept that combines vigour, absorption, and dedication, which was first presented by Dwivedi (2015). Customer engagement was tested using three antecedents: customer satisfaction, perceived quality, and customer involvement. The second path is the sports psychological approach. In this path, gym members are viewed as sports participants; the foundation of this path is the (sports) exercise psychology. It explains physical exercise persistence and then loyalty towards the gym, founded on psychology theories that are widely applied in sports psychology. It combines SCT and self-determination theory to understand physical exercise persistence in the gym. The study examined the ability of the marketing approach and

the sports psychology approach to explain gym members' loyalty, and it compared the two approaches. Lastly, the moderating effects of gender and age generation were also investigated.

1.5 Research Methodology

This research implemented a quantitative empirical approach using self-administered surveys designed on Google forms. The surveys were also distributed with hard copies. The surveys were available in two languages, Arabic and English, and the participants were able to choose their preferred language. The use of two languages aimed to capture more responses. The study used valid established measurement scales adopted from previous literature. The convenient sampling approach was employed to collect data from gyms and through email invitations. A total of 445 surveys were collected, but only 443 usable responses were analysed using Smart PLS3 and SPSS 27.

1.6 Thesis Structure

This thesis consists of six chapters. The first chapter introduces the topic, highlights the research problems and gaps in the current literature, identifies the objectives, suggests how this research would contribute to filling the literature gaps and explains the applied methodology. The second chapter proposes the theoretical foundations used to develop each of the marketing and sports psychology pathways and to define the research variables. Chapter 3 presents the hypothesised associations, along with the literature related to each hypothesis. Chapter 4 discusses the research methodology approach, which includes research type, measurement items and questionnaire design, research context, sampling and data analysis techniques, and discusses the sample characteristics based on SPSS 27 descriptive test analysis. Subsequently, Chapter 5 describes the data

analysis in depth. It starts by explaining the measurement model tests, structural model tests, and multi-group analysis tests for gender and generation, and it ends by discussing the analysis findings. All the analyses in Chapter 5 were conducted using Smart PLS3. Lastly, Chapter 6 presents the conclusions of this study. It also suggests theoretical and managerial implications, discusses the limitations of the current study, and provides future research recommendations for scholars in this area.

CHAPTER 2: THEORETICAL BACKGROUND

2.1 Introduction

This chapter presents the theoretical foundations of the constructs developed in the current study. It discusses the two approaches followed in this research: the marketing approach and the sports psychological approach to achieve customer gym loyalty. First, we introduce our main variable to explain the concept of loyalty. Second, the marketing approach is discussed within customer engagement theories and literature. Third, the sports psychological approach is grounded in two established theories—the SCT (Bandura, 1986) and the self-determination theory (Deci and Ryan, 1985). Drawing from those two approaches (marketing vs. sports psychology), we developed a conceptual framework that incorporates sports psychology and marketing literature to enhance gym customer loyalty.

2.2 The Concept of Loyalty

Customer loyalty in general is an essential topic for both marketing scholars and marketing practitioners. The importance of loyalty is driven by the benefits associated with keeping current customers for the long term (McMullan, 2005). Oliver (2010) has pointed out that loyalty is one of the most essential marketing concepts because of the profitability of having loyal customers. The literature highlights that customer loyalty increases profitability because of its impacts on financial performance (Gupta & Zeithaml, 2006) and product–marketplace performance (Anderson & Mittal, 2000).

Loyalty is a complex construct, and having one definition for it would be a challenging task that has not yet been achieved. However, East et al. (2005) defined loyalty to an object (e.g., brand, service, product, or firm) as a favourable propensity for that specific object. Yi (1990) perceived loyalty as a behavioural concept that

requires the continuous buying of a particular product/service.

Smith and Aaker (1992) refer to brand loyalty as the reflection of how likely customers would switch to invest in other alternative brands, especially if there is a difference in terms of pricing strategy, changes in the product features, communication tools, or distribution methods. According to Edwardson et al. (2000), customer loyalty is simply the customers' desire to re-buy continuously from the same business. Loyalty can be determined with many behavioural indicators, such re-purchase, quantity, and frequency of buying (Zins, 2001; Chen, Lin, and Stotlar, 2006; Ferrand et al., 2010).

Customer loyalty is also presented as the deep commitment customers hold to keep buying their preferred products despite environmental volatility (Caruana, 2003; Keropyan & GilLafuente, 2012). Nevertheless, loyalty goes beyond repeated transactions, because customers who keep buying from a particular brand could have other explanations not related to loyalty. According to Reichheld (2003), customers could buy repeatedly because of a temporary purpose, indifference

, switching costs, or other reasons, rather than actual loyalty.

Other researchers have defined customer loyalty as a long-term attachment with the same organisation with the purpose of repurchase (Jones & Mothers Baugh. 2002). As the level of competition increase in the fitness industry, the need for customer loyalty would increase as well, especially since there is an expanded range of options where customers can complete their exercises. Customer loyalty is essential to maintain the continuity of business activities.).

According to Anderson and Srinivasan (2002), there are two kinds of brand loyalty: attitudinal and behavioural loyalties. Behavioural loyalty refers to “repurchase frequency,” whereas attitudinal loyalty is remarked as “psychological commitment” that a customer holds towards a brand, such as intentions to purchase. In the case of the

current research, frequency of exercise participation in the same gym and membership renewal could be a great example of behavioural loyalty. To investigate loyalty, both types should be considered.

One of the most important contributions regarding loyalty is its classification into three types: behavioural loyalty, psychological commitment, and composite loyalty (Jacoby & Chesnut, 1978). Jacoby and Chesnut (1978) defined loyalty as the main behavioural reaction, which is expressed over a time series. It includes a decision to choose one or more alternatives for a particular brand out of a group of brands. It could be said that loyalty is a function of a psychological processes. According to Mellens et al. (1996), this definition covers the main dimensions of brand loyalty. Further, this definition underlines the fact that brand loyalty is a part of the internal psychological process. The brand is chosen based on the fundamental internal criteria each loyal customer has, which is psychological commitment towards the brand.

Loyalty has many aspects, and customer retention is one of them. Retention in sports marketing literature is described as renewing membership in the sports centre (Hallowell, 1996; Bodet, 2012; Watts, 2012). Usually, retention is set as a dependent binary variable, which is measured by two possibilities only, such as continuing or not (Bolton et al., 2000), retention behaviour or abandonment (East et al., 2005). Therefore, it can be concluded that retention is a behavioural dimension of loyalty. Better understanding of the loyalty dimension (e.g., consumer retention or positive word of mouth behaviour) could bring a variety of benefits for managers, such as improving their financial performance (Fornell, 2007). When customers are loyal to the gym, this means that they like the gym service; thus, they are enthusiastic about introducing their experience to anyone they know. Loyalty could be expanded to reach any other products or services provided by their favourite gym, such as supplements, cups, or T-

shirts.

To manage customer dropout or leaving decisions, it is important to take action before this behaviour occurs. According to Alcaide (2010), it is much easier to retain consumers in the abandonment phase than recovering a consumer after their loss. Therefore, it is important to act before customers show signs that they intend to leave the gym. As reported by McDonald et al. (2014), the simplest way to predict an individual's behaviour is by reviewing their previous behaviours. In this regard, the present research reviewed both the marketing literature (e.g., customer engagement) and the psychology literature (e.g., SCT and self-determination theory) to understand the antecedents of the loyalty of gym customers.

2.3 Customer Engagement Definitions and Antecedents

2.3.1 The concept of customer engagement

Customers have been taking a significant role in marketing concepts and a guiding force of marketing orientation. Engagement research goes further in extending the customer role to be considered as an active decision maker who can exceed the typical image of is a passive receiver of marketing information (Wong & Merrilees, 2015). Customer engagement is still a new concept in marketing; there are some scholars that have studied customer engagement conceptually and presented some theories to explain it. Amid the emerging empirical research, Spratt et al. (2009) explored engagement with brands, Calder et al. (2013) studied the main concept of engagement, Hwang et al. (2017) assessed customer engagement in the social media context, and Chathoth et al. (2020) studied employee engagement.

Academic scholars have followed two approaches to conceptualise customers engagement. Some scholars, such as van Doorn et al. (2010), used a narrow scope to view this phenomenon, concentrating on the behavioural aspects only and defining it

as a set of behaviours. Scholars who adapt the behavioural approach usually use the term ‘customer engagement behaviour (CEBs)’ to refer to customer engagement, for example van Doorn et al. (2010). According to van Doorn and her colleagues (2010, p. 254), customer engagement is defined as “the customer’s behavioural manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers”. van Doorn’s definition shed light on the idea that customer engagement could go further than purchasing behaviour. This definition is in contrast to Kumar et al.’s (2010) argument that a customer engagement definition would not be completed without including customers’ purchases from the business.

By contrast, Brodie et al. (2011) took a wider view to explain customer engagement as a multi-dimensional construct that comprises different dimensions, and it is not limited to behaviours. Further, Brodie et al. (2011) described customer engagement as a psychological statement that happens when collaborative and co-creative customers experience a focal object through the service relationship. Hollebeek (2011) described customer brand engagement as the motivational situation that includes different levels of emotional, behavioural, and cognitive investments with the brand.

Customer engagement is a type of customer–company relationship (Dweivedi, 2015). The concept of engagement has also been studied in organisation psychology (e.g., Menguc et al., 2013). Organisation psychology scholars define engagement as a positive mindset related to work, and it consists of three dimensions: vigour, dedication, and absorption (Schaufeli et al., 2002, p. 74). Dweivedi (2015) followed a similar approach and described customer engagement as a positive mindset that comprises vigour, dedication, and absorption. Dweivedi (2015) adapted this definition from the organisation psychology field. Vigour refers to customer energy and willingness to invest in his interactions with the firm, dedication refers to enthusiasm and inspiration,

and absorption means that the customer is fully concentrated and happy with the firm interactions (Dweivedi, 2015).

Customer engagement is usually considered a multi-dimensional concept that includes three main dimensions: cognitive (e.g., having interest in a brand), emotional (e.g., getting inspired by a brand), and behavioural (e.g., behavioural effort towards a brand) (Harrigan et al., 2017). According to Dovaliene and his colleagues (2015), most scholars have shown that customer engagement can be summarised in those three dimensions. However, the exact expression of focal engagement dimensions could vary based on the context. This is obvious in contrasting studies; for example, Patterson, et al. (2006) set four dimensions for customer engagement with services (vigour, dedication, absorption, and interactions), while Dweivedi (2015) presented three dimensions for customer engagement in brands context vigour (behavioural), dedication (emotional) and absorption (cognitive).

Table 1 presents a summary of the discussed definitions related to engagement and shows how the dimensions vary from one research to another. In general, it is possible to infer from Table 1 that the number of dimensions varies according to the conceptualisation of the concept itself, highlighting the huge consensus gap related to customer engagement (Brodie et al., 2011). As cited previously, the definitions vary from broad, overarching definitions, such as Hollebeek's (2011) definition of customer engagement as the degree of cognitive, emotional, and behavioural investments towards a particular brand, to a narrower definition that focuses on one dimension only, such as the one provided by Spratt et al.'s (2009), who applied a unidimensional approach to explore brand engagement in self-concept in which customers view themselves through brands.

Table 1: Engagement definitions and dimensions in the marketing literature

Source	Construct examined	Conceptualisation	Type of the study	Dimensions
Brodie et al. (2011)	Consumer engagement	“A motivational state that happens by interactive, co-creative customer experiences with a focal agent/object (e.g., a brand) in focal brand relationships”	Conceptual	Multi-dimensional approach: (1) cognitive, (2) emotional, (3) behavioural
Vivek et al. (2012)	Consumer engagement	“The intensity of an individual’s participation in and connection with an organisation’s offerings and/ or organisational activities, which either the customer or the organisation initiates”	Conceptual	Multi-dimensional approach: (1) cognitive, (2) emotional, (3) behavioural, (4) social elements
Pansari and Kumar (2017)	Consumer engagement	“Customers become engaged with the firm when a relationship based on trust and commitment is satisfying and has emotional bonding”	Conceptual	Multi-dimensional approach: (1) satisfaction, (2) emotions
Hollebeek (2010)	Consumer brand engagement	“The level of an individual customer’s motivational, brand-related and context-dependent state of mind characterised by specific levels of cognitive, emotional and behavioural activity in brand interactions”	Conceptual	Multi-dimensional approach: (1) cognitive, (2) emotional, (3) behavioural
van Doorn et al. (2010)	Consumer engagement behaviours	“Customer engagement behaviours go beyond transactions and may be specifically defined as a customer’s behavioural manifestations that have a brand or firm focus, beyond purchase, resulting from motivational drivers”	Conceptual	Uni-dimensional: behavioural

Source	Construct examined	Conceptualisation	Type of the study	Dimensions
Brodie et al. (2013)	Customer engagement	“Consumer engagement is a context-dependent, psychological state characterised by fluctuating intensity levels that occur within dynamic, iterative engagement processes “	Empirical: qualitative	Multi-dimensional approach: (1) cognitive, (2) emotional, (3) behavioural
Patterson et al. (2006)	Customer engagement	“Customer engagement describes the level of a customer's various ‘presence’ in their relationship with the organisation”	Empirical	Multidimensional: (1) vigour, (2) dedication, (3) absorption, (4) Interaction
Sprott et al. (2009)	Brand engagement in self-concept	“An individual difference representing consumers’ propensity to include important brands as part of how they view themselves. This conceptualisation builds on self-schemas to investigate the role of brands in the self-concept.”	Empirical quantitative	Unidimensional
Dweivedi (2015)	Consumer brand engagement	“Consumer brand engagement is consumers' positive, fulfilling, brand-use related state of mind that is characterised by vigour, dedication and absorption.”	Empirical quantitative	Multidimensional: (1) vigour, (2) dedication, (3) absorption,

Customer engagement has been defined in the sports context as well. According to Yoshida et al. (2014), fans engagement could be considered one of customer engagement forms, defining engagement as an extra behavioural role for sports customers to help their favourite team, team's management, or team's fans in non-transactional exchange. This definition shows the importance that customer engagement has brought. So far, it has been conceptualised in the sports fan context (e.g., Yoshida, et al., 2014; Santos et al., 2018), but to our knowledge, it has not been studied in the sports services, such as gyms and fitness centres. The characteristics of customers of gym and fitness centre distinguish them from sports spectators (García-Fernández et al., 2018), as gym customers are sports practitioners who invest more cost, time, physical, and mental efforts.

In the current research, customer brand engagement with the gym is viewed through the lens of vigour, absorption and dedication, which was presented by Dwivedi (2015). This conceptualisation of customer brand engagement was originally driven by the organisation psychology field (Schaufeli et al., 2002). Dwivedi's (2015) dimensions of brand engagement—vigour, dedication, and absorption—are a representation of the holistic lens of customer engagement (cognitive, emotional, and behavioural), which has been validated in the previous literature of customer engagement (see Table 1). It captures multiple dimensions of engagement—dedication (as the emotional aspect), absorption (as the cognitive aspect), and vigour (as the behavioural aspect)—in one framework (Dwivedi, 2015). Thus, the current research adapted the three dimensions of vigour, absorption, and dedication, assuming that it would contribute to a better understanding of gym customer engagement.

2.3.2 The antecedents of customer engagement

To identify the antecedents of engagement, we proceed to a listing of empirical relevant

works presenting a model of engagement antecedent as summarised in Table 2. All the prior studies in the table were published in English and were published in the last 20 years. We identified three main antecedents from our literature review: perceived quality, involvement, and satisfaction. These three antecedents are discussed in the following sections.

Table 2. Summary table of customer engagement antecedents in prior work

Source	Construct examined	Antecedents	Type of the study	Key findings
Pansari and Kumar, (2016)	Customer engagement	Involvement, satisfaction	Conceptual	“The level of involvement would moderate the relationship between emotions, satisfaction, and CE”; “satisfaction has been linked to firm profits and shareholder value”
Bowden (2009)	Customer engagement process	Satisfaction, involvement, and loyalty	Conceptual	Presents a psychological process to obtain loyalty with new and repeated customers, both satisfaction and involvement plays a curricular role in it,
Harter et al. (2002)	Employee engagement	Satisfaction, loyalty	Empirical	There is a positive relationship between high levels of employee engagement and increased customer satisfaction and loyalty.
Hollebeek, (2011)	Customer Engagement	Involvement, satisfaction	Conceptual	Involvement and satisfaction are potential antecedents for customer brand engagement with the experienced customers.
Dwivedi et al. (2016)	Brand customer engagement	Category involvement	Conceptual	Brand category involvement leads to brand engagement behaviours, increasing the quality perceptions could lead to a sustainable engagement as it influences brand judgments.

Source	Construct examined	Antecedents	Type of the study	Key findings
Vivek et al. (2012)	Customer engagement	Involvement	Empirical	“customers engage not only with high-involvement offerings but also low-involvement offerings”
van Doorn et al. (2010)	Customer engagement behaviour	Satisfaction	Conceptual	Satisfaction was proposed as one of the customers-based antecedents of customer engagement behaviour
Wilert et al. (2014)	Customer engagement	Service quality	Empirical	The findings show that all the service quality dimensions have a significant relationship with customer engagement
Thakur, (2018)	Customer engagement with retailer mobile app	Satisfaction	Empirical	“The conceptualisation and empirical validation of mediating role of customer engagement in satisfaction and trust as antecedents of online reviews is, therefore, a strong contribution of this study.” “Satisfaction with the products (and services) and trust in the retailer are essential for customers to post online reviews.”
Dwivedi, (2015)	Customer brand engagement	Involvement with the category	Empirical	findings support the three dimensions of customer engagement vigour, dedication, and absorption. Product category involvement had a significant influence on consumer brand engagement. Approve the capability of brand engagement in
Carvalho et al. (2018)	Customer brand engagement	Involvement	Empirical	“giving the key role of customer involvement in the CBE process, companies should seek to drive active involvement of existing customers”

a. Perceived Quality

- *Perceived quality definition and dimensions*

Perceived quality is the consumer's evaluation of the excellence of a service or product (Zeithaml, 1988). According to Bitner and Hubbert (1994), perceived quality refers to the impression of greatness towards a service. Papadimitriou and Karteroliotis (2000) have stated that perceived quality is the fundamental concept behind sports organisations success. Understanding perceived quality is important in sports marketing and sports services; it is the step prior to loyalty (Baker & Crompton, 2000).

Managers can offer a better experience to their customers by improving the service quality dimensions that would directly affect customer satisfaction (Dabholkar et al., 2000; Zeithaml et al., 2009) and consequently, customer loyalty (Gallarza et al., 2011). Brady et al. (2006) have pointed out that most of the service quality literature has focused on the dimensions of perceived quality instead of the outcomes of quality, which are difficult to measure. For instance, joining an aquatic centre would improve health and the physical body in the long term; therefore, the evaluation would be in the future (Robinson & Taylor, 2003). Thus, long term outcomes are probably impacted by various factors, not only the received service (Gronroos, 1984). There is a need for outcome quality measures, as most tools describe service outcomes, for example, the SERVQUAL instrument (Parasuraman et al., 1991). Service dimensions have a powerful impact on customers' overall satisfaction compared to quality outcomes (Brady et al., 2006; Gronroos, 1984). The present research aims to explore the perceived service quality of the gym and study it as a potential determinant of customer engagement.

In the sports marketing context, service quality dimensions vary between public fitness centres (Howat et al., 2008; Liu, Taylor, & Shibli, 2009) and private gym

services (Alexandris et al., 2004). However, Howat and his colleagues (1996) have highlighted the core dimensions of customers' overall quality as core services, secondary services, facilities, and staff.

- *Quality in engagement literature*

To our knowledge, prior studies that have examined perceived quality in a direct relationship with customer engagement general are few, and none were found in the gym context. However, some scholars have studied relationship quality as a consequence of customer engagement (Hollebek 2010).

Dwivedi, Wilkie, Johnson, and Weerawardena (2016) have proposed a model to explain consumer brand engagement behaviours, where perceived quality was presented as a dimension of the overall brand equity that has a direct positive relationship with brand engagement. Their findings assured that managers could build engagement through different ways, one of which is improving the overall brand equity dimensions, which includes the perception of quality. According to Yoo and Donthu (2001), as cited in Dwivedi et al. (2016), the improvement of quality perceptions could achieve sustainable engagement levels due to the central role of quality in shaping brand judgment and loyalty.

In the airline services context, service quality has presented an indirect relationship with customer brand engagement though brand three variables: image, perceived value, and satisfaction (Hapsari et al., 2017). The findings show that service quality has a significant influence on the three variables, but only satisfaction was able to explain customer engagement. However, the mediating impact of the three variables on the relationship between customer engagement and service quality was not examined.

