

Determinants of Member Retention in Malaysian Fitness Organisations: The Moderating Role of Attendance Frequency

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Abstract

Member retention is crucial for the sustainability of fitness organisations, yet high attrition rates remain a persistent challenge. This research investigates the factors influencing member retention in fitness facilities, focusing on Malaysian goal-based, coach-centric sports fitness organisations. The study examines the relationships between satisfaction, loyalty, and retention, with frequency of attendance as a moderating factor. Guided by Social Cognitive Theory, the research explores how consistent attendance fosters self-efficacy and engagement, strengthening the link between satisfaction and loyalty, which in turn enhances retention. Despite extensive studies on satisfaction and loyalty, limited research has examined the role of attendance frequency in structured fitness programs, highlighting a critical gap in the literature. This study addresses this gap by investigating the behavioural patterns of fitness members and their impact on retention. Using a quantitative, survey-based methodology targeting fitness members across Malaysia, data will be analysed through PLS-SEM to evaluate hypothesised relationships. The findings provide fitness managers with insights to design tailored programs that encourage consistent attendance and foster loyalty, helping fitness organisations improve retention, financial sustainability, and member well-being. Policymakers can leverage these insights to support fitness industry growth, promote long-term physical activity, and enhance public health outcomes, contributing to a healthier and more active society.

Keywords: Satisfaction, Loyalty, Retention, Frequency of Attendance, Social Cognitive Theory

Introduction

Member retention is a critical challenge for fitness organisations worldwide, particularly those offering coach-centric, goal-based fitness programs. Regular attendance is essential for skill progression, engagement, and long-term commitment in activities such as gymnastics, martial arts, competitive sports, dance-based fitness, and athletics (Rodriguez-Rad & Sanchez-

del-Rio-Vazquez, 2023; Cuesta-Valino et al., 2021). Despite its importance, many fitness centres face high dropout rates, threatening their financial sustainability (International Health, Racquet & Sportsclub Association [IHRSA], 2016; Sperandei et al., 2016; Yi et al., 2020). Member satisfaction, loyalty, and retention are key factors influencing long-term engagement, with satisfaction derived from service quality, loyalty reflecting members' commitment, and retention measured by continued membership (Yeomans, Karg, & Nguyen, 2023). Attendance frequency plays a crucial role in strengthening these relationships, as frequent participation enhances perceived service quality, increases satisfaction, and fosters loyalty, ultimately improving retention (Gjestvang et al., 2020; Oliveira et al., 2021). Therefore, this study focuses on attendance frequency as a moderating factor, examining its influence on the relationships between satisfaction, loyalty, and retention to provide insights into sustaining long-term engagement and reducing dropout rates in fitness organisations.

The fitness industry is experiencing a critical retention crisis, with gym memberships declining despite the easing of pandemic restrictions. While projections indicated that 94% of gym members would return to in-person fitness (Evans, Weber, & McQueen, 2020), actual attendance has significantly dropped, with only 35% attending regularly, down from 42% pre-COVID-19. This decline is compounded by the resurgence of respiratory illnesses such as influenza, which has now surpassed COVID-19 in mortality rates (New York Post, 2025). The persistent fear of infection discourages participation in shared fitness spaces, particularly structured, coach-led programs that require close physical interaction. Additionally, the rapid rise of digital and hybrid fitness solutions has given consumers more alternatives, further threatening traditional fitness businesses. Without effective retention strategies, many gyms and fitness centres face significant financial losses and potential closure.

In Malaysia, fitness organisations are grappling with even more severe challenges, including low membership penetration, financial instability, and ineffective retention strategies. With only 1.04% of Malaysians enrolled in gyms (RunRepeat [RR], 2023; Fit Tech Global [FTG], 2023), time constraints remain a major barrier, with 55% of Malaysians citing lack of time as a reason for irregular gym attendance (Statista Research Department [SRD], 2022). Moreover, financial instability poses a major threat, as seen in the closure of True Fitness Malaysia and the RM110 million in losses suffered by gym operators during the pandemic lockdowns (Birruntha, 2021). The high attrition rate of 27% annually (Kumar, 2022) further highlights the struggle fitness businesses face in maintaining consistent revenue streams. As competition intensifies and digital fitness solutions continue to expand, traditional fitness centres in Malaysia must urgently implement targeted retention strategies to remain viable in an increasingly unstable market.