Further, Wilert and Tripopsakul (2014) investigated the influence of service quality dimensions on customer engagement. The findings show that all five aspects of service quality—reliability, assurance, tangibles, empathy, and responsiveness—have a positive influence on customer engagement. According to the authors (Wilert & Tripopsakul, 2014), service quality must be taken into account to enhance customer engagement, and improving customer engagement would produce more positive behaviours, such as the positive word of mouth and loyalty. To our knowledge, the direct influence of perceived quality and customer engagement has not been tested in the gym field, which provides an opportunity for the current research to fill this gap.

b. Satisfaction

Customer satisfaction is one of the most studied variables in the marketing literature. Kotler and Keller (2012) have conceptualised satisfaction as the individual's pleasure or disappointment, which happens because of the comparison between his or her own expectations and the actual product/service performance. According to Oliver (2015), customer satisfaction is a judgment about the acquired product/service, as it is a response to needs fulfilment.

Giese and Cote (2000) concluded that satisfaction comprises three major dimensions: the emotional response associated with a specific focus (e.g., previous) determined in a specific moment (e.g., during or after consumption). Scholars have conceptualised satisfaction in services as the level at which customer expectations are met during the service (Santouridis & Trivellas, 2010). Kuo, Wu, and Deng (2009) pointed out that satisfaction is crucial for business because when the customers are satisfied with the offered service/products, then the business could generate higher

revenues.

Customer satisfaction can be defined based on two approaches: the transactional satisfaction approach, which is the post-purchase evaluation of the evaluation based on the latest consumption experience (Boulding et al., 1993), and the cumulative satisfaction approach, which is defined as the overall satisfaction and is the net sum of the overall customer experience with the service provider or the seller (Johnson & Fornell, 1991).

The focus of this study is the relationship of customer satisfaction and customer engagement and how this relationship could lead to customer loyalty. According to Pansari and Kumar (2017), if customers were satisfied with their organisation and held an emotional attachment to that organisation, then customer engagement could exist. The transaction element of customer engagement is also an outcome of their satisfaction (Palmatier, Kumar, & Harmeling, 2018). Satisfied customers could engage in the form of a direct contribution by repeating their purchases or indirect contribution, such as connecting with the organisation by sharing reviews, comments, and free feedback to the organisation (Palmatier, Kumar, & Harmeling, 2018).

Palmatier, Kumar, and Harmeling (2018) have pointed out that satisfaction causes direct contributions, while emotional attachment causes indirect contributions. The influence of satisfaction on purchase decisions is higher in the service industry than products due to the immediate chance of being disappointed with a service (Palmatier, Kumar & Harmeling, 2018). For example, if gym customers have complained about the messy locker rooms, the gym managers can react immediately to make sure it is clean or ignore the complaint, which would directly influence the repurchase decision. On the opposite side, if the customers have shared negative feedback with the mobile phone company to fix some issues, the repurchase decision would be made after the

new production cycle to obtain the next mobile phone version.

Thakur (2018) empirically tested the impact of satisfaction on customer engagement in the context of retailers and mobile apps. Their findings demonstrated that satisfaction could drive customer engagement, since satisfied customers are more likely to engage with their retailer and share positive word of mouth on their social media accounts.

Researchers have presented satisfaction as one of customer engagement determinants in some conceptual frameworks (Van Doorn et al., 2010; Higgins & Scholer, 2009; Pansari & Kumar, 2016). Van Doorn et al. (2010) proposed satisfaction as one of the customer-based antecedents that affect customer engagement. Satisfaction could also affect customer engagement behaviour over time, as customer satisfaction could decrease or evolve over time (Van Doorn et al., 2010).

Further, Higgins and Scholer's (2009) framework suggests that the need for satisfaction could give a value direction to form engagement even if there was no hedonic experience. However, this relationship has not been tested empirically in the sports marketing and fitness industry and little is known about the impact of satisfaction on sports customer engagement, which offers an opportunity for this study to fill the gap.

c. Customer Involvement

Involvement is widely known as goal-directed motivation, which indicates the extent to which customer decisions have personal relevance (Mittal et al., 1989). Bowden (2009) and Dwivedi (2015) adapted Zaichkowsky's (1985) definition of customer involvement, that it is the perceived level of relevance to the product, and it depends on inherent needs, personal interests, and values. Goldsmith and Emmert's (1991)

definition of customer involvement affirmed that involvement is the feeling of interest towards a product category. The involvement concept played an essential role in creating different theories, such as the information processing theory and decision-making theory (Mowen, 1990).

Most customer engagement scholars have adapted the definition of Zaichkowsky (1985), which views customer involvement as a unidimensional construct (e.g., Vivek et al., 2012; Pansari & Kumar, 2017; Hollebeek, 2011; Bowden, 2009; Dwivedi, 2015). However, Zaichkowsky conceptualisation considers three levels of involvement: (1) the personal level related to inherited interests that could motivate a person towards an object, (2) the physical features that could increase personal interest, and (3) a situational situation of something that could temporarily increase interest towards an object.

Moreover, Laurent and Kapferer (1985) defined involvement as a personal variable that causes and encourages customers to buy and communicate. A product category involvement would include a scale of five dimensions: interest, perceived risk (includes two subcomponents which are probability and importance), the rewarding nature of a product, and the ability of the brand to communicate its status or identity (Laurent & Kapferer, 1985).

According to Brodie et al. (2013), involvement happens because of personal interest, relevance valuableness of product category, while the engaged customers invest tangible resources, such as money and effort, and spend their time because of the brand connection.

Parihar, Dawra and Sahay (2019) supported the notion that customer engagement is different from the concept of customer involvement. Customer involvement is a result of the relevance of a product category, while customer

engagement is a result of the obtained value after dealing with an offer (Parihar et al., 2019). Parihar and his colleagues (2019) examined involvement as a determinant of customer engagement by considering the holistic customer involvement nature, representing involvement in five dimensions of involvement: risk importance, risk probability, sign, interest, and pleasure. The research results confirmed the valid causal relationship between customer involvement and customer engagement. Their findings also confirmed that customer engagement has a mediating effect in supporting the link between involvement and loyalty. To our knowledge, this is the only customer engagement research that has used a multi-dimensional approach to link for customer involvement with customer engagement.

New customers could face an initial level of involvement, which could significantly influence their purchase decision (Bowden, 2009). For example, offering free days for the new expected customers to experience the gym facilities and atmosphere with no risk at “no costs” would significantly influence their future decision to join the gym. Customer involvement can influence the evaluation process because the customer could have degrees of familiarity with the brand (Bowden, 2009). Consequently, if the customers were used to a specific service or product, they would repeat the purchase.

According to Brodie et al. (2011), customer engagement is a psychological statement that has the main role in relational exchange, as involvement is one of the relational concepts that has an essential role in forming customer engagement. When customers are involved, they would engage more, but for this relationship to occur, it needs a prior expression of engagement (Brodie et al., 2011).

Vivek et al.’s (2012) conceptual framework of customer engagement considers customer involvement as one of customer engagement antecedents for both current and

expected customers, involvement as non-behavioural variable, and the high tended level of interest works as a determinant of engagement.

Pansari and Kumar (2017) viewed customer involvement as a motivational variable that encourages customers to search for information related to the product/service to manage any possible risk that comes with the decision-making process. This would occur before the purchase decision customer engagement stage. According to Pansari and Kumar (2017), the search process that involved customers go through would shape their expectations, which may affect the levels of satisfaction and customer engagement; thus, they argue that customer involvement could be a moderator between satisfaction and customer engagement.

2.4 Sports Psychology Approaches to Explain Loyalty

This section presents the theoretical ground of the sports psychology approach to explain exercise persistence. In this section, gym customers are viewed through the lens of sports psychology, using two theories: self-determination theory and SCT. Both theories hold considerable appeal as an approach to explaining exercise and physical activity behaviours. The self-determination theory explains the type of motive that could drive exercise persistence (intrinsic motivation), and SCT provides a vision for understanding the role of self-efficacy and the perceived outcome expectations associated with adapting and performing exercise persistence behaviour in the gym. Both theories have been widely studied in the sports field and are used to explain exercise behaviours.

2.4.1 Self-Determination Theory

Self-determination theory (SDT) provides a solid theoretical ground for exercise persistence motives. Ryan and Deci (1985) presented SDT to examine the different

levels of motivation that have different levels of self-determination. SDT theory investigates an individual's inherent growth tendency besides the natural psychological needs, which are the main foundation of self-motivation and personality integration (Ryan & Deci, 2000). Both intrinsic and extrinsic motives shape the self-determination theory that distinguishes people's motives and regulations (Carron, Hausenblas, & Estabrooks, 2003; Vallerand & Losier, 1999) (see Figure 1).

Keeping up with the SDT continuum, there are two extremes in the theory: the first extreme is amotivation, which is defined as the absence of motivation to perform or engage in an activity; the second extreme is intrinsic motivation, which refers to doing an activity because of joy and pleasure; and levels of extrinsic motivation come between amotivation and intrinsic extremes (Ryan & Deci, 2000).

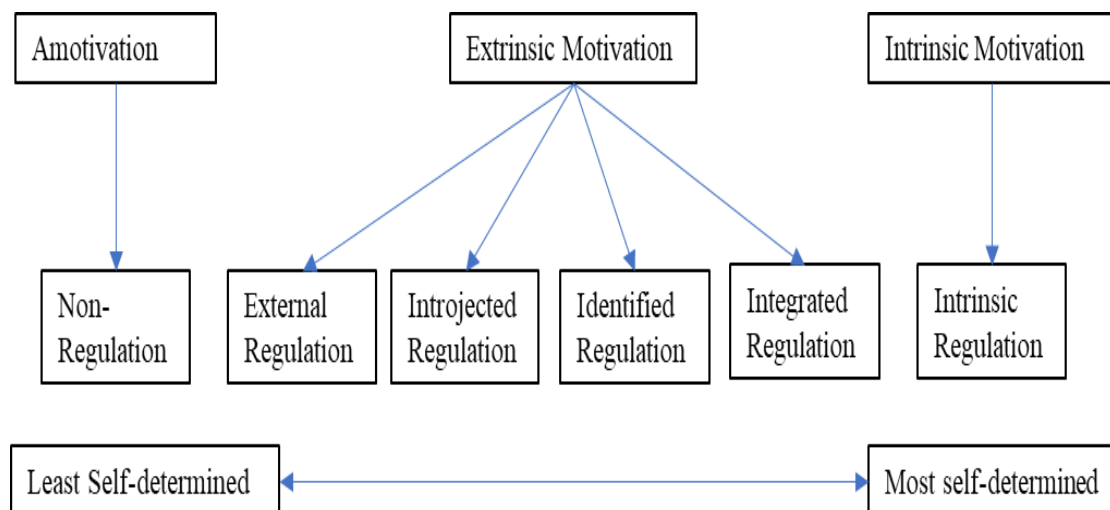


Figure 1. Self-determination theory continuum. Source: adapted from Vallerand, Pelletier and Koestner (2008).

The first extreme, which is Amotivation, is the absence of motivation; it is positioned out of the motivation continuum (Ryan & Connell, 1989). At the level of amotivation, individuals have limited or no motivation to get involved in an exercise;

therefore, values are not considered as an outcome of the activity, or the individuals feel they are incompetent to perform (Bandura, 1986). Amotivation is the last level of the regulation continuum where individuals are completely non-self-determined (Daley & Duda, 2006). Amotivated people participate in a physical activity or exercise expecting a desired outcome, simply because they do not value the activity outcomes (Seligman, 1975). Amotivation is not studied in the current research because in exercise persistence, the literature suggested that previous cross-sectional research among physical education students has proven a negative relationship between amotivation and physical effort (Ntoumanis, 2001). Amotivated people lack control and have low levels of competence (Ryan & Deci, 2000). Thus, Amotivated customers are less likely to show exercise persistence.

Intrinsic motivation represents the most self-determined level of motive (Ryan & Deci, 2000). Intrinsically motivated individuals are the ones who deem the activity as enjoyable or interesting (Vallerand & Losier, 1999; Ryan & Deci, 2000).

By contrast, extrinsic motivation includes a variety of behaviours in which individuals engage to achieve an expected end, but not for their own sake (Deci, 1975). In other words, to be extrinsically motivated means to engage in an activity because of the expected outcomes, such as awards and benefits, or to prevent any unwanted outcomes (Deci & Ryan, 1985; Ryan & Deci, 2000).

At different degrees of extrinsic motivation, the degrees of self-determination increase and move along the continuum in the direction of intrinsic motivation (Landry & Solmon, 2002). Extrinsic motivations are used to refer to behaviours with less self-determination, which means that behaviours are caused by external contingencies only (e.g., benefits). Ryan et al. (1990) suggested that extrinsic motivation is multi-dimensional and consists of four levels of regulation that can be set along the

continuum of self-determination: external regulation, introjected regulation, identified regulation and integrated regulation. In 2000, Ryan and Deci reported that extrinsic motivations are important at the beginning of exercise adoption, whereas intrinsic motivations are more essential for long-term commitment and persistence.

Previous scholars have argued that self-determination theory applies to explaining sports and exercise persistence as well as dropout behaviours (Ryan & Deci, 2000; Valleran & Rousseau, 2000). Some studies have shown that individuals who exercise because of extrinsic regulations are more likely to drop out, while intrinsic motivation is the reason behind exercise persistence (e.g., Ryan, Hohensee, Cooley, & Jones, 2002, in the gymnastics context). Therefore, the current research considers intrinsic motivation to be one of the exercise persistence determinants.

2.4.2 Social Cognitive Theory

SCT was presented by Bandura in 1986 and has been used widely in sports psychology literature as a foundation to promote physical activity programmes (Pastorfield, 2005; Heller et al., 2006; Hutzler et al., 2010; Abdullah et al., 2009; Peterson et al., 2008). SCT originated in the psychology field; it is about how people acquire and keep on performing certain behavioural patterns, and it also proposes the foundation of intervention strategies. The theory presents multidimensional psychological factors that influence a range of human behaviours, including exercise persistence or adherence. The core behaviour determinants in the theory are personal factors and environmental and behavioural factors (Bandura, 1986; Bandura, 2004). Bandura (1986) presented the triadic reciprocal relationships between the variables of SCT with the three core determinants in Figure 2. This figure describes the mutual action among the causal factors that influence human behaviour.

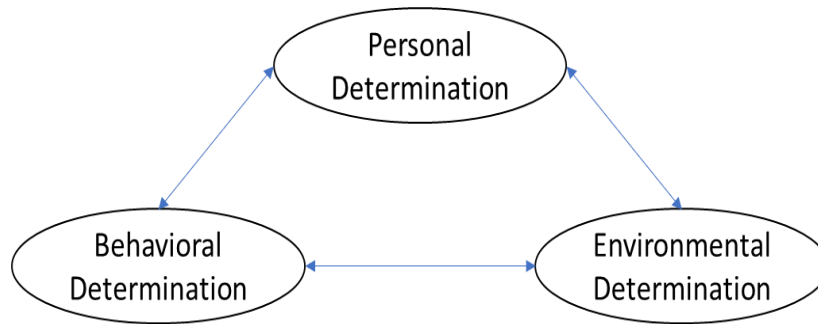


Figure 2. The elements of social cognitive theory, adapted from Ahmad, Mohamad Zani, and Hashim (2015).

SCT theory is widely used to investigate physical activity behaviours (Beauchamp et al., 2012; Feltz et al., 2008; Jackson et al., in press) and to promote exercise maintenance (Holden, 1991). According to SCT theory, behaviour changes and exercise persistence are driven by expected benefits or results (outcome expectations) and expectations about the ability to perform and keep performing (self-efficacy) (Keller, Fleury, Gregor-Holt, & Thompson, 1999). Therefore, the current research adapts the self-efficacy and outcome expectations constructs because these two variables have a significant relationship with exercise persistence.

The central tenet of SCT is the concept of self-efficacy. According to Bandura (1986), self-efficacy is the key determinant of adopting new behaviours. An individual must believe in her or his capabilities to complete a certain task, such as attending the gym and exercising. Moreover, an individual must value the outcomes that he or she thinks would happen as a result of engaging in certain behaviour. Outcome expectations can be classified as immediate and long-term benefits. For exercise maintenance, both self-efficacy and outcome expectations were important predictors for physical activity (McAuley & Blissmer, 2000). Both self-efficacy and outcome expectations are crucial

determinants of exercise (Resnick, Luisi, Vogel, & Junaleepa, 2004).

Self-efficacy has been a widely used predictor of greater levels of structured physical activities (McAuley et al., 2010). As the level of self-efficacy increases, individuals tend to show higher persistence to invest more effort and accept engaging in challenging affectivity (McAuley et al., 2010). Outcome expectation has also been one of the strongest predictors of SCT in explaining current exercise behaviour (Resnick, 2001). Thus, self-efficacy and outcome expectations were adapted in this study to explain gym exercise persistence.

2.4.3 Main Antecedents of Gym Loyalty From a Sports Psychology Perspective

This section presents the antecedents of exercise persistence: intrinsic motivation based on the theory of self-determination, self-efficacy, and exercise persistence based on SCT. This section also describes the relationship between exercise persistence and loyalty.

a. Exercise Persistence

In the physical exercise and sports domain, persistence refers to continuous exercise or sports adherence (Ryan & Deci, 2000), such as gym members who persist in exercising in the gym and athletes who keep maintaining their participation. Dropout, which is the opposite of persistence, happens when sports participants stop persisting and decide to disengage from physical activity (Vallerand et al., 1997). Most of the explorations in the domain of sports persistence and dropout perceive these two results as inherently related, and commonly those two behaviours are the opposite of each other (Sarrazin et al., 2002). For example, gym members who decide not to persist would reduce their attendance, reduce the exercise intensity, or drop out of the gym.

Persistence is necessary to attend the gym and participate in exercise intensively and frequently enough to attain its health benefits (Biddle & Mutrie, 2008). Fitness clubs and gyms are struggling to encourage consumers to maintain their exercises at the centres. Studies found that exercise dropout rates are about 50% (James et al., 2008). This would bring the following question to mind: Why would gym marketers or managers be concerned about customer persistence if the memberships were already played without even consuming their facilities intensely? The answer is that acquiring new consumers every time would be five to 25 times more expensive than keeping the current consumer. Increasing the customer retention rate by 5% might generate a 25% to 95% profit increase (Gallo, 2014). Getting individuals to persist and exercise is incredibly challenging, as it is a complicated behaviour that needs to be planned and maintained in the long term (Dishman, 1994).

To understand exercise behaviours, literature models usually use ecological models and highlight factors on different levels, including intrapersonal, interpersonal, organisational, and community factors (Glanz, 2008; J. Sallis, Owen, & Fisher, 2008). Those social ecological models assist in identifying the opportunities for promoting exercise among people by recognizing the factors behind a certain decision. To successfully encourage a certain behaviour, such as gym persistence, different levels of influence should be investigated at the same time: individual level, policy level, and levels of social and physical environments.

This study's psychological approach focuses mainly on individuals' level because it is the core of social-ecological models. This level includes personal factors, such as attitude, mindfulness, behaviour, beliefs, perceived barriers, motives, pleasure, skills, weakness, disability, age, gender, education level, socio-economic status, and occupation type, self-efficacy, and outcome expectations (J. Sallis et al., 2008). Self-

efficacy was found to be the strongest psychological predictor for physical exercise (Bandura, 1986; Dishman & Sallis, 1994). The psychological approach of this thesis considers self-efficacy, intrinsic motives, and outcome expectation as the main factors that would directly raise the likelihoods to persist on gym exercises.

According to East et al. (2005), in the services field, the semi-continuous use of a service is a sort of behavioural loyalty; this retention could be measured by the time the customer spends on using the service or by repeated purchases. In the gym context, some scholars consider that the frequency of using the gym, which is represented in the number of times that gym members spent in the gym exercising, could be an indicator of satisfaction and retention (Ferrand et al., 2010; Tally, 2008).

Ferrand et al. (2010) posited that the weekly frequency of attendance to the gym to exercise is an important factor for members retention and would positively impact reflect on the gym profitability. Tharret and Peterson (2012) supported this argument, pointing out that the exercise frequency is relevant to the gym member's decision to hold his/membership or to dropout. Thus, the current study brings the relationship between exercise persistence (measured in frequency and time spent) and loyalty into investigation to understand the relationship between the two constructs.

b. Intrinsic Motivation

Among the aspects that influence gym exerciser persistence or dropout behaviours, motivational aspects stand out. Motivation could be conceptualised as the effort direction and intensity (Lox et al., 2010, p. 48). According to Vallerand and Losier (1999), motivation is the key factor in understanding sports persistence behaviours. To illustrate, individuals are super motivated to gain a behaviour or enhance a certain ability (e.g., to master aerobics, squats, or headshots in football). Consequently,

motivated individuals are more likely to persist in the activity, no matter how many repeated failures they faced or obstacles they had (Lox et al., 2010). Prior studies have proven the casual relationship between motivation and persistence in physical activities (e.g., Pelletier et al., 2001; Ryan & Deci, 2000; Vallerand & Losier, 1999).

Intrinsic motivation represents the highest degree of self-determination. When individuals hold an intrinsic motivation towards an activity, they would deem the activity as enjoyable (Deci & Ryan, 1985; Ryan & Deci, 2000; Vallerand & Losier, 1999). Pleasure is the main element that pushes individuals to the limits of physical activity when they are intrinsically motivated to exercise. To be intrinsically motivated means to engage in physical activity for the joy of exercise, not to accomplish another outcome. Intrinsically motivated individuals engage in behaviours that will obtain a level of challenge; therefore, those individuals want to fulfil their autonomy and competence needs (Ryan & Deci, 2000; Vallerand & Losier, 1999).

As reported by Ingledew and Markland (2008), participation motives have different functional significance levels based on the orientation of intrinsic and extrinsic motivations. Individual's attendance and the continuity or discontinuity of sports practicing and exercise behaviours could be predicted based on the initial motive of the individual, whether intrinsic or extrinsic (Deci & Ryan 1985; Lintunen et al., 1999). Some researchers have examined the impact of both intrinsic and extrinsic factors, such as expected rewards, on physical exercise behaviours and their persistence (Ingledew & Markland, 2008; Ingledew et al., 2009). Previous research has suggested that intrinsic motivation for physical exercise persistence in the long term is more predictive than extrinsic motivation (Teixeira et al., 2012).

c. Self-Efficacy

According to Bandura (1986), self-efficacy refers to an individual's belief in his/her capabilities to reach the desired level of performance. Self-efficacy is the reflection of confidence of the personal abilities to show control over the circumstances just to produce specific performance (Bandura,1986). Self-efficacy was hypothesised to influence decisions, persistence, effort, and related achievements (Bandura, 1977).

Having an active lifestyle is not likely to be initiated unless one is confident that her or she can sustain their exercises regularly (Bandura,2001). When gym customers are confident about their ability to perform their gym exercises persistently, even if they face some barriers, they can be said to have self-efficacy. According to Bandura (2004), high levels of self-efficacy influence behaviour engagement and the goals individuals set for themselves. People who have high self-efficacy, believing in their abilities to accomplish a task, would participate more frequently, work harder, and persist for long time periods even when they face obstacles (Schunk, 1995).

When gym members have a higher level of self-efficacy, they would probably set higher exercise targets, attend the gym more frequently, and exercise intensively for longer durations. Because self-efficacy is not limited to achieving performance, its influence extends to requisite knowledge and skills to get better and better (Schunk, 1995). Self-efficacy would improve when the individual receives persuasive information, such being told, "you can do this." Receiving such positive feedback would improve self-efficacy, although temporarily (Schunk, 1995).

Self-efficacy is a successful predictor in sports settings for exercise improvement and its maintenance (Bauman et al., 2012), and it also predicts sports performance (Moritz et al., 2000). With respect to socio-structural obstacles, it has been contended that high levels of self-efficacy would overcome barriers to persistence and

achieving a certain behaviour (Bandura, 2004). Among all the SCT variables, self-efficacy was found to be the most important factor influencing exercise behaviour, especially in follow-up examinations (Miller, Mazzeo, & Fries, 2012; Dewar, et al., 2013). Self-efficacy is significant predictor for physical activity behaviours in people of different ages: preadolescent children (Bean et al., 2012), teenagers (Dewar et al., 2013), middle-aged individuals (Rogers et al., 2007), and older adults (White, Wójcicki, & McAuley, 2012).

Jung and Brawley (2011) studied exercise persistence from the perspective of SCT targeting working mothers. They found that even when exercise barriers vary, mothers who have a high level of self-efficacy would persist on their exercise goals. Further, their findings show that the mothers with high efficacy would manage their time to achieve their exercising goals besides the other goals they possibly have.

d. Outcome Expectations

Outcome expectation is defined as the estimate of the behavioural consequences and results (Bandura, 1997). Bandura (1997) pointed out that people depend highly on their outcome expectations and judgments when they decide to achieve. In SCT, outcome expectation is considered one of the personal factors that could be hypothesised to influence sports consumers to exercise persistently in the gym. Bandura suggested that outcome expectations of participating in health-related behaviours (e.g., exercise persistence or a diet) give considerable social outcomes, self-evaluative consequences, and physical outcomes.

Outcome expectations are well recognised as a determinant of physical exercise engagement and persistence (Marszalek et al., 2017). Outcome expectations are the beliefs that a certain behaviour (e.g., exercise persistence in the gym) will achieve

desired results (Wojcicki, White, & McAuley, 2009). Outcome expectation was found to be a determinant of physical activity in different contexts (King, 2001; Williams et al., 2005). Individuals are more likely to perform the behaviours they believe would offer them valuable and useful consequences (Michaeli et al., 2015). Gym members who have high expectations from their gym practices will persist to achieve their expectations.

SCT variables can influence the outcome expectation, just as they can influence the other variables. Self-efficacy and outcome expectations can influence each other. For example, Bandura (1997) pointed out that individuals who have a strong sense of self-efficacy (e.g., a high level of confidence that they can exercise for 10 weeks) would probably set a positive outcome expectation for themselves; those outcomes could be physical, social, and self-evaluative.

Resnick (2001) applied SCT on a retired community in the United States of America (USA) to understand their current exercise behaviour. The research findings showed that outcome expectation was one of the strongest antecedents that could explain current exercise behaviour compared to other SCT constructs.

Outcome expectations could be enhanced using technology supports. As Bandura (1997) suggested, the technology revolution has allowed the testing of positive and negative outcomes more readily than before. For instance, gyms can adopt the technology that can provide tables and graphs to provide monetary estimates, time, and effort needed to reach a specific target. Some advanced technologies can show customers how they would appear after following a specific training schedule.

According to McAuley et al. (2010), outcome expectations have been studied less than the self-efficacy construct and have rarely been assessed, even though outcome expectations could offer a great contribution to exercise. Hence the current

study seizes the opportunity to address this gap by investigating the influence on outcome expectation on gym exercise persistence.

2.5 Chapter Conclusion

This chapter presents the theoretical framework of the marketing and sports psychology pathways leading to loyalty. Chapter two shows the supporting literature and theories. At first, it starts by presenting the marketing path through the customer engagement theoretical lens and its antecedents, which are quality, involvement, and satisfaction. Then, the sports psychology theories, which are self-determination and SCT and propose the determinants of exercise persistence—*intrinsic motivation, self-efficacy, and outcome expectations*—are explained. It also highlights the gaps in the literature that the current research aims to fill. First, we found that customer engagement is studied more in conceptual studies, and there are few empirical studies, especially in the sports domain. Perceived quality construct has not been studied enough as an antecedent of customer engagement. Exercise persistence in the gym has not been widely studied. Thus, there is an opportunity for this research to contribute more in terms of the relationship of exercise persistence with the other constructs (*intrinsic motivation, self-efficacy, and outcome expectation*). The unique contribution of this research is that it may identify the possible link between sports psychology and loyalty, as it would also compare the two paths and their ability to explain loyalty.

CHAPTER 3: HYPOTHESES AND CONCEPTUAL FRAMEWORK

3.1 Introduction

The hypotheses and conceptual framework chapter aims to present the expected relationships between the research variables in both marketing and sports psychological paths, as revealed by the literature review. Based on the literature review, eight main hypotheses were developed, and three dimensions of customer engagement were proposed (vigour, absorption, and dedication). Moreover, this section presents the research conceptual framework model. Lastly, the chapter introduces the hypothesis table, introducing each of the hypothesis that would guide the research conceptual framework.

3.2 Antecedents of Customer Engagement

The customer engagement concept is currently in its early stages of development. Some scholars have proposed a conceptual foundation of the possible antecedents and consequences of customer engagement (Pansari and Kumar, 2016), and customer brand engagement (Brodie et al., 2011; Hollebeek, 2011). Nevertheless, important part of the proposed potential relationships in the literature have not been empirically tested sufficiently. Moreover, the nature of the casualty relationships between the antecedents and customer engagement would vary depending on whether the customer is new or existing (Brodie et al., 2011; Hollebeek, 2011; Pansari & Kumar 2016). The current research investigates the existing customers' perspectives on gym brand engagement. Building on a large literature review presented earlier, the present research considers three antecedents of gym brand engagement: perceived gym quality, customer satisfaction and involvement.

3.2.1 Effects of Quality on Engagement

Service quality is a result of the evaluation process, where expectations are compared with the actual service Gronroos (1984). According to Hollebeek (2011), there is a gap in the literature regarding the relationship between quality and customer engagement. Abbas, Gao, and Shah (2018) suggested the relationship between service quality and customer engagement as a future research direction. Therefore, the current research aims to fill the gap and presents perceived quality as one of the antecedents of customer engagement in the gym field.

In the conceptual research presented by Hollebeek (2011), perceived relationship quality is proposed as one of the potential consequences of customer brand engagement in the services domain in the contexts of co-creativity. According to Hollebeek (2011), existing customers with higher brand engagement hold positive levels of satisfaction, trust, and commitment towards a particular brand (relationship quality indicators), which could drive customer loyalty. Hapsari, Clemes, and Dean (2017) proposed a hierarchical model to examine the influence of different marketing constructs on airline passenger's loyalty. The research found an interrelationship among some marketing variables, including service quality, brand image, perceived value, customer engagement, and loyalty (Hapsari, Clemes, & Dean, 2017).

Service quality had a direct influence on customer loyalty, whereas the influence of service quality on customer engagement has not been directly tested. Prentice et al. (2019) studied the relationship between service quality and brand engagement and highlighted that service quality moderates the relationship between brand love and customer engagement. Hapsari et al. (2016) assessed the indirect impact of service quality on customer engagement through perceived value and brand image but found no significant effects. Roy et al. (2018) tested the direct effects of service quality on customer engagement behaviour and found a partially significant positive

effect. In the luxury hospitality context, Islam et al. (2019) empirically tested the effect of service quality on customer engagement and demonstrated a significant positive effect. In the banking context, Abror et al. (2019) proved empirically that service quality has a significant positive influence on customer engagement.

Sometimes, customers could have low levels of satisfaction and emotions towards the gym, but they keep renewing their loyalty membership because of a necessity, such as when the gym service is a part of student accommodation or there are no other gyms with easy access for the customer. According to Pansari and Kumar (2017), those customers are described as “fill in need” customers. To encourage those customers, gyms must work hard to get those customers to engage by improving the service quality. Providing better service quality motivates customers to form a stronger relationship with the firm and encourages them to purchase more (Pansari & Kumar 2018). If there were a lack of satisfaction and emotional attachment, perceived quality could assist the relationship between the customer and the gym and encourage customers to engage with the gym.

Based on the findings in the field on how perceived quality impacts customer engagement, this research set perceived quality as an important antecedent of customer engagement. This research proposes the following hypotheses about the relationship between perceived quality and customer engagement:

H1: The perceived quality of the gym positively impacts customer engagement with the gym.

3.2.2 Effect of Satisfaction on Customer Engagement

Satisfaction refers to a customer’s overall evaluation of an offer performance (Johnson & Fornell, 1991). Scholars have argued that customer satisfaction is one of the possible customer engagement determinants (Calder et al., 2013; Pansari & Kumar, 2017; van

Doorn et al., 2010). With reference to Bowden (2009) and Kumar et al. (2019), satisfaction is an important element in the customer engagement process. According to Pansari and Kumar (2016), customers would engage with the firm only if they trust the relationship with that firm, satisfied with it, and have an emotional bond. It is possible that customers who have positive, favourable evaluations would engage more. However, this relationship has not been tested in the sports domain.

Van Doorn et al. (2010) suggested that attitudinal antecedents are one of the most essential antecedents influencing customer engagement, especially attitudinal antecedents, such as satisfaction, trust, and commitment. Hollebeek (2011) supported this argument and pointed that, customer satisfaction is one of the potential consequences of customer brand engagement for new and current customers. A satisfactory experience will motivate current gym members to engage favourably with their gym. Conversely, when gym members are not satisfied about their gym, they are less likely to engage.

The role of satisfaction in predicting customer engagement behaviours has been empirically tested in other fields such as mobile apps and health care. Thakur (2018) conducted research in the context of mobile shopping and found a significant influence of customer satisfaction on customer engagement; satisfied customers were more likely to respond to the retailer and share positive online review. Moreover, a prior research in the health context suggested that patients who are satisfied with their physician are more likely to return, recommend, and complain less about their physician (Mittal and Baldasare 1996). Although the study did not directly test the impact of patient's satisfaction on customer engagement, it is plausible that satisfaction has an influence on customers engagement-related behaviours. Harter, Schmidt, and Hayes (2002) noted that there is a positive relationship between high levels

of employee engagement and customers satisfaction. Roy et al. (2018) indicated that satisfaction has a positive partially significant effect on customer engagement. In the banking context, Abror et al. (2019) proved empirically that satisfaction impacts positively customers engagement. Thus, this research argues that customer satisfaction might influence positively customers engagement with the gym. Based on this discussion, it is hypothesised that:

H2: Customer satisfaction with the gym positively impacts customer engagement with the gym.

3.2.3 Effects of Involvement on Customer Engagement

Customer involvement refers to the perceived relevance of a product to customer personal values and needs. Involvement has been considered an important determinant of customer behaviour (Zaichkowsky, 1985). Product category involvement has been positively related to customer motivations to seek product information, decision making, and customer commitment towards brands (Warrington & Shim, 2000; Zaichkowsky, 1985). Customer brand engagement concept as well have level of the perceived relevance, toward brands. brand engagement directly affects customer involvement with the brand (Schultz et al., 2007). However, the two concepts are distinct (Vivek et al., 2012). Hence, addressing this distinction seems like product involvement could increase consumer motivation (Mano & Oliver, 1993), which might affect customer engagement.

The level of involvement with the brand could create a type of continuous psychological commitment to that brand by considering customers' thoughts, emotions, and behaviours (Gordon, McKeage, & Fox, 1998; Swinyard, 1993). Bowden (2009) proposed a conceptual framework for customer engagement in which involvement, trust, and commitment are the antecedents of customers engagement process. Involved

customers are more likely to react in a positive way to marketing efforts that aim to personalise their experiences. This argument is supported by Oliva et al. 1995), who noted the “stickiness” which involvement adds to the customer brand relationship. They argued that highly involved customers are more loyal and hold the brand relationship in the long term. It is possible to argue that highly involved customers would be loyal to their brand of gym and may engage with it.

Dwivedi, Wilkie, Johnson, and Weerawardena (2016) found that product category involvement has a positive direct influence on engagement behaviours. According to Dwivedi et al. (2016), product category involvement could be considered as one of the motivational antecedents of brand engagement-related behaviours, and the influence of involvement could vary depending on customers’ interest and relevance associated with a certain category. This finding allowed us to reveal the effects of category involvement on customers engagement. Further support for this argument is presented by Saks’ (2006) examination of employee engagement, which provided a conceptual narrower scope for the involvement concept relative to customers brand engagement that incorporates cognitive, emotional, and behavioural aspects. Paralleling Saks’s (2006) research in the employee engagement area, the current research expects a positive impact for involvement on customers’ engagement. The study proposes the following hypothesis:

H3: Higher customer involvement with the gym leads to increased customer engagement with the gym.

3.3 Customer Engagement and Loyalty

The present study attempts to adopt and examine the three dimensions of consumer brand engagement proposed by Dwivedi (2015) for various reasons. Dwivedi defined

consumer brand engagement as “consumers’ positive, fulfilling, brand-use-related state of mind that is characterised by vigour, dedication and absorption”. In the domain of customer-brand relationships, vigour refers to a higher degree of energy when interacting with a particular brand and customers’ willingness to put effort into these interactions (Schaufeli et al., 2002). Vigour here signifies the willingness to exercise in the gym continuously for longer periods with a high level of energy. Dedication denotes a state of “significance, enthusiasm, inspiration, pride, and challenge” (Schaufeli et al., 2002). Dedication refers to the purpose for which a member is joining the gym, exercising, accepting the challenges, and showing enthusiasm for the gym, while absorption means that the person is “fully concentrated and happily engrossed in brand interactions where time flies quickly” (Schaufeli et al., 2002). Absorption here signifies immersed gym participation, performing gym exercise with happiness, and forgetting about everything else when they are at the gym.

According to Brodie et al. (2011) and Hollebeek (2011), each dimension of customer engagement vigour, dedication, and absorption corresponds to behavioural, emotional, and cognitive aspect. Parumasur and Ashley (2019) conducted research on employee engagement that confirmed the three dimensions and found that the contribution of absorption is the most important dimension to predict employee engagement, followed by dedication and vigour. Their research findings did not show any difference in terms of absorption, vigour, and dedication between female and male. As discussed in the previous chapter, in the present work, we consider absorption, vigour, and dedication as the three dimensions of customer engagement.

Marketing scholars have widely promoted the role of customer engagement in explaining the loyalty. According to Bansal and Chaudhary (2016), if a company wants to increase its customers’ loyalty, then it must consider brand-enhancing customer

engagement through offline and online strategies. Hollbeck (2009) illuminated the importance of customer engagement and presented a model to clarify the relationship between customer engagement and other variables, including loyalty, where loyalty was considered a consequence of customer engagement. Patterson et. al. (2012) investigated the influence of customer engagement in the services industry and indicated that customer engagement has potential contributions in explaining loyalty.

King, Sparks and Wang (2014) investigated the impact of customer engagement in shaping loyalty in truism brands context. Their research considered customer engagement as one of the antecedents of loyalty in a study conducted on 496 hotels and airline customers. The research outcome demonstrated that customer engagement plays a vital role in enhancing customers' loyalty. The findings pointed out that administration brand loyalty is not only shaped by administrative utilisation experience, but it can also be increased through the customers' engagement, and its increase goes beyond the administrator experience.

King and Sparks (2012) explored the role of customer engagement in promoting the brand loyalty. The research designed a sequential mixed approach, which consists of two phases: quantitative and qualitative. Phase one presented a customer engagement measure, and in the second phase, interviews were conducted with 16 highly engaged customers. The outcomes of the study showed that customer engagement affects brand loyalty in a positive way. Customer engagement has a crucial role in the services industry, as it has a significant impact on loyalty. It has not been adopted in the sports industry sufficiently, although enhancing customer engagement within the gym would be a profitable strategy that could directly impact gym loyalty. Therefore, the research postulates the following:

H7: Customer engagement with the gym positively impacts customer loyalty towards

the gym.

3.4 Antecedents of Exercise Persistence

Exercise persistence in the gym could be promoted through three different psychological aspects: intrinsic motivation driven from self-determination theory, self-efficacy and outcome expectations, which are adapted from SCT.

3.4.1 Effects of intrinsic Motivation on Exercise Persistence

Intrinsic motivation is the most self-determined extreme in the self-determination continuum (Vallerand et al., 2008). This type of motivation is an innate motivation; it is fully autonomous and self-regulated. Intrinsic motivated gym members would practice and exercise persistently for their own pleasure and enjoyment with no extrinsic pressure, such as seeking a reward or harm avoidance. According to Deci and Ryan (2000), intrinsic motivation is one of the important antecedents of sports participation in the short and long terms; when exercisers are intrinsically motivated, they will value their practices and will persist.

The sports literature has pointed out that athletes who show higher levels of intrinsic motivation to participate are the most likely to persist on their participation (e.g., Hagger et al., 2007; Pelletier et al., 2001). Intrinsic motivation encourages people to track challenges, master their skills, and search for new activities to try (Hagger & Chatzisarantis, 2007). Research in sports persistence found that intrinsic motivations increase as the participants persist in their sports over time (Pelletier et al., 2001). Hagger and Chatzisarantis (2007) supported this argument and indicated that more self-determined types of motivation, such as intrinsic motivation, would lead to greater persistence in behaviours. A seminal study of motivation and sports persistence for female swimmers showed that intrinsic motivation has significantly predicted

swimming persistence over time (Pelletier et al.,2001). Consequently, for a gym member to maintain his/ her exercises in the gym persistently, then intrinsic motivation should be nurtured and internalized. Accordingly, the study hypothesises as follows:

H4: Higher intrinsic motivation leads to an increased exercise persistence in the gym.