Despite the global recognition of gym retention challenges, Malaysian research remains limited in addressing the behavioural and attitudinal factors that influence long-term retention. Existing studies have predominantly focused on customer satisfaction and marketing strategies rather than examining critical psychological and behavioural determinants of retention (Yusof, Popa, & Geok, 2018; Foroughi et al., 2019; Patrick et al., 2022). While Stephen (2023) explored customer lifetime value in boutique studios, the study lacked insights into coach-centric programs that require sustained engagement for skill progression. Similarly, research on emotional engagement in public sports centres (García-Pascual et al., 2020) does not account for private, goal-based fitness settings where retention

challenges may differ. Additionally, studies have not sufficiently investigated how factors like self-efficacy, attendance consistency, and commitment shape retention in the Malaysian context, despite evidence that time constraints and motivation lapses are significant barriers to long-term gym adherence (Yuen, 2023; Gjestvang et al., 2020). This gap in the literature leaves fitness organisations without a clear understanding of the psychological and behavioural drivers that contribute to sustainable membership retention.

Given these challenges, the significance of this study extends across multiple stakeholders, including fitness organisations, researchers, and policymakers, offering critical insights into improving member retention. For the fitness industry, the findings provide practical applications, particularly in designing data-driven strategies to address disengagement, such as personalised programs tailored to varying attendance levels, loyalty incentives, and predictive analytics to mitigate attrition risks (Yeomans et al., 2023; Yi et al., 2020). Fitness managers can enhance long-term member commitment by implementing structured engagement initiatives, such as competitions and progression-based systems, based on attendance frequency. Academically, this study advances retention theories in goal-based, coach-centric programs, contributing to the Social Cognitive Theory framework by highlighting how personal motivation and environmental influences shape retention behaviour. Policymakers can leverage these insights to promote industry-wide standards and structured fitness initiatives, addressing broader public health concerns by fostering consistent physical activity and reducing non-communicable diseases (WHO, 2023). By bridging theoretical insights with operational strategies, this research enhances decision-making processes within fitness organisations and informs policy development, ultimately improving industry sustainability and public health outcomes.

Building on these insights, the primary objective of this study is to examine how attendance frequency moderates the relationships between satisfaction and loyalty, which in turn enhances retention in Malaysian fitness organisations. The research also aims to explore the mediating effect of loyalty on the relationship between satisfaction and retention. By addressing these objectives, the study provides actionable recommendations for fitness organisations while advancing academic understanding of behavioural factors in retention. Additionally, its implications extend beyond the fitness industry, supporting public health initiatives aimed at promoting regular physical activity and reducing sedentary lifestyles for improved health outcomes.

Literature Review

Malaysian Fitness Organisations and Industry

The Malaysian fitness industry has experienced substantial growth in recent years, driven by increased awareness of health and wellness, evolving lifestyle trends, and government initiatives aimed at promoting physical activity. According to DSG Consumer Partners (2023), the fitness sector in Southeast Asia, including Malaysia, continues to expand rapidly, reflecting broader regional trends. Structured fitness programs have gained popularity due to their organised approach and measurable outcomes, aligning with the growing public interest in maintaining physical health (Statista Research Department [SRD], 2023). Additionally, the rise of boutique fitness studios offering specialised services has contributed to diversifying fitness options, catering to different preferences and fitness goals.

The development and standardisation of the fitness industry in Malaysia are supported by various national and state-level organisations. The Malaysian Fitness Association (MAFA), in collaboration with the Ministry of Youth and Sports (KBS), plays a pivotal role in promoting fitness-related events, training programs, and professional coaching (Malaysian Fitness Association, n.d.). Sports federations such as the Malaysian Gymnastics Federation (MGF), Malaysia Taekwondo Association (MTA), and Malaysia Karate Federation (MAKAF) oversee competitive sports, establishing structured training pathways and certification processes. Additionally, the National Fitness Council Malaysia (NFCM) and Malaysia Athletics Federation (MAF) contribute to enhancing both recreational and competitive fitness participation, ensuring that fitness programs meet international standards and supporting both grassroots and elite athlete development (Yeomans et al., 2023; DSG Consumer Partners, 2023).

The adoption of digital fitness platforms represents one of the most significant changes within Malaysian fitness organisations. The widespread availability of virtual classes, fitness apps, and wearable technology has reshaped how individuals engage with fitness services (Fitness On Demand, 2024). This digital shift has enabled fitness centres to reach a broader audience while offering greater convenience and flexibility. However, it has also intensified competition, with traditional gyms needing to adapt their service offerings to meet the evolving expectations of tech-savvy consumers (Cevik & Sevilmis, 2022). To remain competitive, many fitness organisations now integrate online and in-person experiences, offering hybrid memberships that combine the benefits of on-site facilities with the flexibility of virtual workouts.