3.4.2 Effects of Self-Efficacy on Exercise Persistence

Bandura (1989), who developed the SCT, defined self-efficacy as the individual's perception of his/her own abilities to perform a particular task successfully. Bandura (1986) noted that “what people think, believe, and feel affects how they behave” (p. 25). In the recent commentary on SCT, Bandura (2004) presented a framework specifying the main antecedents of health behaviours; self-efficacy and outcome expectations were included. Self-efficacy is considered the core variable of SCT, as it could influence behaviour in two ways, directly or indirectly, through a mediator such as goals (Dewar et al., 2013).

A recent study has indicated that, for predicting physical activity behaviours, self-efficacy is the strongest predictor among SCT constructs (Bean, Miller, Mazzeo, & Fries, 2012). Dewar and his colleagues (2013) found that self-efficacy was the only construct in their SCT-based model that could predict physical activity persistence for 12 months period. Previous studies have demonstrated the importance of self-efficacy in predicting physical activity behaviours among adolescents (Lubans et al., 2008; Plotnikoff, et al., 2013). Further, the literature shows the great support influence of self-efficacy in mediating the change in physical activity behaviours between children and adolescents (e.g., Taymoori & Lubans, 2007). When gym members believe in their capabilities and view gym exercises as a task they can achieve successfully, then they are more likely to persist in their exercises in the gym. Thus, individual's self-efficacy can affect their exercise persistence in the gym, as cast in the following hypothesis:

H5: Customer self-efficacy positively impacts exercise persistence in the gym.

3.4.3 Positive Outcome Expectations

In SCT, outcome expectations are defined as the judgment of likely outcomes that such behaviour would produce (Bandura, 1986). In this research context, outcome expectations are the belief that attending the gym and exercising persistently will achieve a specific consequence. Outcome expectations can be negative or positive. According to Bandura (1986), negative expectations could be considered as behaviour barriers, while positive outcome expectations are behaviour incentives. Positive outcome expectations could be the expected physical pleasure and pleasant experiences, while the negative form of outcome expectations is like physical pain and negative experiences (Bandura, 1986). Outcome expectations of gym members could be powerful deterrents and are not limited to physical expectations. For example, they could be social, such as improving social standing, or emotional, such as going to the gym to get the satisfying feelings of exercising.

Several sports studies have emphasised the positive influence of outcome expectations on exercise and persistence behaviours. Research on exercise behaviour in the context of behaviour models (e.g., watching exercise movements as a model) found that outcome expectations of the observers of the behavioural model were positively related to exercise performance and self-regulation (Oyibo et al., 2018). Moreover, Resnick (2001) proposed a social cognitive model to explain current exercise behaviour for older adults who live in continuing care retirement community in the United States. The research found that self-efficacy and outcome expectations were strong predictors of current physical exercise for older adults. Accordingly, this research argues that outcome expectations affect gym exercise persistence, especially if customers have positive outcome expectations; they would be more likely to persist

in their gym exercises. The next hypothesis is as follows:

H6: Customer outcome expectations have a positive effect on exercise persistence in the gym.

3.5 Exercise Persistence and Loyalty

Exercise persistence is continuous participation or sports adherence (Ryan and Deci, 2000). Gym members who maintain their exercises and improve their skills are said to be persistent. Exercise persistence is the opposite of laziness and dropping out from the gym. When the gym member persists, it is essential for him/her to exercise intensively and frequently enough (Biddle & Mutrie 2008). Exercise persistence and exercise patterns are usually measured with frequency, duration and/or intensity. However, there is a lack of research that links exercise persistence in the gym and loyalty, while there is little known about the frequency of gym attendance and loyalty.

Frequency of participation and the proportion of participation are two main aspects of behavioural loyalty (Havitz & Howard, 1995; Park, 1996). Exercise persistence is the continuous participation or sports adherence (Ryan and Deci, 2000). Lwasaki and Havitz (2004) posited that loyalty measurements must include both attitudinal and behavioural components, highlighting that frequency (number of purchases or participation), intensity, and duration are behavioural components of loyalty. On the other hand, Bodet's (2012) study contrasted the conception that high frequency of sports participation is merely a characteristic of loyalty and commitment, as it did not find any significant links for that relationship in sports participation services.

Ferrand and his colleagues (2010) suggested that satisfied gym members attend more than unsatisfied customers, and those who attend more frequently have a greater

intention to renew their memberships. Considering this frequent attendance as a form of behavioural loyalty that leads to a high probability for repurchase intentions (Ferrand, Robinson, & Valette-Florence, 2010), it is possible that exercise persistence in a specific gym could lead loyalty, and it seems that it could lead directly to loyalty. However, the influence of exercise persistence in the gym has not been subject to explicit previous empirical research, taking into account previous works on exercise persistence as well as previous works on loyalty, we expect that:

H8: Higher exercise persistence in the gym leads to higher loyalty towards the gym.

3.6 Conceptual Framework

Based on the proposed theoretical framework in Chapter 2 and the hypothesised relationships in the current chapter, the following conceptual framework is designed. This research investigates the impact of three independent variables—perceived quality, satisfaction, and involvement—on customer engagement as well as investigates the influence of three independent variables—intrinsic motivation, self-efficacy, and outcome expectations—on exercise persistence. Loyalty is studied as an outcome of exercise persistence and customer engagement. The schema of the study is presented in Figure 3. Table 3 summarises all the hypothesised relationships.

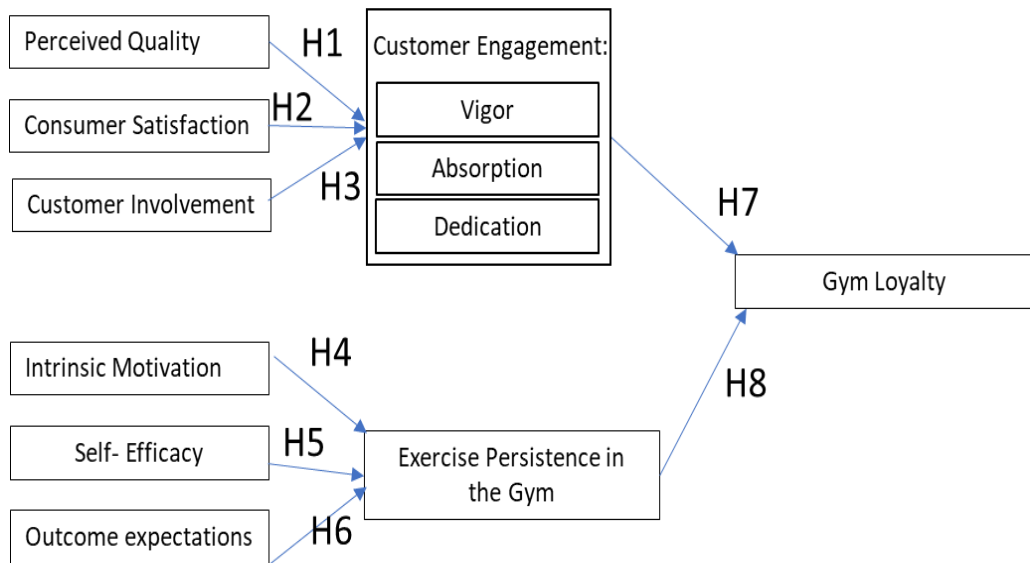


Figure 3. Conceptual Framework

Table 3. Hypotheses summary

Hypothesis number	Hypotheses	The Path of
H1	The perceived quality of the gym positively impacts customer engagement with the gym	Marketing
H2	Customer satisfaction with the gym positively impacts customer engagement with the gym	Marketing
H3	Higher customer involvement with the gym leads to an increased customer engagement with the gym.	Marketing
H4	Higher intrinsic motivation leads to an increased exercise persistence in the gym.	Psychology
H5	Customer self-efficacy positively impacts exercise persistence in the gym.	Psychology
H6	Customer outcome expectations have a positive effect on exercise persistence in the gym.	Psychology
H7	Customer engagement with the gym positively impacts customer loyalty towards the gym	Marketing
H8	Higher exercise persistence in the gym leads to higher loyalty towards the gym.	Psychology

CHAPTER4: METHODOLOGY

4.1 Introduction

The third chapter of this work presents the hypothesis development and the literature related to the presented associations and the conceptual model that were investigated in this research. The current chapter presents the methodologies that were used to examine the casual relationships in the hypothesis. This chapter consists of six sections. First, we present the research type to explain the approach employed. The chapter explains the measurement items that were adopted in the study and the questionnaire design. Further, the chapter moves on to providing insights about the research context of the study and briefly explains the data collection methods and sampling procedure. Lastly, this chapter also presents the implemented data analysis, which is the focus of Chapter 5.

4.2 Research Type

The current thesis explores the impact of two paths on customer loyalty at the gym. The first path is the marketing approach, which suggests that gyms could adopt the customer engagement concept founded in the brand context to increase their members' loyalty. The marketing approach includes three independent variables: (a) satisfaction, (b) perceived quality, and (c) involvement. The three aspects were tested as independent variables that affect customer engagement. Moreover, customer engagement were tested twice, first as a dependent variable that is influenced by the three marketing aspects, and as an independent variable where it influences gym loyalty. The second path is adopted from the sports psychology field; it offers an exploration of the psychological construct that influences gym customers' exercise persistence, which leads to gym loyalty. Multiple psychological aspects of exercise persistence were

considered, including (a) customer intrinsic motivation to exercise, (b) self-efficacy, and (c) outcome expectation; these three constructs were regarded as independent variables. The effect of each independent construct on gym exercise persistence has been tested. Further, the exercise persistence in the gym was examined in the research twice, first as a dependent variable that is affected by the three psychological variables and as an independent variable where it affects gym loyalty.

The study investigated the casual relationships between independent predictors and dependent variable. Accordingly, this study adopted a deductive quantitative explanatory approach, in which researchers set a logical hypothesis supported by theories. Then, the hypothesis is tested by collecting data from the presentative sample and applying statistical methods to test the relationships in the hypothesis, analyse results and generalise it to a greater population (Cooper & Schindler, 2014). The quantitative approach is employed in this study to offer an empirical examination of the two different pathways of marketing and sports psychology to better explain gym loyalty better. All the variables in this study were well-conceptualised and tested. Moreover, all the measurement items of the research variables have been well-established and examined in the literature.

4.3 Measurement Items and Questionnaire Design

The data were collected through self-reported type of surveys. The surveys were offered in two languages, Arabic and English, to capture more responses. The online survey was shared via Google forms for a better reach, which is an online questionnaire platform that is easy to use. The survey was distributed using a convenience sampling approach. All the measurement scales are validated scales that have been adapted from previous marketing and sports psychology literature. The survey consisted of five

sections, and it started with a consent letter to inform the participants about the following: (a) the aim of this research, (b) description of the marketing and sports psychology approaches, (c) suggested time needed to answer all the questions in the survey, (d) contact details of the presented researchers for any further information, and (e) confidential agreement (see Appendix 1).

For the purposes of the study, the adapted scales were slightly changed to fit in the study context, which is the gym in which customers are members. For example, the first pre-existing item of satisfaction, which is adopted from García-Fernández et al. (2019), expressed as “I am satisfied with the services of this CrossFit Centre,” was rephrased to “I am satisfied with the services of my gym”. Table 4 shows the research hypotheses, variables that have been measured, measurement items, and the literature source from which the scales were adapted.

The first section in the survey included two filtering questions that revolved around questions related to the respondent’s gym membership status and the respondent’s location. The first question was “Are you a gym member?” with two options: “Yes” or “No”. Participants who responded to the first question with “No” were supposed to end the questionnaire immediately, while those who answered with “Yes” would progress to the second question. This question aimed to activate the respondent’s mindset about the gym in which he/she is a member while answering the rest of the questions. The second filtering question was “Do you live in_____?” with two possible answers: “Qatar” or “other”. Respondents who answered that they were living in Qatar proceeded to the rest of the questions. This question was a filtering question to isolate and keep the focus on customers in Qatar only. The third question in this section consisted of two items on a formative scale to measure exercise persistence. Respondent provided information about their exercise persistence by answering two

questions: “What is the frequency of attending the gym in the last month?”, giving them five possible options to choose from: (1) Did not attend or have attended (2) Less than 5 times, (3) 5 to 7 times, (4) More than 7 times, and (5) daily. The second item is “In general, what is the average time you spend exercising at the gym?”. Customers had six options to choose from: (1) Did not attend, (2) Less than 10 minutes, (3) 10 to 20 minutes, (4) 20 to 40 minutes, (5) one hour, and (6) More than one hour. This formative scale, including its two items, aimed to understand customers’ exercise persistence patterns.

The second section contained five constructs addressing respondents’ intrinsic motivation with a 4-item scale, satisfaction with a 3-item scale, self-efficacy with a 5-item scale, involvement with a 4-item scale, and perceived quality with a 4-item scale. The third section had 12 items measuring the respondent’s physical outcome expectation (8-item scale) and loyalty (4-item scale). The fourth section included a customer engagement scale with 17 items covering the three dimensions of customer engagement: vigour, dedication, and absorption. All the questions in sections two, three, and four were measured using a 5-point Likert scale, where 1 represents “strongly disagree,” which is the lowest point, and five represents “strongly agree,” which is the highest point in the scale. The fifth section involved questions about personal information: gender, age, educational qualification, and nationality (Qatari, others). The questions in this section were multiple choice questions; participants were supposed to choose one answer only.

Based on the hypotheses developed in Chapter 3, Table 4 presents the measurement scales for each variable, along with their sources.

Table 4. Questionnaire mapping table

Variable	Items	Source	Hypothesis
Perceived Quality (independent variable)	<ol style="list-style-type: none"> 1. My gym is in very high quality. 2. My gym is in very consistent quality. 3. My gym offers excellent features. 4. My gym is very reliable. 	Spry et al. (2011)	H1: The perceived quality of the gym positively impacts customer engagement with the gym.
Satisfaction (independent variable)	<ol style="list-style-type: none"> 1. I am satisfied with my gym services. 2. I am satisfied with my decision to join this gym. 3. I am pleased to have made the decision to become a member of this gym. 	García-Fernández et al. (2019)	H2: Customer satisfaction with the gym positively impacts customer engagement with the gym
Involvement (independent variable)	<ol style="list-style-type: none"> 1. My gym practice interest me a lot. 2. My gym practice. matters a lot to me. 3. I attach great importance to my gym practice. 4. I am fascinated by my gym practice. 	Dweivedi (2015)	H3: Higher customer involvement with the gym leads to an increased customer engagement with the gym.
Intrinsic motivation (independent variable)	<ol style="list-style-type: none"> 1. I get pleasure and satisfaction from participating in gym exercises 2. I find exercise a pleasurable activity. 3. I exercise because it's fun 4. I enjoy my exercise sessions. 	Liu et al. (2020)	H4: Higher intrinsic motivation leads to an increased exercise persistence in the gym.
Self-efficacy (independent variable)	<ol style="list-style-type: none"> 1. Even if I have worries and problems, I am confident that I can complete my exercises at the gym for the next 3 months. 2. Even if I feel depressed, I am confident that I can complete my exercises at the gym for the next 3 months. 3. Even if I feel tense, I am confident that I can complete my exercises at the gym for the next 3 months. 	Oyibo et al. (2018)	H5: Customer self-efficacy positively impacts exercise persistence in the gym.

Variable	Items	Source	Hypothesis
	4. Even if I am tired, I am confident that I can complete my exercises at the gym for the next 3 months.		
Outcome expectation (independent variable)	<ol style="list-style-type: none"> 1. My gym exercises will improve my ability to perform daily activities. 2. My gym exercises will improve my overall body functioning. 3. My gym exercises will strengthen my bones. 4. My gym exercises will increase my muscle strength. 5. My gym exercises will improve the functioning of my cardiovascular system. 6. My gym exercises will improve my social standing. 7. My gym exercises will make me more at ease with people. 8. My gym exercises will increase my acceptance by others. 	Oyibo et al. (2018)	H6: Customer outcome expectations have a positive effect on exercise persistence in the gym.
Customer Engagement	<p style="text-align: center;">Vigour</p> <ol style="list-style-type: none"> 1. In my gym, I feel full of energy. 2. In my gym, I feel strong and ous 3. When I get up in the morning, I feel like going to my gym. 4. I can continue practicing for extensive periods at a time. 5. In my gym, I am mentally very resilient. 6. In my gym, I always persevere, even when things do not go well. <p style="text-align: center;">Dedication</p> <ol style="list-style-type: none"> 1. My gym practice. is full of meaning and purpose. 2. I am enthusiastic about my gym. 3. My gym inspires me. 4. I am proud of my gym. practice 5. My gym exercises are challenging 	Menguc et al. (2013)	H7: Customer engagement with the gym positively impacts customer loyalty toward the gym.

Variable	Items	Source	Hypothesis
	Absorption		
	<ol style="list-style-type: none"> 1. Time flies when I am at the gym. 2. When I am exercising at the gym, I forget everything else around me. 3. I feel happy when I am exercising intensely at my gym. 4. I am immersed in my gym practice. 5. I get carried away when I am practicing at my gym. 6. It is difficult to detach myself from my gym. 		
Loyalty	<ol style="list-style-type: none"> 1. I use this gym as my first choice compared to other gyms. 2. It would be costly in terms of money, time, and effort to end the relationship with the gym. 3. I will continue considering this gym as my main gym in the next few years. 4. I would recommend this gym if somebody asked for my advice. 	García-Fernández et al. (2013)	Dependent Variable
Exercise Persistence	<p>1-Frequency of attending the gym in the last month</p> <ol style="list-style-type: none"> 1. Did not attend 2. Less than 5 times 3. 5 to 7 times 4. More than 7 times 5. Daily <p>2-The average time spent exercising at the gym (duration)</p> <ol style="list-style-type: none"> 1. Did not attend 2. Less than 10 minutes 3. 10 to 20 minutes 4. 20 to 40 minutes 5. One hour 6. More than one hour 		H8: Higher exercise persistence in the gym leads to higher loyalty toward the gym.

4.4 Research Context

The setting of this research is significant, as it is conducted in Qatar. Qatar is an Arab independent state that is a member of the Gulf Cooperation Council countries (GCC). In recent years, the Qatari government has been extremely ambitious towards its sports goals as a part of Qatar National Vision 2030 (Government Communications Office, 2021). Besides hosting major international sports events and World Cup 2022, the country aims to attract more sports-related services as a part of its vision to become a regional hub for sports events (QFC, 2019). Regarding health facts, the International Association for the Study of Obesity (2012) considered Qatar one of the countries with high levels of obesity, especially for the adult populace and male youth populations. The International Diabetes Federation (2012) announced that the diabetes rate in Qatar is higher than the world average. These issues are a result of the fact that Qatari society has low levels of physical activity (Brannagan & Giulianotti, 2014).

The specific research context is the gym members in Qatar. According to the population estimate conducted in 2019, the total population in Qatar is 2,687,871, where men represent 1,995,175 and women represent 692,696 (Ministry of Development Planning and Statistics, 2019). According to the Ministry of Development Planning and Statistics (2019), there are 260 private gyms in Qatar, 25 of which include outdoor playgrounds, and 28 of which are private gyms with swimming pools. The number of multi-activity gyms located in hotels is 97. According to the ministry report, the number of individuals who are members of private gyms in Qatar is 67,243; most of them are men (44,617) (Ministry of Development Planning and Statistics, 2019). The number of people who practice sports in hotels is 4,025 ((2,621 men and 1,404 women), which is less than members of private gyms (Ministry of Development Planning and Statistics, 2019). In total the number of members in both facilities is 71,268 (47,238

men and 24,030 women). These numbers illustrate that gyms and exercise have become a significant part of people's lives in Qatar. However, they also underline the need to enhance gym loyalty to compete in the fitness market in Qatar.

4.5 Sampling

Data were gathered using a convenience sampling technique to collect data, which is also known as availability sampling. This approach is a type of non-probability sampling techniques (Tansey, 2007). This approach depends on collecting data from people who are conveniently available to answer the survey and participate in the study. The researcher distributed hardcopies of the English and Arabic surveys around 11 gyms in different locations in Qatar. With a prior agreement between the researchers and gym managers, the distribution was as follows: first, when the gym member enters the gym to sign his attendance in the front desk, then one of the gym staff would suggest the survey for the gym member and ask him to participate voluntarily. The online surveys were developed on Google forms and were shared through Qu announcements at Qatar University and through other social media platforms such as Instagram.