Despite these advancements, retention remains a key challenge for fitness organisations in Malaysia. Industry reports indicate that attrition rates can reach as high as 27% annually, with factors such as time constraints, financial considerations, and shifting engagement patterns contributing to member churn (Kumar, 2022). The competitive landscape, shaped by both local gyms and global fitness platforms, has made it essential for organisations to enhance member satisfaction and foster long-term loyalty (Yeomans et al., 2023). Moreover, the increasing popularity of goal-based, coach-centric fitness programs has provided a pathway for improving retention by fostering deeper engagement and stronger emotional connections with members. Thus, understanding these evolving dynamics is crucial for developing sustainable retention strategies in Malaysia's rapidly changing fitness industry.

Theoretical Foundation

Social Cognitive Theory

Social Cognitive Theory (SCT), developed by Bandura (1986), provides a robust framework for understanding behavioural patterns in fitness settings by examining the interaction between personal, environmental, and behavioural factors. SCT posits that internal motivations and surroundings influence an individual's actions, shaping engagement and retention outcomes. Within fitness organisations, this theory explains how factors like coaching quality, social support, and the overall fitness environment interact with members' self-efficacy and motivation to impact their attendance and long-term commitment (Ong et al., 2022). Attendance frequency is central to this framework, as regular participation enhances self-efficacy, promoting persistence and resilience, which are essential for long-term retention (Rodríguez-Rad & Sánchez del Río-Vázquez, 2023). Fitness organisations implementing SCT-

based strategies, such as structured goal-setting and continuous feedback, foster greater member engagement and loyalty.

A core principle of SCT is reciprocal determinism, which highlights the dynamic and bidirectional interaction between personal factors, behaviours, and environmental influences (Bandura, 1986). In the context of fitness centres, members' attendance frequency is shaped by their internal motivations, such as achieving fitness goals, and external factors, such as positive reinforcement from instructors and peers. This interaction creates a feedback loop where personal achievements and social reinforcement enhance self-efficacy, leading to higher engagement and loyalty (Yakut, 2019). For example, goal-based programs that provide structured milestones and peer encouragement reinforce this dynamic, motivating members to maintain consistent attendance. The bidirectional nature of reciprocal determinism highlights the importance of creating supportive fitness environments that cater to individual needs and social interactions, fostering long-term retention.

SCT also identifies antecedents to behavioural patterns, including internal and external factors that influence an individual's actions. In fitness settings, these antecedents encompass personal goals, instructor feedback, social support, and facility quality (Schunk & DiBenedetto, 2020). Observing peers' success is a form of vicarious experience, motivating members to emulate similar behaviours and reinforcing their commitment to their fitness routines. Social support from peers and instructors further enhances self-efficacy, increasing the likelihood of consistent attendance and long-term engagement (Rakib et al., 2022). For example, coach-centric goal-based fitness programs provide incremental milestones that help members track their progress and build confidence, reinforcing their motivation to continue participating. Environmental factors, such as well-maintained facilities and accessible digital platforms, are also critical to encouraging sustained engagement and retention.

Outcome expectations, another key concept of SCT, refer to individuals' beliefs about the consequences of their actions, which significantly influence their motivation to engage in specific behaviours (Bandura, 1977). In fitness contexts, members often participate with the expectation of achieving physical, social, or emotional benefits, such as improved health, weight loss, or enhanced well-being. These expectations drive their commitment to regular attendance, as achieving desired outcomes reinforces their satisfaction and loyalty (Wilson & Millar, 2021). Fitness organisations can enhance retention by aligning their programs with members' goals, offering targeted training options, and providing progress-tracking tools highlighting tangible results. Social recognition from instructors and peers further reinforces members' beliefs in the positive outcomes of their efforts, strengthening their motivation to maintain long-term engagement (Yeomans et al., 2023).

In summary, SCT provides a comprehensive framework for understanding retention in fitness settings by emphasising the interaction between personal factors, behaviours, and environmental influences. By leveraging SCT principles such as reciprocal determinism, behavioural antecedents, and outcome expectations, fitness organisations can create supportive environments that enhance members' self-efficacy, motivation, and long-term commitment. Thus, this theoretical foundation underscores the importance of frequent attendance in driving engagement and retention, highlighting its role as a key factor in structured fitness programs.

Determinants of Retention

Retention remains a critical priority for fitness organizations, yet there is no universal consensus on the specific drivers that sustain long-term membership. Retention encompasses strategies and initiatives aimed at maintaining memberships, expanding market share, and fostering customer loyalty (Saputro et al., 2020). While satisfaction, service quality, and loyalty are commonly associated with retention, many studies focus on members' intentions to renew rather than actual retention behaviours. However, examining measurable indicators such as attendance frequency, consistency, and engagement patterns provides a more reliable assessment of long-term commitment (Teixeira et al., 2022; Yeomans et al., 2024). Fitness organizations that track these behavioural indicators can better identify retention risks and implement targeted strategies to sustain member engagement.

Beyond attitudinal and behavioural loyalty, additional factors such as pricing, convenience, and perceived fitness outcomes significantly influence retention. Flexible pricing structures, including pay-as-you-go options or tiered memberships, accommodate different financial situations and help reduce membership cancellations (IHRSA, 2023). Convenience also plays a crucial role, as fitness centres with accessible locations, adequate parking, and proximity to public transportation experience higher retention rates (Rodríguez-Rad & Sánchez del Río-Vázquez, 2023). Members who perceive fitness as a seamless part of their routine are more likely to maintain long-term participation. Furthermore, retention is strengthened when organizations create an environment that minimizes barriers to attendance and maximizes accessibility.

Perceived fitness outcomes serve as another critical determinant of retention, as members are more likely to continue their memberships if they see tangible progress toward their goals. Observable improvements in physical performance, endurance, or skill level enhance members' sense of accomplishment, reinforcing their motivation to remain engaged. Programs incorporating structured progression, such as skill-based training and performance tracking, provide members with clear benchmarks for success, fostering long-term adherence (Foroughi et al., 2019). By aligning fitness programs with members' aspirations, organizations can improve engagement and retention by offering goal-oriented experiences that support sustained motivation and progress.

Retention in fitness organizations is primarily influenced by three interconnected factors: satisfaction, loyalty, and attendance frequency. Satisfaction reflects members' fulfilment with their fitness experiences, encompassing both practical benefits, such as achieving fitness goals, and emotional benefits, such as enjoyment and social connections (Teixeira et al., 2022). High satisfaction levels contribute to greater motivation, directly influencing retention outcomes. Moreover, satisfaction is a precursor to loyalty, as members with positive experiences are more likely to develop emotional connections with the organization (Yeomans et al., 2023). Loyalty, consisting of both attitudinal and behavioural components, ensures long-term commitment by fostering psychological attachment and habitual engagement (Oliver, 1999). Additionally, attendance frequency plays a reinforcing role in retention, as regular participation enhances self-efficacy, strengthens social bonds, and deepens members' commitment to their fitness journey (Rodríguez-Rad & Sánchez del Río-Vázquez, 2023). By recognizing these determinants, fitness organizations can develop

targeted retention strategies that integrate satisfaction-driven engagement, loyalty-building initiatives, and attendance reinforcement to sustain long-term membership.

Satisfaction

Satisfaction with fitness services is closely linked to service quality, with higher service quality leading to greater satisfaction and, subsequently, stronger loyalty (Lim et al., 2021). According to expectation-disconfirmation theory (Oliver, 1997), members assess their satisfaction by comparing the fitness centre's actual performance with their initial expectations. When services exceed expectations, satisfaction increases, promoting loyalty and continued engagement. Meanwhile, utilitarian satisfaction emphasises practical and functional benefits such as the quality of facilities, program effectiveness, and service reliability (Pedragosa et al., 2015; Loranca-Valle et al., 2021). Meeting these functional expectations reinforces members' perceptions of value for money, motivating them to maintain their memberships.

Satisfaction builds over time through repeated interactions rather than isolated experiences (Cuesta-Valino et al., 2021; Tran et al., 2020). High standards of cleanliness, modern equipment, and efficient service contribute to sustained satisfaction, which is pivotal in reducing churn rates and improving retention. While satisfaction can also involve hedonic elements (such as enjoyment and emotional fulfilment) and non-monetary benefits (such as social bonds), this study limits its scope to practical, measurable factors that directly influence members' perceptions of service value (Sirin et al., 2023; Kim & Byun, 2021). This focus provides a more precise analysis of the key drivers of loyalty within fitness contexts.