455 surveys were completed, but only 443 were used for further analyses because some were invalid responses. Responses that did not fit the inclusion criteria that target gym members only were eliminated. Considering that the targeted sample are gym members, most of the participants were in young generations from 18 to 19 and 20 to 39. Around 59% of participants were male, while around 41% were female. In fact, gyms and sports in general are viewed as a masculine activity in eastern societies, so the sample is somewhat representative of this population. In-depth demographic characteristics details are displayed in the descriptive section.

4.6 Data Analysis Methods

The data analysis was split into several phases, starting with data cleaning and descriptive analysis using SPSS 27 and moving to Smart PLS3 to assess the measurement model and structural model and to conduct additional multi-group analysis. In the first phase, hardcopy surveys were coded, and results were recorded on excel sheet. The incomplete hardcopies were excluded. Also, the responses that were received online from non-gym members were excluded, and the online responses that were not received from Qatar were also eliminated. Due to the way that the online surveys are set up on Google forms, all the fields and the questions were set as “required” participants will be notified if they left any field blank. To submit their participation successfully, they were not allowed to skip questions. The second phase was running the descriptive analysis using SPSS 27 to indicate the characteristics of the sample. In the third phase, Smart PLS3 was used to examine the model measurement items and the structural model and to conduct further analysis. First, the exercise persistence was set as a formative construct because its measures are formative, while all the other variables that used a 5-point Likert scale were set as reflective constructs. In the beginning of the analysis, the measurement model was assessed. At this stage, an algorithm test was conducted to investigate the construct’s reliability and validity, discriminant validity, R-squared, and collinearity analysis. Second, the bootstrapping analysis was conducted to test the structural model path. Third, we conducted additional multi-group analysis to investigate the gender and age generations differences. Finally, the discussion section will present the research findings about the associations in the model and compare them with what has existed in the literature.

4.7 Descriptive Data Analysis

All the investigated variables were measured using scales adapted from reputed scholars, with minor modifications to fit in the current study context, which is the gym context. It is worth mentioning that 455 were received, but only 443 were usable for the analysis, as some of them were incomplete or received from non-gym members. This section presents the results of the sample characteristics based on the SPSS software frequencies test.

4.7.1 Sample Characteristics

The current section emphasises the demographic characteristics for the used sample. The descriptive analysis included gender, age, education level, and nationality. Figure 4 presents insights about the demographics.

a. Gender

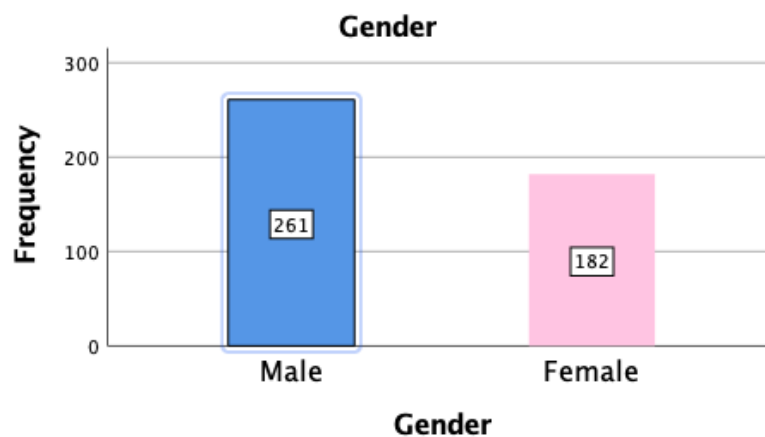


Figure 4: Gender distribution graph

As shown in Figure 4, the majority of respondents are men, with a percentage of 58.9%, while females represent 41.1%. The sample is mainly composed of males due to the convenience sampling method used in distributing the surveys. This attribute is in line with Qatar's statistical data published by the Ministry of Development Planning

and Statistics (2019), where the number of men who are gym members is higher than females, for the year of 2019. This shows that there is a higher possibility of receiving more responses related to gym from men than from women, as the number of females is less significant than the number of males who are gym members.

b. *Age group*

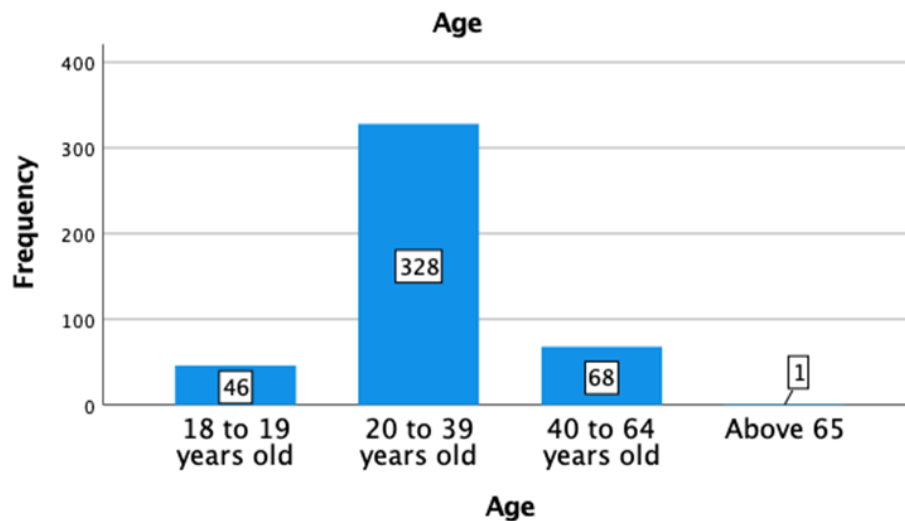


Figure 5: Age group distribution graph

In this research, the participants were classified into three groups. According to Erikson's (1993), human development goes through eight stages, which could be classified based on four age groups: 16–19 years, 40–64 years, 65 and above. The first group period is classified as adolescence (12–18), while the second age group is known as young adults (19 to 39 years), and the age groups of 40–64 and above 65 are in the middle age group and older adult hood group, respectively (Erikson, 1993). In the current study, Erikson's age insights were considered to classify the respondents, with a minor change. Because of ethical considerations, ages below 18 were not targeted in the survey. Thus, for the adolescence group considered ages from 18 to 19 only. As shown in Figure 5, the current study has four age groups ranging from 18 to 19 years,

20 to 39, 40 to 64, and above 65. The demographic analysis shows that most respondents are young adults, their ages range between 20 and 39 years old with 74%. Followed by middle age respondents (40-46 years old) who represent 16.3% of the sample. Then the adolescence group of age (18–19), which represents 10.4% of the sample. The least respondents' group is the older adult hood group (above 65), which represents only 1%.

c. Education level

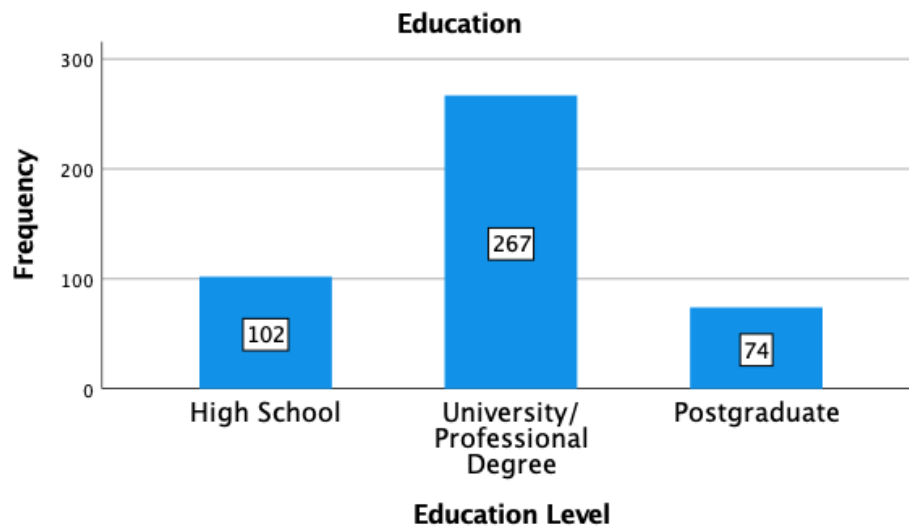


Figure 6: Education level distribution graph

The education level was distributed over three levels: the high school level, university/professional degree level, and the postgraduate level. Respondents with university/professional degree level occupied the first rank with a 60.3%. The second rank is assigned to respondents with high school certificates, with a percentage of 23%. Finally, the respondents who hold a postgraduate degree (including master's and PhD holders) represent 16.7% of the sample (see Figure 6).

d. *Nationality*

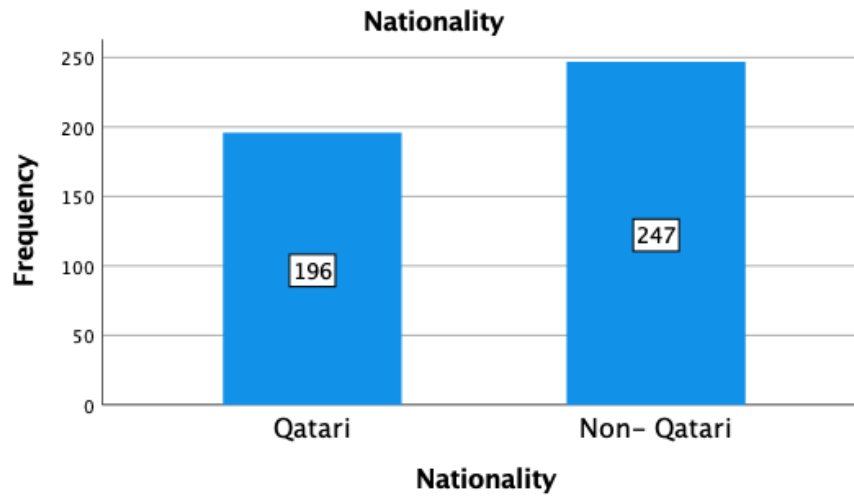


Figure 7: Nationality distribution graph

Most of the respondents were non-Qataris, with a percentage of 55.8%, while the Qatari respondents are 44.2%. This is because most responses were collected from gyms located in Doha city using a convenience sampling method. These results are in line with the fact that Doha is a multicultural marketplace where service providers (e.g., products, services, marketers, brands) and customers come from different cultures (Maher & Elsharnouby, 2020). The obtained results are reflective of the Qatar labour force report (2019), where the number of non-Qataris was 2,228,857 while the number of Qataris was 208,919 (see Figure 7).

4.8 Chapter Conclusion

In summary, this chapter discusses the research type. Then, it explains how the questionnaire was developed, scales and resources. methodology to collect and analysis the data. The followed approach is the convenient sampling approach; data were collected using self-determined surveys. In addition, this chapter discusses the significance of the research context of gyms in Qatar. The number of useable surveys

is 243. SPSS 27 software was used to analyse the descriptive data. The analysis shows that the majority of respondents are men, young ages (20 to 39), and have different education levels that vary, but the majority of respondents are bachelor/ professional degree holders. Further, most of the respondents were non-Qataris. For the model assessment, Smart PLS3 was used.

CHAPTER 5: DATA ANALYSIS AND FINDINGS

5.1 Introduction

This chapter presents the statistical analysis for the collected data using Smart PLS3. Further, it discusses the obtained results. This chapter is divided into four sections, which include measurement model assessment, structural model assessment, additional analysis, and results discussion. Measurement model section presents two steps we followed: the original model and the repeated indicators approach for the second order model. Structural model assessment includes collinearity statistics, direct effects, indirect effects, and the model fit. Third section presents additional analysis related to multi-group analysis for moderating effects of gender and generation. Finally, section four summarises and discusses the results.

5.2 Measurement Model Test

The reliability and validity of the measurement model was first assessed. This section describes the first model we examined and presents the repeated indicators approach for the second-order model, which was developed to avoid the issues we had with the first model. Further, this section presents the reliability analysis and discriminant validity using the Fornell-Larcker criterion and Heterotrait-Monotrait Ratio (HTMT). Moreover, this section discusses the collinearity issues related to the first model.

5.2.1 The Initial Model (Step 1)

In the first model of this study, all the constructs were considered reflective, except exercise persistence. Exercise persistence was set as a formative construct because of the nature of the used scale and items. According to Borsboom et al. (2003), in the formative model, the latent construct is a combination of its indicators and depends on them. In the current research, two indicators were used to represent exercise

persistence: the gym frequency of attendance and the average duration of exercise. Any change in one of those indicators is likely to cause a change in the exercise persistence. Further, the two items do not share a common theme; duration and frequency assess different concepts assessed using different units; duration is measured in hours frequency in days. However, for the reflective constructs, each variable item shares the same theme and the scale (5 Likert scale); deleting one of the items would not change the conceptual domain of the construct, unlike formative items, where adding or removing one of the items would change the whole concept (Jarvis et al., 2003; Rossiter 2002). Figure 8 was created using Smart PLS3. It shows the studied constructs, measurement items, and associations between constructs depending on the theoretical framework and the hypotheses' development chapters.

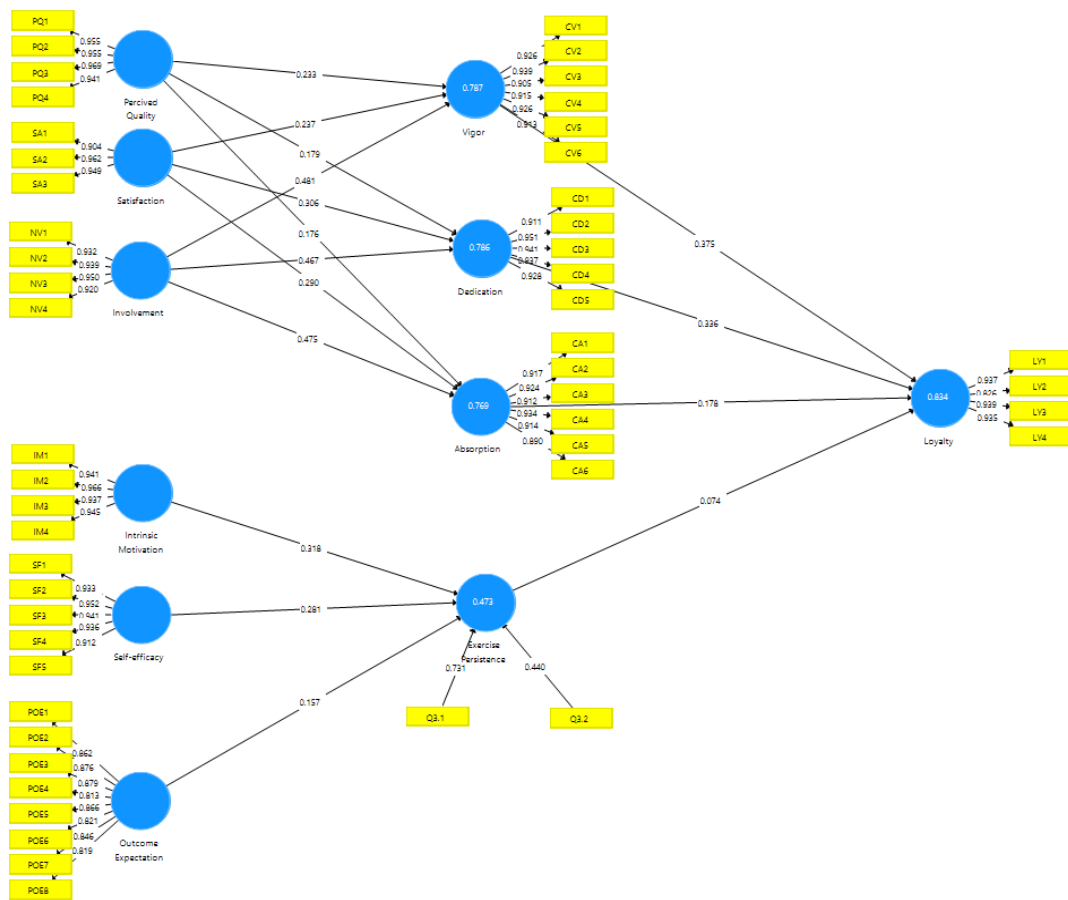


Figure 8: The initial model

Before testing the hypotheses, the measurement model should be tested first to assess the goodness of measurement items before moving to the inner (structural) model. This test was conducted using Algorithm (Path) Smart PLS3.

a. Reliability

The first step in the analysis was to determine the quality of indicators used to measure each construct. Reliability was assessed using the indicator load on hypothetical-defined construct, Cronbach's alpha, convergent validity (average variance extracted (AVE)), and Outer VIF (see table 5). To determine whether an item is reliable, its outer loading should be above 0.70 (Kock, 2013). The loadings obtained in this study were all acceptable. Indicator's loadings were all higher than 0.70. All the reflective construct items had high loadings, ranging between 0.813 and 0.966. The reliability for the items of the formative construct was determined using outer VIF and its significant effect not through indicator loadings. The outer VIF shows the strength of collinearity among indicators within a construct. According to Ringle et al. (2015), the maximum level to accept a VIF value is 5. As shown in Table 5, the two indicators used to measure exercise persistence had 1.218 values for outer VIF, which is acceptable. Further, the composite reliability (CR) desired value was above 0.70 (Hair et al., 2010). In the current analysis, all the studied constructs have acceptable composite reliability values, which ranged between 0.951 and 0.967. The convergent validity was assessed using an average variance extracted (AVE) acceptable value greater than 0.5 (Hair et al., 2010). All constructs had acceptable AVE values, as Table 5 shows the lower value of 0.719.

Table 5: Loadings and quality criteria for the measurement model.

Construct	Item	Outer Loading	Cronbach's Alpha	Composite Reliability	Average variance extracted (AVE)	Outer VIF
Absorption	CA1	0.917	0.961	0.969	0.838	4.450
	CA2	0.924				5.245
	CA3	0.912				5.378
	CA4	0.934				5.757
	CA5	0.914				5.062
	CA6	0.89				4.084
Dedication	CD1	0.911	0.963	0.971	0.871	3.939
	CD2	0.951				6.931
	CD3	0.941				6.005
	CD4	0.937				5.548
	CD5	0.928				4.824
Exercise persistence	Q3.1	0.731				1.218
	Q3.2	0.44				1.218
Intrinsic motivation	IM1	0.941	0.962	0.972	0.897	6.376
	IM2	0.966				9.233
	IM3	0.937				5.028
	IM4	0.945				5.457
Involvement	NV1	0.932	0.952	0.965	0.875	4.719
	NV2	0.939				5.249
	NV3	0.95				6.177
	NV4	0.92				4.398
Loyalty	LY1	0.937	0.93	0.951	0.829	4.574
	LY2	0.826				2.167
	LY3	0.939				5.012
	LY4	0.935				5.079
Outcome expectation	PEO1	0.862	0.944	0.953	0.719	5.589
	PEO2	0.876				8.028
	PEO3	0.879				4.850
	PEO4	0.813				3.491
	PEO5	0.866				4.094

Construct	Item	Outer Loading	Cronbach's alpha	Composite Reliability	Average Variance Extracted (AVE)	Outer VIF
Perceived quality	PEO6	0.821	0.968	0.976	0.912	4.920
	PEO7	0.846				7.551
	PEO8	0.819				5.676
	PQ1	0.955				6.871
	PQ2	0.955				7.194
	PQ3	0.969				9.293
Satisfaction	PQ4	0.941	0.932	0.957	0.881	5.465
	SA1	0.904				2.781
	SA2	0.962				6.765
	SA3	0.949				5.868
Self-efficacy	SF1	0.933	0.964	0.972	0.874	6.192
	SF2	0.952				8.655
	SF3	0.941				6.174
	SF4	0.936				5.479
	SF5	0.912				4.151
Vigour	CV1	0.926	0.964	0.971	0.848	7.394
	CV2	0.939				8.506
	CV3	0.905				4.403
	CV4	0.915				5.351
	CV5	0.926				5.746
	CV6	0.913				4.419

b. discriminant validity

Discriminant validity was also tested using the Fornell-Larcker criterion, and the analysis showed a problem with the absorption. As shown in Table 6, the Fornell-Larcker criterion indicated that the correlation between absorption and absorption (0.915) was less than the correlation between absorption and vigour (0.923), and it was less than the correlation between absorption and dedication (0.918). This means that the items were related, whereas they should be unrelated. Thus, we eliminated the absorption construct.

Further, HTMT test of discriminant validity was evaluated (see Table 7). According to Henseler et al. (2015), the Heterotrait-Monotrait Ratio (HTMT) measures the correlations related to the average monotrait–heteromethod; if the HTMT value is close to one, this would mean that there is a lack of discriminant validity. Henseler et al. (2015) cited that Gold et al. (2001) set 0.9 as the cut edge for HTMT. The results from the current study indicated a lack of validity for the colouration between the following constructs: absorption and dedication (0.953), absorption and loyalty (0.924), absorption and vigour (0.958), dedication and loyalty (0.932), dedication and vigour (0.949), and loyalty and vigour (0.940).