Previous research highlights a strong connection between satisfaction and loyalty (Amin & Piaralal, 2020; Amin et al., 2020), particularly in goal-based fitness programs where practical and experiential expectations are consistently met (Sevilimis et al., 2022; Teixeira et al., 2022). Satisfaction fosters loyalty by enhancing members' willingness to renew memberships, recommend the fitness centre, and maintain long-term engagement (Tsitskari et al., 2023; Munaier & Costa, 2021). This relationship is reinforced when members achieve their fitness goals within structured, purpose-driven programs that provide both functional benefits and emotional rewards, such as pride in personal achievements.

Satisfaction reflects members' fulfilment with their fitness experiences, encompassing both practical benefits, such as achieving fitness goals, and emotional benefits, such as enjoyment and social connections (Teixeira et al., 2022). Satisfaction is a precursor to loyalty, as members who are satisfied with their experiences are more likely to develop long-term emotional connections with the organisation (Yeomans et al., 2023). Additionally, retention is believed to be a function that measures existing customers' level of satisfaction (Amin & Piaralal, 2020). The studies by Howat and Assaker (2016) and Garcia-Pascual et al. (2020) further confirm that satisfaction—driven by consistent service quality and structured programs—enhances loyalty by meeting practical needs and emotional expectations, ultimately supporting long-term retention. Thus, this study proposes the following hypotheses:

H1a. Satisfaction has a positive effect on loyalty.

H1b. Satisfaction has a positive effect on retention.

Loyalty

Loyalty is essential for the long-term success of organisations (Elrayah & Piaralal, 2024). In the fitness industry, it signifies members' commitment to consistently using its services (Avourdiadou & Theodorakis, 2014). Higher loyalty levels enhance member retention, promoting financial stability and sustainability (Howat & Assaker, 2016). Additionally, loyal members act as brand advocates, boosting the centre's reputation through word-of-mouth recommendations (Dick & Basu, 1994). Previous research establishes a strong link between loyalty and retention, especially in structured fitness programs that foster consistent engagement. Key factors influencing loyalty include service quality, satisfaction, and attendance frequency (Avourdiadou & Theodorakis, 2014; Yeomans et al., 2023). High visit frequency and program participation provide physical and psychological benefits, reinforcing members' long-term commitment (Teixeira et al., 2022). However, loyalty is not solely driven by habit or convenience; deeper emotional connections, such as social belonging and trust in trainers, play a significant role in sustaining long-term retention (Eskiler & Safak, 2022; Yeomans et al., 2024).

Research has consistently highlighted the mediating role of loyalty in the relationship between satisfaction and retention, emphasising that satisfied members are more likely to develop both attitudinal and behavioural loyalty, which in turn drives long-term engagement and membership renewal (Oliver, 1999; Foroughi et al., 2019). Attitudinal loyalty reflects an emotional commitment to the fitness organisation, fostering a sense of belonging and attachment, while behavioural loyalty is demonstrated through repeated attendance and continued membership (Yeomans et al., 2023). Prior studies suggest that loyalty is a critical pathway through which satisfaction translates into sustained participation, as members who feel valued and engaged are more likely to remain committed to the organisation (Rodríguez-Rad & Sanchez del Rio-Vazquez, 2023).

By recognising loyalty as a mediator, organisations can design more targeted retention strategies beyond enhancing satisfaction to actively fostering long-term commitment. Strategies such as personalised engagement, reward programs, and social reinforcement strengthen attitudinal and behavioural loyalty, increasing retention rates (Teixeira et al., 2022). Given the importance of loyalty towards retention and in bridging satisfaction and retention, this study proposes the following hypotheses:

H2. Loyalty has a positive effect on retention.

H3. Loyalty mediates the relationship between satisfaction and retention.

The Moderating Role of Frequency of Attendance

The frequency of attendance is both an indicator of engagement and a reinforcing factor for retention. Regular participation strengthens members' self-efficacy, as achieving fitness milestones builds confidence in their abilities (Rodríguez-Rad & Sanchez del Rio-Vazquez, 2023). Frequent attendance also fosters social interactions with peers and instructors, creating a supportive environment that enhances emotional commitment and loyalty (Teixeira et al., 2022). Consequently, members who attend more frequently are more likely to maintain their memberships, as consistent engagement reinforces their satisfaction and loyalty, driving long-term retention. In goal-based programs, frequent participation fosters intrinsic motivation, supported by structured milestones and social interactions that drive sustained engagement (Riseth et al., 2022).

Consistent attendance in structured programs is linked to greater self-efficacy, which is crucial for maintaining long-term fitness commitments. Self-efficacy, the belief in one's ability to achieve goals, strengthens with regular feedback and social support (Romeo et al., 2021). Huang and Kim (2023) highlight that high self-efficacy motivates members to attend regularly, reinforcing both satisfaction and loyalty. Frequent participation also enhances social connections, promoting a sense of belonging that further deepens members' emotional attachment and commitment to the fitness organisation (Ghorbanzadeh & Rahehagh, 2020; Yeomans et al., 2023).