Table 6. Discriminant validity Fornell-Larker criterion (1)

	ABS	DED	EP	IM	NV	LY	POE	PQ	SA	SFF	VIG
Absorption (ABS)	0.915										
Dedication (DED)	0.918	0.933									
Exercise persistence (EP)	0.595	0.609									
Intrinsic motivation (IM)	0.799	0.813	0.639	0.947							
Involvement (NV)	0.845	0.852	0.599	0.804	0.935						
Loyalty (LY)	0.876	0.888	0.613	0.766	0.823	0.910					
Outcome expectation (POE)	0.810	0.819	0.612	0.794	0.769	0.781	0.848				
Perceived quality (PQ)	0.782	0.791	0.536	0.751	0.815	0.845	0.721	0.955			
Satisfaction (SA)	0.793	0.806	0.604	0.786	0.780	0.781	0.749	0.755	0.939		
Self-efficacy (SFF)	0.695	0.679	0.617	0.700	0.694	0.671	0.723	0.621	0.688	0.935	
Vigour (VIG)	0.923	0.915	0.610	0.794	0.857	0.892	0.841	0.805	0.789	0.711	0.921

Table 7. Discriminant validity Heterotrait- Monotrait (HTMT) (1)

	ABS	DED	IM	NV	LY	POE	PQ	SA	SFF	VIG
Absorption (ABS)										
Dedication (DED)	0.953									
Intrinsic motivation (IM)	0.830	0.845								
Involvement (NV)	0.882	0.890	0.840							
Loyalty (LY)	0.924	0.932	0.805	0.871						
Outcome expectation (POE)	0.848	0.858	0.834	0.810	0.827					
Perceived quality (PQ)	0.810	0.819	0.778	0.850	0.888	0.752				
Satisfaction (SA)	0.837	0.851	0.830	0.828	0.833	0.798	0.795			
Self-efficacy (SFF)	0.723	0.705	0.727	0.725	0.706	0.756	0.644	0.726		
Vigour (VIG)	0.958	0.949	0.824	0.893	0.940	0.880	0.833	0.831	0.738	

c. Collinearity Statistics:

Multicollinearity is tested by the inner variance inflection factor (VIF), which should not exceed 5 (Hair et al., 2014). As shown in Table 7, issues were found with loyalty in the VIF for the following constructs: absorption (8.671), dedication (8.037), and vigour (8.547).

Table 8. Collinearity statistics inner VIF values (1)

	ABS	DED	EP	LY	VIG
Absorption (ABS)				8.671	
Dedication (DED)				8.037	
Exercise persistence (EP)				1.636	
Intrinsic motivation (IM)			2.977		
Involvement (NV)	3.678	3.678			3.678
Loyalty (LY)					
Outcome expectation (POE)			3.180		
Perceived quality (PQ)	3.341	3.341			3.341
Satisfaction (SA)	2.865	2.865			2.865
Self-efficacy (SFF)			2.305		
Vigour (VIG)				8.547	

To avoid these issues, absorption was eliminated because of the lack of discriminant validity in Fornell-Larker criterion, and we made the choice to consider a second order latent variable for customer engagement. As discussed in Chapters 2 and 3, customer engagement is generally considered a unique variable that could contain

sub-dimensions, thus justifying the use of a second order latent variable for customer engagement. Due to the collinearity problems related to absorption, the second-order latent variable for customer engagement considered two dimensions only vigour and dedication.

5.2.2 Second Order Model (Step 2)

The absorption construct was eliminated due to unaccepted values of discriminant validity (Fornell-Larcker criterion). Other than eliminating absorption, the repeated indicators approach was applied to avoid collinearity issues. We considered customer engagement as a second-order construct considering only two dimensions: vigour and dedication.

Backer and his colleagues (2012) indicated that the results of the repeated indicators technique have smaller biases for the prediction of the higher order construct's measurement model. In the repeated indicators technique, lower order component measurement items are assigned to the higher order construct (Sarstedt, Hair, Cheah, Becker and Ringle, 2019). In the current model, dedication and vigour were set as first-order constructs, and their indicator (measurement items) were used as an indicator for customer engagement, which was the second order construct. Since customer engagement consisted of the same items that were used to indicate vigour and dedication, the customer engagement variance was fully explained by the lower order components (vigour and dedication), which was problematic. The issue was that the R-squared value equalled one; therefore, it was not possible for the other high order constructs to explain customer engagement. Thus, the path coefficient was zero for the perceived quality, satisfaction, and involvement; they could not explain any variance in customer engagement as it was fully explained by vigour and dedication. To solve this issue, Backer et al. (2012) suggested that to capture the real effect on the higher order

construct, researchers should analyse the total impact of the antecedents constructs on the higher order components. In the case of the present study, the data were exported directly from Smart PLS3 to Excel sheet. The Excel sheet included all the total effects of lower order components data to capture the accurate variance of the higher components. Figure 9 shows the new model, which was developed using the new data.

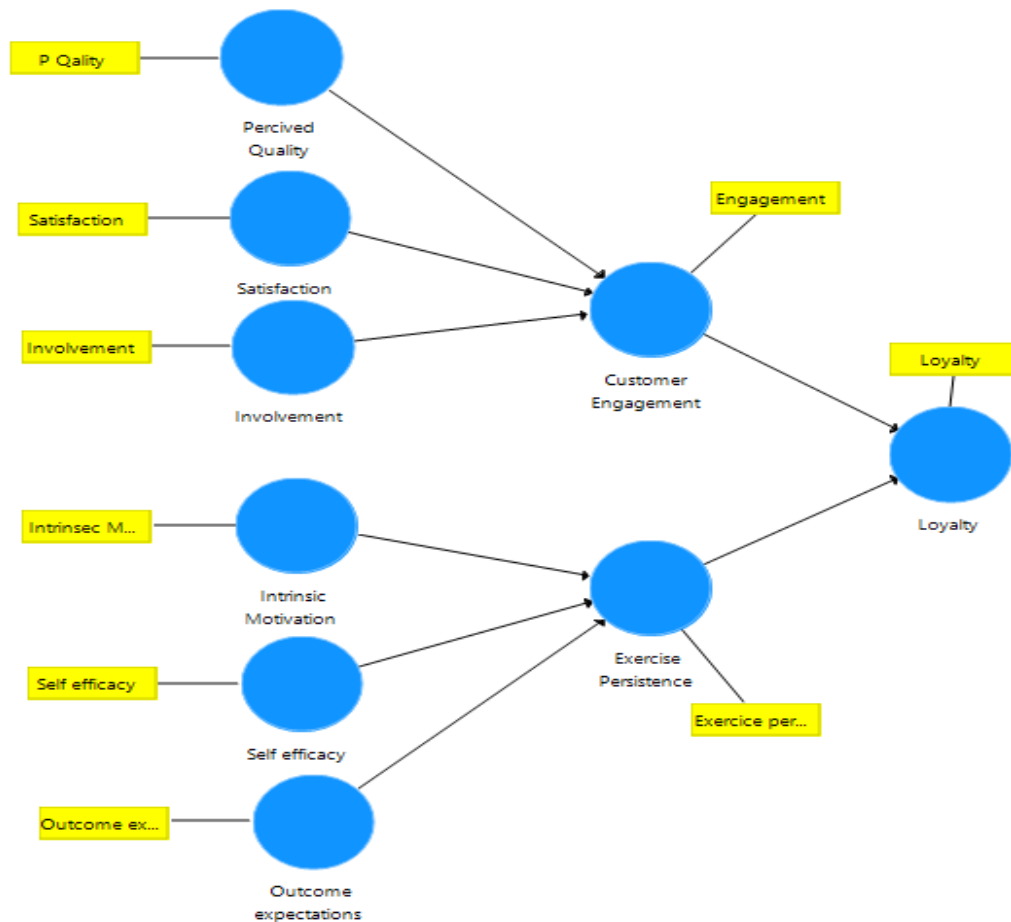


Figure 9: Second-order model

To assess the constructs' discriminant validity, the Fornell-Larcker criterion was used. The discriminant validity measures to what extent two conceptually similar variables are distinct (Hair et., 2006). The aim of using the Fornell and Larcker criterion for discriminant validity was to ensure that each variable shared a higher correlation

with its own block of indicators than sharing with any other latent variables. According to Fornell and Larcker (1981), the square roots of AVE of different constructs must not be higher than the correlation between the same constructs. As shown in Table 9, the colouration between any same corresponding similar constructs is (1.00), which is higher than all its cross loadings in a row or a column. This means that the second-order model had no discriminant validity issues. Moreover, the issues related to the HTMT test of discriminant validity were not a concern in the second order model. As shown in Table 10, all the values were less than 0.9, which is the cut edge determined by Gold et al. (2001).

Table 9. Discriminant validity Fornell-Larcker criterion (2)

Variable	ENG	EP	IM	NV	LY	POE	PQ	SA	SFF
Customer engagement (ENG)	1.000								
Exercise persistence (EP)	0.530	1.000							
Intrinsic motivation (IM)	0.773	0.552	1.000						
Involvement (NV)	0.800	0.529	0.754	1.000					
Loyalty (LY)	0.872	0.545	0.745	0.793	1.000				
Outcome expectations (POE)	0.811	0.528	0.756	0.724	0.766	1.000			
Perceived quality (PQ)	0.798	0.504	0.724	0.807	0.873	0.715	1.00		
Satisfaction (SA)	0.768	0.544	0.741	0.724	0.765	0.721	0.744	1.00	
Self-efficacy (SFF)	0.682	0.529	0.673	0.662	0.659	0.698	0.627	0.659	1.00

Table 10. Discriminant validity heterotrait-monotrait (HTMT) (2)

	ENG	EP	IM	NV	LY	POE	PQ	SA	SFF
Customer engagement (ENG)									
Exercise persistence (EP)	0.530								
Intrinsic motivation (IM)	0.773	0.552							
Involvement (NV)	0.800	0.529	0.754						
Loyalty (LY)	0.872	0.545	0.745	0.793					
Outcome expectations (POE)	0.811	0.528	0.756	0.724	0.766				
Perceived quality (PQ)	0.798	0.504	0.724	0.807	0.873	0.715			
Satisfaction (SA)	0.768	0.544	0.741	0.724	0.765	0.721	0.744		
Self-efficacy (SFF)	0.682	0.529	0.673	0.662	0.659	0.698	0.627	0.659	

5.3 Structural Model Test

After implementing a reliable and validated measurement model, the next step was to examine the theoretical hypothesised relationships. This section presents the collinearity statistics, direct effects, indirect effects and the model fit.

5.3.1 Collinearity Statistics

Collinearity was assessed to determine whether the study results were valid (Hair et al., 2014). Collinearity tests investigate the relationship between two or more predictors; the relationship between two variables will be high if they are highly correlated. In the first model, an examination of collinearity revealed high correlation between absorption, vigour, and dedication (see Table 8), which was problematic. In the current second-order model, we were able to come over this issue. Table 11 presents the predictive variables on the column and the results of the dependent constructs on the row side. As shown in Table 11, the inner VIF of the second-order model met (Hair et al., 2014) recommendations, as none of the values exceeded 5. All the issues related to collinearity were inner solved with the second-order model.

Table 11. Collinearity statistics inner VIF (2)

	Customer engagement	Exercise persistence	Loyalty
Customer engagement			1.390
Exercise persistence			1.390
Intrinsic motivation		2.583	
Involvement	3.174		
Outcome expectation		2.754	
Perceived quality	3.383		
Satisfaction	2.488		
Self-efficacy		2.159	

5.3.2 Direct effects

The current bootstrapping was a two-tailed test, and the significant T statistics should be greater than 1.96 (Hair et al., 2014). The p was used to determine whether the hypothesis was significant ($p < 0.05$); if the p value is significant, then the null hypothesis is supported (Field, 2009). The path coefficients (β) are presented in Table 12 as the original sample column (Hair et al., 2014), and it was used to determine whether the relationship was positive or negative. Path coefficient analysis showed that there was a positive significant relationship between customer engagement and loyalty ($\beta = 0.811, t = 20.797, p = 0.000$), exercise persistence and loyalty ($\beta = 0.116, t = 2.960, p = 0.003$), intrinsic motivation and exercise persistence ($\beta = 0.278, t = 2.997, p = 0.003$), perceived quality and engagement ($\beta = 0.301, t = 3.597, p = 0.000$), satisfaction and engagement ($\beta = 0.295, t = 3.570, p = 0.000$), involvement and customer engagement ($\beta = 0.344, t = 4.358, p = 0.000$), and self-efficacy and exercise persistence ($\beta = 0.233, t = 3.241, p = 0.001$). These results provide support for hypotheses H1, H2, H3, H4, H5, H7, H8. However, H6 is rejected because there was no significant relationship between outcome expectations and exercise persistence ($\beta = 0.156, t = 1.610, p = 0.108$) (see Table 12).

Table 12. Path coefficient

Hypothesis path	Original	Sample	Standard	T	P
	Sample	Mean	Deviation	Statistics	Value
	(O)	(M)			
H7: Customer engagement → Loyalty	0.811	0.810	0.039	20.797	0.000
H8: Exercise persistence → Loyalty	0.116	0.115	0.039	2.960	0.003
H4: Intrinsic motivation → Exercise persistence	0.278	0.286	0.093	2.997	0.003
H3: Involvement → Customer Engagement	0.344	0.346	0.079	4.358	0.000
H6: Outcome expectations → Exercise persistence	0.156	0.149	0.097	1.610	0.108
H1: Perceived Quality → Customer Engagement	0.301	0.302	0.084	3.597	0.000
H2: Satisfaction → Customer Engagement	0.295	0.291	0.083	3.570	0.000
H5: Self-efficacy → Exercise persistence	0.233	0.231	0.072	3.241	0.001

5.3.3 Indirect effects

When the indirect effects are tested for the sports psychology path, analysis showed that there was no mediating effect between intrinsic motivation and loyalty ($\beta = 0.032$, $t=1.904$, $p = 0.057$), and outcome expectation and loyalty ($\beta = 0.018$, $t = 1.375$, $p = 0.169$). The results showed that the only significant mediating effect of exercise persistence was through the indirect relationship between self-efficacy and loyalty ($\beta = 0.027$, $t = 2.253$, $p = 0.024$). The analysis also revealed a significant indirect effect for all the associations mediated by customer engagement in the marketing path. Customer engagement mediated the relationship between loyalty and the three antecedents perceived quality ($\beta = 0.244$, $t = 3.454$, $p = 0.001$), satisfaction ($\beta = 0.239$, $t = 3.488$, $p = 0.000$), and involvement ($\beta = 0.279$, $t = 4.319$, $p = 0.000$) (See Table 13).

Table 13. Indirect effects

Indirect paths	Original sample (O)	Sample mean (M)	Standard deviation	T-statistics	Ps
Intrinsic motivation → Loyalty	0.032	0.033	0.017	1.904	0.057
Involvement → Loyalty	0.279	0.280	0.065	4.319	0.000
Outcome expectations → Loyalty	0.018	0.017	0.013	1.375	0.169
Perceived quality → Loyalty	0.244	0.245	0.071	3.454	0.001
Satisfaction → Loyalty	0.239	0.236	0.069	3.488	0.000
Self-efficacy → Loyalty	0.027	0.026	0.012	2.253	0.024

5.3.4 Model Fit

a. Effect size

Explanatory power (R-squared) and effect size are used to measure the model performance in Smart PLS3 (Ben Mimoun & Poncin, 2015). The f^2 the effect size measures the influence of the independent variable on the dependent construct (Hair et al.2014). The f^2 effect size is used to determine the difference in the R-squared value if a particular predictor was eliminated from the model (Hair et al.2014). f^2 is assessed based on Cohen’s (1998) recommendations; if the f^2 value equals 0.02, it is considered a small effect, $f^2 = 0.15$ medium effect, and $f^2=0.35$ is a large effect. As shown in Table 14, there was a large effect size for the predictive value of customer engagement on loyalty ($f^2 = 2.054$). There was a medium size effect for the predictive values of involvement on customer engagement ($f^2 = 0.144$), satisfaction on customer engagement ($f^2 = 0.135$), and perceived quality on customer engagement ($f^2 = 0.103$). There are small effects for intrinsic motivation ($f^2 = 0.047$) on exercise persistence and self-efficacy ($f^2 = 0.039$). The results of the effect size confirmed the fact that, in general, the marketing path and specifically engagement had a higher explanation power than the sports psychology path.

Table 14. Effect size (f^2)

	Customer engagement	Exercise persistence	Loyalty
Customer engagement			2.054
Exercise persistence			0.042
Intrinsic motivation		0.047	
Involvement	0.144		
Outcome expectations		0.014	
Perceived quality	0.103		
Satisfaction	0.135		
Self-efficacy		0.039	

b. Explanatory power (R^2)

R-squared measures the amount of variance that the independent variables in the model could cause in the dependent construct. Table 15 shows the results of the R-squared based on the Smart PLS3 algorithm. According to Hair et al. (2014), the desired value for a substantial model is 0.75, moderate level 0.50, and 0.25 for a weak level. The model strongly predicted engagement (0.741) and loyalty (0.770). However, it explained 0.35 of the variance in exercise persistence, which is considered as a moderate level.

Table 15. R-Square

	R-squared	R-squared Adjusted
Engagement	0.741	0.740
Exercise persistence	0.359	0.355
Loyalty	0.770	0.769

c. Standardized Root Mean Square Residual (SRMR)

The standardized root mean square residual of Smart PLS3 is a good test to assess the model fit, as it can avoid model misspecification (Henseler et al., 2014). The current SRMR of the model is in a perfect fit (=0.000). Based on Byrne's (2008) recommendations, if the SRMR's value equals zero, then the model is in a perfect fit, and it is an acceptable fit if the value is below 0.05. Here, the model showed a fit. (See Table 16)

Table 16. SRMR

	Saturated model	Estimated model
SRMR	0.000	0.057

5.4 Multi Group Analysis (MGA)

Multi-group analysis (MGA) was conducted using Smart PLS3. The aim of the MGA test is to assess the differences among the selected groups (Cheah et al., 2020). Applying the MGA test enhances the researcher's ability to investigate the differences in multiple relationships across groups (Schlagel & Sarstedt, 2016). In the bootstrap of MGA, the researcher followed Cheah et al.'s (2020) recommendations and set 5000 subsamples for the bootstrapping and one-tailed test with a 0.05 significance level. The accepted significant *p-values* should be lower than 0.05 (Cheah et al., 2020). The Smart PLS3 estimated the model results of the selected groups. Two tests of multi-group analysis were considered: PLS-MGA and bootstrapping.

5.4.1 Gender

To compare gender groups, a multi-group analysis was conducted for females (group 1) and males (group 2). The Smart PLS3 estimated the model results of females and males separately.

a. PLS-MGA

PLS-MGA test showed that there were no significant differences between females and males in terms of the direct associations in this model. As shown in Table 17 below, all the *p* values were higher than 0.05 (not significant); customer engagement → loyalty ($\beta = 0.023$, $p = 0.774$), intrinsic motivation → exercise persistence ($\beta = -0.322$, $p = 0.895$), involvement → customer engagement ($\beta = -0.209$, $p = 0.169$), outcome expectations → exercise persistence ($\beta = 0.299$, $p = 0.103$), perceived quality →

customer engagement ($\beta = 0.167$, $p = 303$), satisfaction \rightarrow customer engagement ($\beta = 0.069$, $p = 0.670$), self-efficacy \rightarrow exercise persistence ($\beta = -0.066$, $p = 0.678$), and the exercise persistence \rightarrow loyalty ($\beta = -0.011$, $p = 0.895$)

Table 17. PLS-MGA gender test

Hypothesis path	Path	p	p new
	Coefficients- diff (Female - Male)	original 1-tailed (Female vs Male)	(Female vs Male)
H7: Customer engagement \rightarrow Loyalty	0.023	0.387	0.774
H8: Exercise persistence \rightarrow Loyalty	-0.011	0.552	0.895
H4: Intrinsic motivation \rightarrow Exercise persistence	-0.322	0.955	0.089
H3: Involvement \rightarrow Customer Engagement	-0.209	0.916	0.169
H6: Outcome expectations \rightarrow Exercise Persistence	0.299	0.052	0.103
H1: Perceived quality \rightarrow Customer Engagement	0.167	0.152	0.303
H2: Satisfaction \rightarrow Customer Engagement	0.069	0.335	0.670
H5: Self-efficacy \rightarrow Exercise Persistence	-0.066	0.661	0.678

b. Bootstrapping

Bootstrapping results show real differences between the significant paths between gender. The significant paths for females were customer engagement \rightarrow loyalty ($\beta = 0.823$, $t = 16.034$, $p = 0.000$), involvement \rightarrow customer engagement ($\beta = 0.247$, $t = 2.486$, $p = 0.013$), outcome expectations \rightarrow exercise persistence ($\beta = 0.306$, $t = 2.112$, $p = 0.035$), perceived quality \rightarrow customer engagement ($\beta = 0.385$, $t = 3.419$, $p = 0.001$),

and satisfaction \rightarrow customer engagement ($\beta = 0.319$, $t = 2.679$, $p = 0.007$), whereas exercise persistence \rightarrow loyalty ($\beta = 0.107$, $t = 1.898$, $p = 0.058$) was not significant as it had a p of 0.058, which was almost greater than 0.05. The intrinsic motivation \rightarrow exercise persistence was not significant for females ($\beta = 0.115$, $t = 0.708$, $p = 0.479$) the p is approximately 0.05. The path of self-efficacy \rightarrow exercise persistence ($\beta = 0.198$, $t = 1.447$, $p = 0.148$) is not significant for females. Thus, the significant hypotheses supported by females were only H1, H2, H3, H6, and H7. By contrast, none of self-efficacy (H5) and intrinsic motivation (H4) explained females exercise persistence. Further, the exercise persistence did not affect female's loyalty (H8). The sports psychology path was rejected for females, whereas the marketing path was accepted for females with all its variables.