Frequent attendance is crucial in strengthening the relationship between satisfaction and loyalty in structured fitness programs. Members who attend regularly receive continuous feedback and achieve incremental milestones, reinforcing their self-efficacy and motivation (Satjawathee et al., 2023; Rodriguez-Rad & Sanchez del Rio-Vazquez, 2023). These interactions also facilitate observational learning, as members witness peers reaching similar fitness goals, further enhancing their commitment. Social reinforcement, aligned with SCT, highlights the influence of environmental factors such as peer support and instructor feedback in sustaining behavioural change and fostering long-term engagement (Teixeira et al., 2022). In goal-based fitness programs, structured milestones such as competitions and skill assessments are tangible progress markers that enhance motivation and strengthen satisfaction-loyalty.

For members with lower attendance frequency, targeted interventions such as personalised workout plans, motivational reminders, and flexible scheduling options can help overcome participation barriers (Huang & Kim, 2023). Digital tracking tools and personalised check-ins further foster emotional connections and engagement, ultimately improving retention. Recognising attendance frequency as a key moderator allows fitness organisations to refine retention strategies by addressing the specific needs of both high- and low-frequency attendees. Frequent attendees who experience both emotional and practical benefits are likely to show deeper commitment to the organisation (Huang & Kim, 2023; García-Pascual et al., 2021). The consistent participation of frequent attendees reinforces both emotional and practical engagement, making satisfaction more likely to translate into long-term loyalty (Yi et al., 2020; Munaier & Costa, 2021). Accordingly, this study proposes the following hypothesis:

H4. Frequency of attendance moderates the relationship between satisfaction and loyalty.

Conceptual Framework

The conceptual framework of this study is grounded in Social Cognitive Theory (SCT), emphasising the relationship between satisfaction as the primary antecedent influencing loyalty, which in turn drives retention. Loyalty is a mediating variable, bridging the relationship between satisfaction and retention. This study focuses on the frequency of attendance, which is introduced as a moderating factor, strengthening the satisfaction-loyalty relationship. By integrating these constructs, the study aims to provide a comprehensive model explaining how fitness organisations can optimise retention strategies through a structured understanding of satisfaction, loyalty, and frequency of attendance (Figure 1).