Bootstrapping results for men showed that the significant paths were customer engagement \rightarrow loyalty ($\beta = 0.800$, $t = 13.655$, $p = 0.000$), the exercise persistence \rightarrow loyalty ($\beta = 0.118$, $t = 2.190$, p value = 0.029), intrinsic motivation \rightarrow exercise persistence ($\beta = 0.438$, $t = 6.119$, $p = 0.000$), involvement \rightarrow customer engagement ($\beta = 0.455$, $t = 4.121$, $p = 0.000$), satisfaction \rightarrow customer engagement ($\beta = 0.250$, $t = 2.291$, $p = 0.022$), and self-efficacy \rightarrow exercise persistence ($\beta = 0.264$, $t = 3.212$, $p = 0.001$). The non-significant associations for men were outcome expectations \rightarrow exercise persistence ($\beta = 0.008$, $t = 0.072$, $p = 0.942$), and perceived quality \rightarrow customer engagement ($\beta = 0.218$, $t = 1.875$, $p = 0.061$). Both paths had p values higher than the cut edge 0.05. Accordingly, the significant hypotheses supported by men were only H2, H3, H4, H5, H7, and H8. Men members engagement was not influenced by the perceived quality (H1), and their exercise persistence was not explained by outcome expectations (H6). In contrast to females, men's loyalty was influenced by the paths of marketing and sports psychology.

Table 18. Bootstrapping gender test

Hypothesis Path	Path	Path	Path	Path	STDEV	STDEV	t-Value	t-	p	p
	Coefficients	Coefficients	Coefficients	Coefficients	(Female)	(Male)	(Female)	Value	(Female)	(Male)
	Original	Original	Mean	Mean				(Male)		
	(Female)	(Male)	(Female)	(Male)						
H7: Customer engagement → Loyalty	0.823	0.800	0.822	0.797	0.051	0.059	16.034	13.655	0.000	0.000
H8: Exercise persistence → Loyalty	0.107	0.118	0.106	0.118	0.056	0.054	1.898	2.190	0.058	0.029
H4: Intrinsic motivation → Exercise persistence	0.115	0.438	0.139	0.433	0.163	0.072	0.708	6.119	0.479	0.000
H3: Involvement → Engagement	0.247	0.455	0.257	0.445	0.099	0.111	2.486	4.121	0.013	0.000
H6: Outcome expectations → Exercise persistence	0.306	0.008	0.284	0.012	0.145	0.106	2.112	0.072	0.035	0.942

Hypothesis Path	Path	Path	Path	Path	STDEV	STDEV	t-Value	t-	<i>p</i>	<i>p</i>
	coefficients	coefficients	coefficients	coefficients	(Female)	(Male)	(Female)	Value	(Female)	(Male)
	original	original	mean	Mean				(Male)		
	(Female)	(Male)	(Female)	(Male)						
H1: Perceived quality → Engagement	0.385	0.218	0.383	0.229	0.113	0.116	3.419	1.875	0.001	0.061
H2: Satisfaction → Engagement	0.319	0.250	0.310	0.249	0.119	0.109	2.679	2.291	0.007	0.022
H5: Self-efficacy → Exercise persistence	0.198	0.264	0.197	0.265	0.137	0.082	1.447	3.212	0.148	0.001

5.4.2 Generation

To compare between age generations, the multi- group analysis was conducted for generation 1 which includes the ages group from 18 to 19 and from 20 to 39, while generation 2 included age groups from 40 to 64 and above 65. The Smart PLS3 estimated the model results of generation 1 and 2 separately as the following.

a. PLS-MGA

PLS-MGA test shows that there are no significant differences between generation 1 and generation 2. As all the hypotheses had p values above 0.05: customer engagement \rightarrow loyalty ($\beta = 0.111$, $p = 0.056$), intrinsic motivation \rightarrow exercise persistence ($\beta = -0.005$, $p = 0.977$), involvement \rightarrow customer engagement ($\beta = 0.261$, $p = 0.198$), outcome expectations \rightarrow exercise persistence ($\beta = -0.217$, $p = 0.383$), perceived quality \rightarrow customer engagement ($\beta = -0.177$, $p = 0.324$), satisfaction \rightarrow customer engagement ($\beta = -0.043$, $p = 0.874$), and self-efficacy \rightarrow exercise persistence ($\beta = 0.100$, $p = 0.619$). Further, exercise persistence \rightarrow loyalty was almost not significant ($\beta = -0.046$, $p = 0.488$)

Table 19. PLS-MGA generation test

Hypothesis path	Path	p original 1-tailed (Generation 2 vs Generation 1)	p new (Generation n 2 vs Generatio n 1)
H7: Customer engagement → Loyalty	0.111	0.028	0.056
H8: Exercise persistence → Loyalty	-0.046	0.756	0.488
H4: Intrinsic motivation → Exercise persistence	-0.005	0.511	0.977
H3: Involvement → Customer engagement	0.261	0.099	0.198
H6: Outcome expectations → Exercise Persistence	-0.217	0.808	0.383
H1: Perceived quality → Customer engagement	-0.177	0.838	0.324
H2: Satisfaction → Customer engagement	-0.043	0.563	0.874
H5: Self-efficacy → Exercise persistence	0.100	0.309	0.619

a. Bootstrapping

Bootstrapping results showed real differences between generations. The significant paths for generation 1 were customer engagement \rightarrow loyalty ($\beta = 0.791$, $t = 16.793$, $p = 0.000$), the exercise persistence \rightarrow loyalty ($\beta = 0.122$, $t = 2.664$, $p = 0.008$), intrinsic motivation \rightarrow exercise persistence ($\beta = 0.286$, $t = 3.018$, $p = 0.003$), involvement \rightarrow customer engagement ($\beta = 0.315$, $t = 3.544$, $p = 0.000$), perceived quality \rightarrow customer engagement ($\beta = 0.303$, $t = 3.255$, $p = 0.001$), satisfaction \rightarrow customer engagement ($\beta = 0.311$, $t = 3.402$, $p = 0.001$), and self-efficacy \rightarrow exercise persistence ($\beta = 0.223$, $t = 2.921$, $p = 0.004$). The results showed that outcome expectation ($\beta = 0.182$, $t = 1.700$, $p = 0.089$) was the only non-significant path for generation 1. Thus, the significant hypotheses supported by generation 1 were only H1, H2, H3, H4, H5, H7, and H8, and H6 was rejected. Therefore, both the marketing path and sports psychology path of loyalty were significant for generation 1.

On the other side, Bootstrapping results show that there were two significant associations only for generation 2: customer engagement \rightarrow loyalty ($\beta = 0.902$, $t = 25.892$, $p = 0.000$), and involvement \rightarrow customer engagement ($\beta = 0.576$, $t = 3.277$, $p = 0.001$). Most of the associations of generation 2 were not significant, as the p was higher than 0.05. The non-significant relations were the exercise persistence \rightarrow loyalty ($\beta = 0.076$, $t = 1.537$, $p = 0.124$), intrinsic motivation \rightarrow exercise persistence ($\beta = 0.281$, $t = 0.971$, $p = 0.331$), perceived quality \rightarrow customer engagement ($\beta = 0.126$, $t = 0.786$, $p = 0.432$), satisfaction \rightarrow customer engagement ($\beta = 0.269$, $t = 1.397$, $p = 0.162$), self-efficacy \rightarrow exercise persistence ($\beta = 0.323$, $t = 1.537$, $p = 0.124$), and Outcome expectations \rightarrow Exercise persistence ($\beta = -0.034$, $t = 0.151$, $p = 0.880$). Thus, the significant hypotheses for generation 2 were only H3 and H7. The rejected hypothesis supported by generation 2 were H1, H2, H4, H5, H6, and H8. In the research model,

the only significant path for generation 2 was the marketing path, although engagement in this case was explained by involvement only.

Table 20. Generation bootstrapping Results

	Path coefficients	Path	Path	Path	t-Value	t-Value	p	p
	original	coefficients	coefficients	coefficients	Generation 2	Generation 1	Generation2	Generation1
	Generation 2	original	Mean	Mean				
		Generation 1	Generation 2	Generation 1				
H7: Customer engagement → Loyalty	0.902	0.791	0.898	0.790	25.892	16.793	0.000	0.000
H8: Exercise persistence → Loyalty	0.076	0.122	0.077	0.123	1.537	2.664	0.124	0.008
H4: Intrinsic motivation → Exercise persistence	0.281	0.286	0.270	0.291	0.971	3.018	0.331	0.003
H3: Involvement → Customer engagement	0.576	0.315	0.584	0.315	3.277	3.544	0.001	0.000
H6: Outcome expectations → Exercise persistence	-0.034	0.182	-0.025	0.178	0.151	1.700	0.880	0.089

	Path coefficients original Generation 2	Path coefficients original Generation 1	Path coefficients Mean Generation 2	Path coefficients Mean Generation 1	t-Value Generation 2	t-Value Generation 1	p Generation2	p Generation1
H1: Perceived quality → Engagement	0.126	0.303	0.140	0.303	0.786	3.255	0.432	0.001
H2: Satisfaction → Engagement	0.269	0.311	0.242	0.310	1.397	3.402	0.162	0.001
H5: Self- efficacy → Exercise persistence	0.323	0.223	0.323	0.222	1.537	2.921	0.124	0.004

5.5 Discussion

The main aim of this research was to explore the influence of marketing and sports psychology paths on gym members loyalty. By running Smart PLS3 algorithm, path coefficients were used to examine the direct relationships between the dependent and independent constructs in the proposed research model. The indirect effects were also tested to measure the mediation effects. This study proposed eight hypotheses. Seven hypothesised relationships were accepted as they were significant (H1, H2, H3, H4, H5, H7, and H8), only one hypothesis was rejected (H6).

The first hypothesis (1) presumes that perceived quality has a positive relationship with customer gym brand engagement. The results demonstrated a significant positive influence of perceived gym quality on customer engagement. These results confirmed the research direction of Abbas et al. (2018), who suggested a possible link between perceived quality and customer engagement. The study's findings are in line with Wilert and Tripopsakul (2014), who found that quality has a strong positive relationship with customer engagement. Furthermore, Pansari and Kumar (2017) remarked that quality could encourage customers to engage with the firm. Gym perceived quality could play a circular role in directing customer engagement.

The second hypothesised relationship is between satisfaction and customer gym brand engagement (H2), and it is significant as well. This research targeted current gym members who had experience with the gym to make an evaluation. The results showed that customers who were satisfied with their gym experience and had positive evaluations for their gym engaged more. Similarly, Pansari and Kumar (2010) suggested that customers would not engage with a firm unless they were satisfied in the first place. Further, van Doorn et al. (2010) stated that attitudinal antecedents, including

satisfaction, are essential to achieve customer engagement. Besides, the results of this study also corroborated Dwivedi et al.'s (2016) findings that the mediating effect of customer engagement in the relationship between satisfaction and loyalty intentions is significant.

The third hypothesis (H3) states that involvement is positively related to customer brand engagement. The results highly support H3 and prove that involvement could be considered an antecedent of customer engagement. This result is in accordance with Dwivedi et al.'s (2016) findings that involvement is one of the antecedents of brand engagement behaviours. The findings also support Bowden's (2009) conceptual framework, which suggests that involvement has a positive direct relationship with customer engagement.

The next hypothesis is about the relationship between intrinsic motivation and exercise persistence (H4), which was also significant. Gym members who evidenced high levels of intrinsic motivation would exercise in the gym more persistently. This finding aligns with Hagger and Chatzisarantis (2007), who argued that more self-determine behaviours would lead to higher persistence in exercise and other activities. These results are also consistent with Pelletier et al.'s (2001) findings that, as intrinsic motivation increases, exercise persistence increases.

The fifth hypothesis (H5) proposes that there is a direct positive relationship between self-efficacy and exercise persistence. The results supported H5 and showed that self-efficacy had a positive significant relationship with exercise persistence. The results showed that self-efficacy was the strongest predictor of exercise persistence. This aligns with Bean's (2012) findings that self-efficacy is the strongest predictor of physical activity behaviours. Our findings support Dewar and his colleagues' (2013)

results, which demonstrated that self-efficacy was able to predict exercise persistence over a 12-month period.

The sixth hypothesis (H6) assumes that perceived outcome expectation is positively related to exercise persistence. The results of this study did not support H6, as outcome expectations did not have a direct significant influence on exercise persistence. The indirect relationship between outcome expectation and loyalty was not supported. The outcome expectation measure is a reflection of three aspects: social outcomes, self-evaluative consequences, and physical outcomes. To understand the outcome expectations, each outcome should be assessed (Bandura, 2004). However, in the current research, we did not differentiate the dimensions of outcome expectation, and we used one scale that comprises the three aspects.

The seventh hypothesis (H7) states that customer engagement positively relates to loyalty. The results of the study support H7 and demonstrate that customer engagement explains loyalty between gym members. This result is in accordance with Bowden (2009) conceptual research, where customer engagement is the mechanism to achieve loyalty for both new customers, and it is essential to keep repeated customers loyal. Further, our findings support Appelbaum's (2001) research, as the customer brand engagement scores present the highest explanation of loyalty. In the current research, customer engagement was the most powerful predictor of loyalty; it explains more loyalty than the sports psychology path does. In addition, Dwivedi et al. (2016) found that customer brand engagement influence loyalty intentions. Regarding engagement dimensions, our findings support Menguc et al.'s (2013) and Salanova et al.'s (2005) research in organisational psychology, their findings showed a high correlation between vigour, dedication, and absorption. Thus, we developed a second order model that considered only two dimensions; dedication and vigour, to give a

better representation for customer engagement. The study findings are in contrast with Dwivedi et al.'s (2016) suggestion that customer brand engagement is better presented with the three dimensions together. In Dwivedi research, the absorption dimension met the Fornell-Larcker criterion, but vigour and dedication did not. To solve this, Dwivedi (2015) tested a two-dimensional model in which vigour and dedication represent the first dimension together and absorption presents the second dimension. Dwivedi et al. (2016) examined both models and argued that brand engagement is better represented as a three-dimensional model not the two. However, in the current research, absorption was eliminated from the study because of the issues related to discriminant validity of the Fornell-Larcker criterion, and we argue that customer engagement is better presented by vigour and dedication.

Hypothesis 8 (H8) proposes that there is a positive relationship between exercise persistence and loyalty. The study supported H8, as the results showed a significant positive relationship between exercise persistence and loyalty. This means that encouraging customers to attend more frequently and to spend more time exercising would be effective in enhancing loyalty. This research findings support Ferrand et al.'s (2010) research, where he pointed out that fitness club members who attend more frequently would show higher loyalty and retention to not drop out from their fitness club. Sports psychology path was acceptable as it could explain the variance in loyalty, but it was not as powerful as the sports marketing path represented in customer engagement.

When the mediating effect was tested, the results show that customer engagement could mediate all the hypothesised relationships between its determinants of perceived quality, involvement, and satisfaction with the gym loyalty. On the other

hand, exercise persistence could mediate the relationship between self-efficacy and loyalty only.

By running the multi-group analysis for gender (females–males), the results show that, in explaining loyalty, customer engagement was significant for both genders, while exercise persistence was significant only for men. Satisfaction and involvement are also significant predictors of customer engagement for both genders. Females were influenced by the marketing path more, as all the constructs in it are significant for them; the only psychological construct that shows a significant influence on females is the outcome expectations. The two paths of the model were applicable to men, as they were influenced by all the constructs except the perceived quality and outcome expectation are not significant for men.

Lastly, we have conducted a second multi-group analysis to investigate how the associations in the model will be different for two age generations. The young generation is the generation 1, which includes ages from 18 to 19 and 20 to 39, whereas the older generation is the generation 2, which includes ages from 40 to 64 and above 65. Loyalty for both generations was explained by customer engagement, and involvement is significant for both generations. Most of the associations were rejected for the older generation (2), excluding the significant relationships: customer engagement influence on loyalty (H7) and involvement influence on customer engagement (H3). All the hypothesised relationships in the model were applicable to generation 1, as all the hypotheses were significant except outcome expectations (H6), which was not significant.

CHAPTER 6: CONCLUSIONS, LIMITATIONS, IMPLICATIONS, AND FUTURE RESEARCH

6.1 Introduction

Chapter 6 presents the conclusions of this study. It outlines the theoretical and managerial implications of the thesis, followed by a discussion of the research limitations and some future research directions.

6.2 Conclusions

This thesis offers a comparison of two possible paths to achieving loyalty among gym members. The first path is the marketing path, where perceived quality, satisfaction, and involvement are the potential antecedents of customer engagement, which leads to loyalty. The second path is the sports psychology path, which examines the relationship between exercise persistence and loyalty. The exercise persistence in the current model is driven by intrinsic motivation, self-efficacy, and outcome expectations. Moreover, the mediating effects of customer engagement and exercise persistence were analysed. In addition, two moderating effects were investigated which are gender and generation (young and old). This research was based on the theories of customer engagement, self-determination, and social cognition to explain the proposed pathways and the relationship between the variables.

The findings indicate that all the suggested relationships in the model are supported except one. The outcome expectation did not show a significant influence on the exercise persistence. However, the most important path to explain loyalty is the marketing path, as all the marketing variables are significant and the ability of customer engagement to explain variance was 81.1%, which was higher than the explanation that was offered by exercise persistence (11.6% only), which was a moderate level.

Therefore, enhancing customer engagement is an important marketing instrument for achieving loyalty among gym members and improve retention rates. A point of interest is that the results demonstrated that the three antecedents of customer engagement have different sizes of effect on it. Thus, to encourage gym engagement, gyms must give the biggest attention to get the members involved, followed by gaining their satisfaction and finally improving quality. This does not necessarily mean ignoring the exercise persistence in the gym (presented in the frequency of attendance and duration spent) but giving it the second priority after customer engagement. Nevertheless, to enhance exercise persistence, less attention should be focused on outcome expectation, as this variable does not have significant impact. Self-efficacy and intrinsic motivation are the only antecedents that affected exercise persistence, but both had small effects. To understand customer engagement, it is better to exclude absorption and study customer engagement as a second-order construct by considering two dimensions, dedication and vigour, due to the high correlation between the three dimensions of vigour, dedication, and absorption.

The mediating impact of customer engagement was significant among perceived quality, satisfaction, and involvement with loyalty. On the contrary, the exercise persistence mediating effect was significant only for self-efficacy and loyalty, and this significant effect is as strong as the mediating power of customer engagement.

Interestingly, the gender analysis showed that both exercise persistence and customer engagement could predict men's loyalty, but for women, only the marketing path (customer engagement) could explain their gym loyalty. Neither perceived quality nor outcome expectations had a significant influence on men, while both were significant for women. Men gave less attention to the perceived quality, as it was not

significantly related to their engagement. Men exercise persistence behaviour did not depend on the outcome expectations, but both relationships were significant for women. Another interesting finding is that men's exercise persistence behaviour was influenced by self-efficacy and intrinsic motivations, but neither variable explained women's exercise persistence. It should be noted that involvement and satisfaction had a significant impact on customer engagement for both genders.

Regarding the generation analysis between generation 1, which represents the younger ages and generation 2 which represents older ages, the findings show that the presented model was more effective in offering a good understanding for the younger generation, as there was one hypothesis that was rejected for generation 1, which was outcome expectation. However, most of the hypothesised relations were not applicable to the elder generation, only two relationships are accepted: the influence of customer engagement on loyalty and the influence of involvement on customer engagement. For the older generation to be loyal, nothing was more important than engagement and involvement. It can be concluded that the model associations and effectiveness vary, but the importance of involvement and customer engagement in the model will not change. Thus, the findings of the current study provide a better understanding of the determinants driving customer engagement and exercise persistence. The findings also offer a more advanced understanding of customer engagement and exercise persistence roles in enhancing gym loyalty.

6.3 Theoretical and Managerial Implications

The study results offer interesting knowledge to scholars and marketing practitioners. Precisely, these findings would be useful to researchers who are investigating marketing and sports psychology fields, as well as those who focus on the gym context. The study findings also provide managerial implications for gym managers by providing insights into how the model could be applicable to customers.

6.3.1 Theoretical Implications

The research findings contribute to the fields of sports marketing and sports psychology in multiple ways. First, the study adds valuable knowledge by bringing the customer engagement concept to the gym context; it also provides additional understanding on its antecedents. Second, the current research fills an important gap in the interface between exercise persistence and loyalty. Numerous scholars have pointed out the lack of research that links gym exercise patterns and marketing concepts (e.g., Ferrand et al., 2010; Tharret & Peterson 2012), which emphasises the necessity of this research. The current conceptual framework not only investigated the influence of exercise persistence on loyalty but also went further to explain how it is formed. Third, the study compared the influence of customer engagement and exercise persistence on loyalty, as it also explained the extent to which they are significant. This, in fact, fulfils the main objective of this research concerning the effectiveness of marketing and sports psychology pathways, providing the answer that the most effective path is the marketing path, as customer engagement explained 81.1% of loyalty.

One of the major contributions of the current research is the added explanatory power of customer engagement in explaining gym loyalty. Precisely, the research findings show that customer engagement explained more variation in gym loyalty than exercise persistence. Customer engagement was also a powerful mediator, as it could

mediate the relationship between perceived quality and loyalty, involvement and loyalty, and satisfaction and loyalty. Further, the findings show that customer engagement had a significant influence on loyalty for males, females, the younger generation, and the older generation. The antecedents of customer engagement tested in this study have received more conceptual attention than empirical examinations, although perceived quality has received limited attention in customer engagement (Wilert & Tripopsakul, 2014). However, the findings emphasise the importance of the three determinants—involvement, satisfaction, and perceived quality—in explaining customer engagement. These findings are in a line with prior research that found a significant relationship between customer engagement and quality (Yoo and Donthu, 2001), satisfaction (Hapsari et al., 2017), and involvement (Parihar et al. 2019). The findings also imply that involvement leads to customer engagement for both genders and for both generations. These results addressed another objective concerning investigating the antecedents of customer gym engagement.

For the sports psychology path, our findings support the ability of exercise persistence to explain loyalty. The findings demonstrated that members' loyalty could be predicted by analysing the data related to the members' attendance frequency and the time log (time spent) of the gym, even though it was not the most effective approach to predict loyalty since customer engagement was a more powerful predictor. However, this research used two theories to understand exercise persistence. Intrinsic motivation was driven by self-determination theory (Ryan & Deci, 1985), and it was remarkably effective in predicting exercise persistence. Outcome expectation and self-efficacy were adapted from SCT (Bandura,1986). Outcome expectation did not stimulate exercise persistence, while self-efficacy did. This research delineates the importance of

self-efficacy in enhancing exercise persistence, and supports the findings of Bean's (2012) that self-efficacy is the strongest predictor of physical activity behaviours.

The current research presents a conceptual framework that could be used as a foundation for the research to build on and extend the two approaches in the sports context. It is worth noting that the two pathways combined could predict 76.9% of loyalty, which is a high percentage. The current study is theory driven and contributes to a better understanding of the relationships related to exercise persistence and customer engagement and set loyalty as an outcome of the two constructs. Lastly, the data were collected in Qatar, which could advance the theoretical knowledge about gym members in Qatar or in the Gulf Cooperation Council (GCC) and, for the most part, support previous research evidence from Western countries.

6.3.2 Managerial Implications

Besides the theoretical contributions, the current research has valuable implications for marketer and managers. Gym managers and marketers need to acknowledge that using the attendance sheet to predict members' loyalty is no longer sufficient; hence, they need to enhance both exercise persistence and customers engagement. It is important for gym managers to make informed decisions when developing their loyalty strategies. Yet, gym managers are often left with limited theoretical guidance that considers either aspects of their clients: marketing, as they are business customers, and sports psychology, as a sports participant. The majority of scholars have focused on one of the paths, and linking the two paths was one of this research contributions.

The study shows that gym managers can enhance loyalty by encouraging members to engage, as this is the most powerful way to achieve loyalty. Managers should continuously find ways to increase engagement levels by developing marketing strategies that put customers' involvement on the top list, followed by gaining

members' satisfaction and improving the quality. When customers are not involved, satisfied, or perceive the gym as low quality, they will not engage. The findings make important contributions to sports marketing practice by indicating the extent to which each determinant plays a role in customer engagement.

Improving members' exercise persistence is important to gain their loyalty, as it decreases this gives a sign of the lack of loyalty, and vice versa. To enhance exercise persistence in the gym, first-place managers must offer their customers an enjoyable experience to increase their intrinsic motivation. For a gym member to be intrinsically motivated he/she must be exercising for fun, pleasure, and enjoyment (Ryan and Deci, 2000). In the second place, self-efficacy is an effective determinant of exercise persistence, and it has an indirect relationship with loyalty through exercise persistence. Enhancing self-efficacy could be by (Schunk, 1995). For example, they remind customers to believe in themselves and their abilities to reach their desired target. Gym members' exercise persistence depends on how they feel confident about their ability to perform exercises. Customers will not exercise persistently unless they feel that they know how to do so in the right way. Managers could pay less attention to outcome expectations, as it is not a necessity for exercise persistence. Adapting technologies to show the customer they would look like after a particular program will not be necessary, as it will not affect their exercise.

Further, the study builds a model for gym managers that identifies relevant marketing and psychological directions to consider when developing loyalty strategies for both generations and both genders. For gym managers who target ladies, the study findings reveal that the two paths are effective only for males, whereas women are influenced only by the marketing path, since exercise persistence for ladies does not explain their loyalty. To increase women's engagement with the gym, all three

determinants should be considered (quality, satisfaction, and involvement). or men engagement quality is not significant as satisfaction and involvement. On the other hand, enhancing exercise persistence for women depends on the outcome expectation; it is the only variable that a gym manager should consider while setting exercise persistence as a goal. Men exercise persistence is determined by their self-efficacy and confidence about their abilities to attempt exercises, as well as their intrinsic motivation.

Moreover, customer engagement is effective in predicting loyalty for both generations—young generation (1) and older generation (2)—while exercise persistence is a powerful indicator of loyalty only for the young generation (ages between 18 and 40). Therefore, gym managers must understand how results vary based on age when implementing segmentation and targeting strategies. If a gym manager is aiming to increase customer engagement with a target market that consists of elderly people or a retired community, then none of the quality of satisfaction would make a difference. Only involvement would bring them to engage; all the other constructs are not significant for the older generation (40 and above). For the younger generation (18 to 39), all the constructs in the model are worth considering except for outcome expectations, as it is the only variable that is not significant for the younger generation.

If gym managers target different generations, males and females, then the best option is to apply the marketing path with giving extra attention to get the customers to be involved, as it is a circular determinant for all the customers.

6.4 Limitations

One of the main limitations of the current study is that most of the customer engagement literature comes from fields different from sports contexts, such as brands and social

media contexts. Due to the lack of sufficient previous studies in the customer engagement sports context, adopting the concept to understand gym members' loyalty was difficult.

Another limitation is that the data was collected in 2021 at the time of the Covid-19 pandemic, which represents a global health challenge and almost every sector of society has been affected (Kelly, Erickson, & Turnnidge, 2020). Covid-19 is a highly contagious virus. To limit the quick spread of the virus, governments and national authorities encouraged people to limit their interaction with others and adapt social distancing and self-isolating behaviours (Hammami, Harrabi, Mohr, & Krusturup, 2020). Risk elevating messages and negative reports published in the media can cause public anxiety (Sell et al., 2017). This negative atmosphere, which is filled with uncertainty, can bring anxiety and fear of getting infected or causing it to others (Holmes et al., 2020). Although the study did not consider its effect on the model, these conditions may have affected the exercise persistence in terms of attendance frequency and exercise duration. Further, most of the gyms where the data were collected had applied strict measures to avoid the risk of Covid-19 infection; thus, only a limited number of people could exercise at the same time and the group sessions have been cancelled.

Exercise persistence was measured using two self-reported surveys. It would be better to assess whether there was available access to the gym databases or an experimental methodology. Since we aimed to capture the highest possible number of responses, this was not a valid option.

The study focused on a specific type of sports practitioner: gym members. Besides gym members, sports consumers could be sports students or professional practitioners (athletes). Therefore, the findings could be limited to gym members and may not be generalised to other types of sports contexts.

Moreover, the current study collected data from different types of gym members who practice different exercises, such as weightlifting, pilates, dancing, boxing, and yoga, although the customers were not classified based on their type of exercise. Future research should consider applying the proposed conceptual model to investigate the sports psychological path and the marketing path effectiveness on loyalty in with different types of sports consumers with differentiating their exercise type.

6.5 Future Research Directions

The research context of sports marketing has unaccountable areas that offer future research directions. This section provides some of these unique opportunities. As mentioned above, this study did not mention the influence of the Covid-19 pandemic on customer engagement, exercise persistence, or loyalty. Future research could include the fear of Covid-19 or social distancing measurement as a moderating variable in the conceptual model.

Since the study focuses only on gym members, future research should extend the study and consider other types of sports consumers, such as sports students. Such investigations could also consider the influence of the coach as a moderator in the model. This would offer a more robust model.

Further research could focus on perceived quality given the lack of literature regarding its influence on customer engagement. Although the current study found that it was a significant predictor of customer engagement, we used a unidimensional scale. According to Howat et al. (1996), the core dimensions of customers' overall quality are core services, secondary services, facilities, and staff. Future research could use a multi-dimensional scale to assess the overall quality and consider the influence of different

dimensions on customer engagement, which might produce differential impacts on customer engagement and add valuable knowledge.

Moreover, customer involvement is the most powerful predictor of customer engagement for the younger generation, the older generation, males, and females. Efforts should be made to consider the different dimensions of involvement. Further studies are needed to assess the three dimensions suggested by Laurent and Kapferer (1985): interest, perceived risk (includes two subcomponents: probability and importance), the rewarding nature of a product, and the ability of the brand to communicate its status or identity.

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APPENDIX

Appendix A: Questionnaire

Dear Respondent,

You are invited to participate in a research study titled “A comparison between sports psychology and sports marketing approaches to achieve loyalty between gym members in Qatar and USA”. This is a Master Thesis being conducted by Aza Sidi Lemine, a student at Qatar University. The study is approved by the Qatar University Institutional Review Board with the approval number [QU-IRB 1484-E/21]. If you have any question related to ethical compliance of the study, you may contact the board at QU-IRB@qu.edu.qa.

The study aims to explore the gym loyalty through two approaches, marketing, and sports psychology approaches. The research investigates the participants’ perspective when they decide to be loyal for their gym, and which approach influence their loyalty decision the most. It also investigates the differences and similarities between the gym customers in Qatar and USA.

This study is targeted at only those who are of 18 years of age and above and must be a gym member in Qatar or USA; any other respondents would be excluded. Answering survey questions should not take more than 10 to 15 minutes of your time. The sample size targeted is 600 responses. The data will be used for the purpose of this study only.

Your participation is completely voluntary and anonymous. There are no personal benefits you will get from participating in this research. Completing the survey involves no risks to you. Students’ unwillingness to participate in the study and/or withdrawal from the study will not in any way interfere with your relationship with the instructor or affect student’s course grades assessment. Similarly, participation in the study will not in any way interfere with your relationship with the instructor or affect student’s course grades assessment.

Confidentiality will be strictly maintained, and the given information will not be shared with a third party. Your completion of this survey indicates your consent to participate in this research study. If you have any questions, feel free to contact me and/or my supervisor at the address below.

- Dr. Mohamed Slim Ben Mimoun, Associate Professor of Marketing at Qatar University: office number 44035036 or email: mbenmimoun@qu.edu.qa
- Aza Sidi Lemine, MSc Marketing student in Qatar university on email: as1403195@qu.edu.qa

Thank you for your time.

You may skip any question or withdraw from this study at any time. If you have read, understood, and agree to participate, please click on the link below.

I agree to participate (link to survey)

I decline (link to close webpage)

- **Section 1**

Q1. Are you a gym member?

- a. Yes
- b. No

If you answer Yes, please proceed to the next question

If your answer is No, many thanks for your time and interest, you can stop the questionnaire, this study is targeting only gym members.

Q2. Do you live in _____.

- a. Qatar
- b. Other (Please precise):

If your answer is a or b, please proceed to the next question

If your answer is c, many thanks for your time and interest, you can stop the questionnaire, this study is targeting only gym members living in Qatar.

Q3. Please provide the following information about your gym exercise persistence.

1- What is the frequency of attending the gym in the last month?

- 1. Did not attend
- 2. Less than 5 times
- 3. 5 to 7 times
- 4. More than 7 times
- 5. Daily

2- What is in general the average time you spent in exercising at the gym?

- 1. Did not attend
- 2. Less than 10 minutes
- 3. 10 to 20 minutes
- 4. 20 to 40 minutes
- 5. One hour
- 6. More than one hour

Please indicate your agreement or disagreement to each of the following statements for pertaining your opinion about the gym which you are member in:

Section 2	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
IM1. I get pleasure and satisfaction from participating in my gym exercises.	1	2	3	4	5
IM2. I find my gym exercises, as a pleasurable activity.	1	2	3	4	5
IM3. I exercise at the gym because it is fun.	1	2	3	4	5
IM4. In general, I enjoy my gym exercise sessions.	1	2	3	4	5
SA1. I am satisfied with my gym services.	1	2	3	4	5
SA2. I am satisfied with my decision to join the gym.	1	2	3	4	5
SA3. I am pleased to have taken the decision to become a member of the gym.	1	2	3	4	5
SF1. Even if I have worries and problems, I am confident that I can complete my exercises at my gym for the next 3 months.	1	2	3	4	5
SF2. Even if I feel depressed, I am confident that I can complete my exercises at my gym for the next 3 months.	1	2	3	4	5
SF3. Even if I feel tense, I am confident that I can complete my exercises at my gym for the next 3 months.	1	2	3	4	5
SF4. Even if I am tired, I am confident that I can complete my exercises at my gym for the next 3 months.	1	2	3	4	5
SF5. Even if I am busy, I am confident that I can complete my exercises at my gym for the next 3 months.	1	2	3	4	5

Section 2	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
NV1. My gym exercises interest me a lot.	1	2	3	4	5
NV2. My gym exercises matter a lot to me.	1	2	3	4	5
NV3. I attach great importance to my gym exercises.	1	2	3	4	5
NV4. I am fascinated by my gym practice.	1	2	3	4	5
PQ1. My gym facilities are in a high quality.	1	2	3	4	5
PQ2. My gym facilities are of very consistent quality.	1	2	3	4	5
PQ3. My gym facilities offer excellent features.	1	2	3	4	5
PQ4. My gym facilities are very reliable.	1	2	3	4	5

Please indicate your agreement or disagreement to each of the following statements for pertaining your opinion about the gym which you are member in:

Section 3	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
POE1. My gym exercises will improve my ability to perform daily activities.	1	2	3	4	5
POE2. My gym exercises will improve my overall body functioning.	1	2	3	4	5
POE3. My gym exercises will strengthen my bones.	1	2	3	4	5
POE4. My gym exercises will increase my muscle strength.	1	2	3	4	5
POE5. My gym exercises will improve the functioning of my cardiovascular system.	1	2	3	4	5
POE6. My gym exercises will improve my social standing.	1	2	3	4	5
POE7. My gym exercises will make me more at ease with people.	1	2	3	4	5
POE8. My gym exercises will increase my acceptance by others.	1	2	3	4	5
LY1. I exercise at my gym as my first choice compared to other gyms.	1	2	3	4	5
LY2. It would be costly in terms of money, time, and effort to end the relationship with my gym.	1	2	3	4	5
LY3. I shall continue considering my gym as my main gym choice in the next few years.	1	2	3	4	5
LY4. I would recommend my gym if somebody asked my advice.	1	2	3	4	5

Please indicate your agreement or disagreement to each of the following statements for pertaining your opinion about the gym which you are member in:

Section 4	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
CV1. In my gym, I feel full of energy.	1	2	3	4	5
CV2. In my gym, I feel strong and vigorous.	1	2	3	4	5
CV3. When I get up in the morning, I feel like going to my gym.	1	2	3	4	5
CV4. I can continue exercising for very long periods at a time.	1	2	3	4	5
CV5. In my gym, I am mentally very resilient.	1	2	3	4	5
CV6. In my gym, I always persevere, even when things do not go well.	1	2	3	4	5
CD1. My gym practice is full of meaning and purpose.	1	2	3	4	5
CD2. I am enthusiastic about my gym.	1	2	3	4	5
CD3. My gym inspires me.	1	2	3	4	5
CD4. I am proud of my gym practice.	1	2	3	4	5
CD5. My gym exercises are challenging.	1	2	3	4	5
CA1. Time flies when I am at the gym.	1	2	3	4	5
CA2. When I am exercising at the gym, I forget everything else around me.	1	2	3	4	5
CA3. I feel happy when I am exercising intensely at my gym.	1	2	3	4	5

CA4. I am immersed in my gym practice.	1	2	3	4	5
CA5. I get carried away when I am practicing at my gym.	1	2	3	4	5
CA6. It is difficult to detach myself from my gym.	1	2	3	4	5

- **Section 5**

Please provide the following information about yourself:

1-Are you a:

1. Man
2. Lady

2- Please indicate your age:

1. 18 to 19 years
2. 21 to 39 years
3. 40 to 64 years
4. Over 65 years

3- What is your highest educational qualification:

1. High School
2. University/Professional degree
3. Postgraduate

4- What is your nationality:

1. Qatari
2. Other (please precise):

Appendix B: Institutional Review Board Ethics Approval



Qatar University Institutional Review Board QU-IRB

QU-IRB Registration: IRB-QU-2020-006, QU-IRB, Assurance: IRB-A-QU-2019-0009

DATE: February 17, 2021

TO: Aza Sidi Lemine, MSc
FROM: Qatar University Institutional Review Board (QU-IRB)

PROJECT TITLE: 1715393-1: A comparison between sports psychology and sports marketing approaches to achieve loyalty between gym members in Qatar and USA.

QU-IRB REFERENCE #: QU-IRB 1484-E/21
SUBMISSION TYPE: New Project

ACTION: DETERMINATION OF EXEMPT STATUS
DECISION DATE: February 16, 2021
REVIEW CATEGORY: Exemption Category 2 & Category 4

Thank you for your submission of New Project materials for this project. The Qatar University Institutional Review Board (QU-IRB) has determined this project is EXEMPT FROM IRB REVIEW according to Qatar Ministry of Public Health regulations. Please note that exempted proposals do not require renewals; however, any changes/modifications to the original submitted protocol should be reported to the committee to seek approval prior to continuation.

Note: Please note that this approval covers the part of the study that will be conducted in Qatar and it is the investigator's responsibility to check if they need an ethics approval from the USA and to obtain such approvals.

We will retain a copy of this correspondence within our records.

Documents Reviewed:

- Application Form - qu-irb-application-human-subject-modified MSBM.doc (UPLOADED: 02/1/2021)
- Consent Form - English and Arabic Consnts (UPLOADED: 02/10/2021)
- Other - QU-IRB Check List.pdf (UPLOADED: 02/1/2021)
- Qatar University - IRB Application - Qatar University - IRB Application (UPLOADED: 02/10/2021)
- Questionnaire/Survey - Survey English 2.pdf (UPLOADED: 02/10/2021)
- Questionnaire/Survey - Arabic Survey.pdf (UPLOADED: 02/10/2021)

If you have any questions, please contact QU-IRB at 4403 5307 or qu-irb@qu.edu.qa. Please include your project title and reference number in all correspondence with this committee.

Best wishes,

Dr. Ahmed Awaisu
Chairperson, QU-IRB