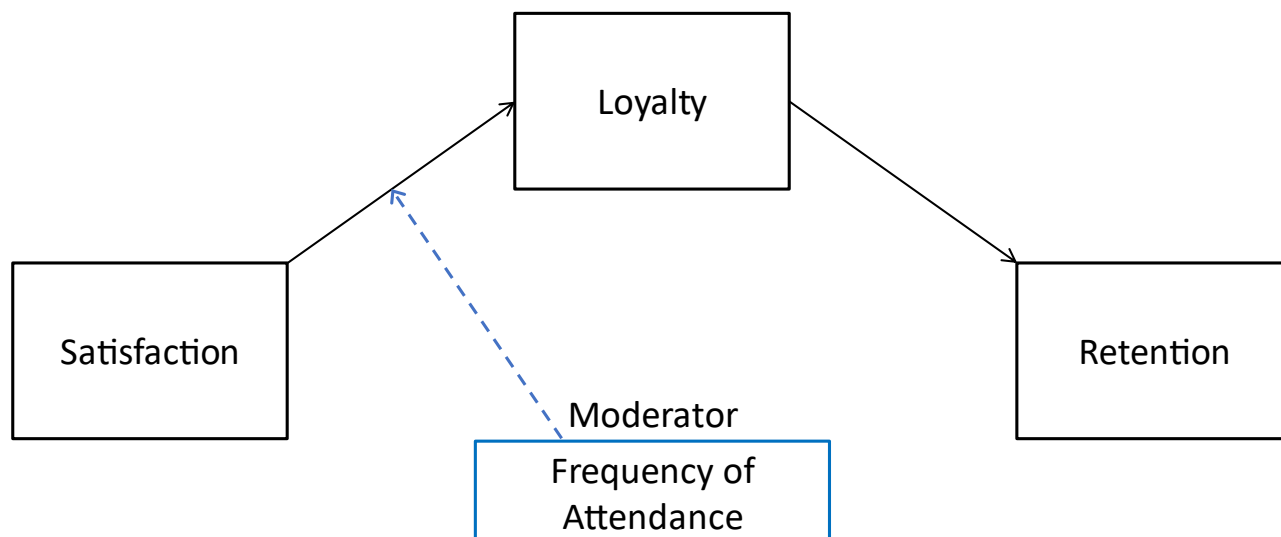


Figure 1. Conceptual Framework

Research Methodology

Research Design

A carefully designed methodology aligns the research questions, theoretical framework, and data collection methods to produce valid conclusions (Creswell & Creswell, 2018). This study adopts a positivist paradigm, emphasising objective measurement and empirical observation to explore structured relationships between variables, including satisfaction, loyalty, and retention, within Malaysian fitness organisations. The study follows a quantitative research approach, using structured surveys with close-ended questions to ensure the findings' consistency, reliability, and generalisability across a larger sample size (Schindler, 2021). This study employs a deductive approach, aligning with its positivist foundation to test existing theories and hypotheses using quantitative methods. Deductive reasoning enables systematic measurement and objective analysis, ensuring findings are grounded in empirical data (Bryman, 2012). This structured approach facilitates rigorous hypothesis testing, particularly in coach-centric, goal-based fitness programmes. A cross-sectional survey design is employed to collect data at a single point in time, allowing for the analysis of relationships among variables without altering the natural setting (Siedlecki, 2020).

Survey Method

This study employs a survey research methodology, a widely used approach in quantitative research that facilitates standardised data collection. Surveys effectively examine relationships among variables and gather data from large populations, making them particularly suitable for studies investigating participant characteristics and behaviours. Bihu (2021) highlights the relevance of questionnaire surveys in social sciences, noting their structured and reliable framework for analysing diverse factors. Given the study's focus on member retention in Malaysian fitness organisations, this methodology provides a systematic means of exploring the study's key constructs of satisfaction, loyalty, retention and frequency of attendance.

Population

The target population for this study comprises members of fitness organisations across Malaysia, specifically those participating in coach-centric, goal-based fitness programmes. These programmes emphasise structured training, regular attendance, and measurable skill progression, contributing to long-term member retention (Huang & Kim, 2023). Participants are drawn from diverse fitness disciplines to enhance the study's applicability—including martial arts, dance, competitive sports, and general fitness—capturing broader industry dynamics and identifying universal factors influencing member behaviour (García-Pascual et al., 2020). By encompassing various organisational settings, the findings will be relevant across multiple fitness contexts rather than confined to niche markets.

Unit Analysis and Sampling Frame

The unit of analysis for this study is individual members of fitness organisations in Malaysia who participate in structured, goal-oriented activities such as gymnastics, martial arts, competitive sports, dance-based fitness, and athletics. To ensure meaningful insights into member retention, the study focuses on participants with at least 12 months of consistent engagement in these programmes. This criterion enhances the reliability of findings by capturing perspectives from experienced members, aligning with best practices in fitness research, where methodological rigour is crucial for validity and generalisability (Cuenca-Garcia et al., 2022; Burnstein et al., 2011).

Sampling Design

The study employs a non-probability convenience sampling approach to ensure a representative sample across various fitness disciplines, allowing for efficient data collection from accessible participants (Hair et al., 2022). Members were reached through fitness organisations' mailing lists, social media, and referrals, facilitating cost-effective recruitment. While convenience sampling provides practical benefits, it introduces potential selection bias, which may limit the generalisability of findings (Jager, Putnick, & Bornstein, 2017). Despite these limitations, this approach is appropriate for exploratory research, offering valuable early insights into the dynamics of member retention within Malaysian fitness organisations (Casteel & Bridier, 2021).

Sample Size

The sample size for this study is determined based on Structural Equation Modelling (SEM) guidelines to ensure statistical validity and reliability. Since the total population size is unknown, Cochran's (1977) formula for an infinite population is applied, yielding a minimum required sample size of 384 participants. To enhance robustness and account for potential non-responses, the target sample size is increased to 450 participants, ensuring sufficient data for reliable parameter estimation, minimising Type II errors, and enhancing generalisability (Saunders, Lewis, & Thornhill, 2019; Cohen, 1988). This decision aligns with best practices in SEM, including the rule of 10, general SEM recommendations, and empirical evidence suggesting that studies with multiple constructs benefit from larger sample sizes (Hair et al., 2022; Nikmah & Rosia, 2023).

Measurement Instrument

This study employs an online questionnaire as the primary data collection tool, adapted from previously validated scales, to ensure reliability and validity (Yeomans et al., 2023). The

structured survey format enables the collection of standardised, quantifiable data across multiple variables, facilitating an in-depth analysis of factors influencing member retention in Malaysian fitness organisations. Each survey item corresponds to specific constructs within the study's conceptual framework, ensuring a clear link between theoretical foundations and empirical measurement. Satisfaction is measured using scales adapted from Pedragosa et al. (2015), while loyalty and retention constructs are based on Avourdiadou and Theodorakis (2014). To optimise response quality, the questionnaire is designed to be concise, user-friendly, and pre-tested for clarity and reliability, following best practices in online survey methodology (Cornesse et al., 2020).

Coding Scale

The study utilises a 5-point Likert scale for measurement, ranging from "1 = Strongly Disagree" to "5 = Strongly Agree" or "1 = Very Unlikely" to "5 = Very Likely." This scale is chosen for its simplicity and effectiveness in capturing respondent attitudes while minimising cognitive burden. A 5-point scale is particularly well-suited for the study's target demographic—members of goal-based fitness programmes—ensuring quick and clear responses. Research suggests that limiting response options to five categories enhances data reliability and consistency in structured surveys (Dawes, 2008).

Pilot Test

A pilot study was conducted to evaluate the survey instrument's clarity, coherence, and functionality before full-scale data collection. Pilot studies are essential for refining research tools, identifying questionnaire wording, structure, and sequencing issues, and assessing response rates and completion times (Pearson et al., 2020). This study's preliminary version of the questionnaire was distributed to 35 members of various fitness organisations in Malaysia, yielding 30 valid responses—meeting the recommended pilot sample size of 15–30 participants (Whitehead et al., 2015). The findings confirmed the reliability and validity of the questionnaire, ensuring its suitability for the main study while enhancing methodological rigour (Klinggraeff et al., 2023).

Data Collection

Data will be collected through an online survey distributed via fitness organisations' email lists and social media platforms, ensuring broad reach and accessibility. Given the inclusion of minors in coach-centric, goal-based fitness programmes, a dual-response mechanism will be implemented, requiring parental or legal guardian consent before participation. Participants under 18 can complete the questionnaire independently or with parental assistance, aligning with ethical research guidelines (Shaw, Elger, & Colledge, 2017). Reminder emails will be sent one week after the initial distribution to maximise participation. Strict privacy protocols will be maintained to ensure anonymity and confidentiality, adhering to the ethical principles outlined in the Declaration of Helsinki (World Medical Association, 2013).

Data Analysis

This study's data analysis employs descriptive and inferential statistical techniques to examine the relationships between satisfaction, loyalty, retention and frequency of attendance in coach-centric, goal-based fitness programmes in Malaysia. Descriptive statistics summarise participant demographics and response patterns, while inferential methods assess variable relationships using SPSS and JASP software. Structural Equation Modelling (SEM) is the

primary analytical approach, enabling the simultaneous examination of direct, mediating, and moderating effects across multiple constructs (Ringle et al., 2018). Confirmatory Factor Analysis (CFA) will be conducted to validate the measurement model and assess construct validity, with Average Variance Extracted (AVE) ensuring convergent validity (Dos Santos et al., 2021). A mediation analysis following Baron and Kenny's (1986) framework will evaluate loyalty's role as a mediator of satisfaction and retention, while a moderation analysis will assess the impact of attendance frequency on these relationships. This rigorous, multi-faceted approach ensures robust and reliable findings, contributing valuable insights into member retention dynamics.

Conclusion

In conclusion, this study examined the relationship between satisfaction, loyalty, and retention in Malaysian fitness organisations, focusing on the moderating role of attendance frequency. Satisfaction is expected to enhance loyalty, which in turn fosters long-term retention. However, this study highlights that attendance frequency is crucial in strengthening these relationships, as members who attend more frequently are likely to develop stronger commitment and engagement. The findings of this research offer valuable benefits to key stakeholders. Fitness organisations can leverage these insights to design targeted engagement strategies, optimise service offerings, and implement loyalty programs encouraging consistent participation. Policymakers can use the findings to develop industry standards and support initiatives promoting long-term fitness participation, contributing to improved public health outcomes. Additionally, researchers can build upon this study to explore further behavioural and psychological factors affecting retention. By providing a deeper understanding of how attendance frequency influences satisfaction, loyalty, and retention, this study contributes to academic literature and practical strategies for sustaining membership in fitness organisations. Ultimately, fostering consistent attendance is not just a business strategy but a fundamental driver of long-term member retention, financial sustainability, and a healthier society.

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