

What drives clients adhere to long-term personal training? A case study of personal training participants in Japan

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Abstract:

Personal training has the potential to be an effective method for maintaining exercise routines and improving physical fitness. However, there is limited academic research on the factors that influence clients' long-term adherence to personal training, as well as the qualities of trainers that contribute to sustained engagement. This study examined the factors that motivate clients to continue personal training for extended periods. The participants included 53 middle-aged and older adults who had been receiving personal training for six months or longer. The subjects responded to an online survey, in which they freely stated the reasons why they continued to receive personal training instruction for extended periods of time. The results showed that the factors that compelled clients to adhere to personal training were the trainer's "Ability to design training programmes (n = 44)", "Ability to communicate and motivate (n = 39)", "Attainment of training benefits (n = 33)", "Goal setting ability (n = 29)", "Training teaching skills and knowledge (n = 28)", "Relationship of mutual trust (n = 4)", as well as the establishment's "Reservation availability (n = 9)", and "Ease of access (n = 8)". Analysis by gender revealed that "Attainment of training benefits (Men = 25, Women = 8)" was more frequently mentioned by men subjects ($p \leq 0.01$) as an important aspect, while "Reservation availability (Men = 1, Women = 8)" and "Ease of access (Men = 1, Women = 7)" were more frequently mentioned by women subjects ($p \leq 0.05$). These results suggest that there are factors that are common for both men and women, and factors that each gender prioritized when they made the choice to continue personal training long-term. In conclusion, we can infer that personal trainers are not only advised to acquire expansive knowledge of exercise science and technique, but also non-technical skills such as the ability to respond to the different needs of their clientele, communication skills, and the ability to build trusting relationships.

Keywords: personal trainer, attribute, Japanese, questionnaire, survey

Introduction

Today, it is a well-known fact among people worldwide that 'long-term exercise habits are good for health'. Numerous studies have demonstrated that long-term exercise is effective not only in terms of changes in body composition, but also in terms of disease prevention (Ahlskog et al., 2011; Gleeson et al., 2011; Manson et al., 1999; Pedersen & Saltin, 2015; Tanasescu et al., 2002). However, discontinuing long-term exercise may lead to a return to an individual's pre-training physical condition (Graves et al., 1988; Hortobágyi et al., 1993; Kraemer et al., 1995; Mujika & Padilla, 2015). Dishman (1994) reported that nearly half of those who began exercising for health purposes stopped exercising within six months. Although we understand that 'long-term exercise habits are good for health', owing to various circumstances (i.e. time restriction owing to occupation or raising children) it is difficult for many people to continue exercising.

One strategy to help people continue to exercise is personal training (PT), in which a trainer prescribes exercise on a one-on-one basis to a client or small groups of one to three people. Several studies have examined the effectiveness and professional status of PT. For example, Wing et al. (1996) conducted a study on exercise compliance in PT and compared a 24-week exercise regimen for compliance rates between a PT group and a minimally supervised exercise group. McClaran (2003) conducted a 10-week PT programme and found that 102 of 129 participants had a higher exercise compliance rate than those in the minimally supervised group. Ratamess (2008) reported the difference between supervised and unsupervised groups of healthy women groups and the influence of personal trainers on self-selected intensities during resistance training. The results revealed that the group receiving PT had greater initial 1RM muscle strength and trained at higher intensities than their counterparts. Melton et al. (2011) conducted an interview survey with five women who were continuing long-term personal training and five women personal trainers and qualitatively examined 'reasons why clients hire

trainers' and 'qualities required of trainers'. Consequently, the authors reported that the clients' reasons for hiring a trainer were dissatisfaction with their own body image and seeking support to motivate themselves to maintain their exercise habits. Clients stressed the importance of hiring certified trainers.

Several studies have demonstrated the characteristics and effectiveness of PT. However, evidence regarding the effect of PT on exercise persistence rates is scarce, and the attributes of PT that influence long-term exercise adherence are unclear. For example, in a study by Wing et al. (1996), the exercise continuation rate was higher when PT was conducted, which was the only conclusive result, whereas the quality of trainers that influenced exercise persistence was not examined. Melton et al. (2011) examined the reasons for hiring personal trainers using data from five women participants. However, it is possible that different results would have been obtained if men participants had been included. Therefore, the factors compelling clients to adhere to PT are yet to be clarified. These factors could potentially provide personal trainers with useful information regarding client needs.

Therefore, this study aims to examine the factors that make clients adhere to PT and the qualities of trainers that may influence clients' exercise adherence. To the best of the authors' knowledge, this is the first academic study to examine factors affecting long-term adherence to PT from this perspective.

Material and Methods

Experimental Approach to the Problem

This study employed an open-ended questionnaire to examine factors that compel clients to adhere to PT. The reason for using open-ended questions was that the number of similar studies examining the factors compelling clients to continue adhering to PT was limited to those by Melton et al. PT sometimes provides rehabilitation for returning to daily life after an injury. However, this study did not focus on rehabilitation, but on clients focusing on strength, flexibility, endurance, and other fitness training programmes. The trainers in charge of the participants were active in Tokyo (one person), Ibaraki Prefecture (one person), and Fukuoka Prefecture (five persons), and all were men. This study was approved by the Ethics Review Committee of the principal investigator's institution (No. 168).

Participants

Fifty-three participants (31 men and 22 women) had been adhering to PT for at least 6 months. The mean age of the subjects was 44.0 ± 11.3 years, 41.9 ± 9.6 years for men participants and 47.0 ± 12.8 years for women participants. The duration of personal training was six months to one year (10 men and 5 women participants), one to two years (5 men and 5 women participants), three years or more (16 men and 12 women participants). The participants signed an informed consent document that provided a sufficient explanation of the content and context of this study.

Procedures

Questionnaire

The questionnaire was provided to the participants via Google Forms. The content of the questionnaire was designed such that the participants were provided with an informed consent clause and the content of the questionnaire upon which the participants were to answer the survey questions was subsequently explained. The questionnaire was designed such that the subjects were required to, 'In 100 words or more, please explain in detail the reasons why are you able to continue your personal training'. The following four precautions were provided in advance: Do not answer the questionnaire while consulting with others around you; do not search for information about PT on the Internet; write your own thoughts; and do not consult with the trainer in charge.

Analysis Procedure

The analysis was conducted using the quantitative text analysis software, KH Coder 3.Beta.03i (Higuchi) (hereinafter, 'KH Coder') and WordMiner (Fujitsu). The analysis procedure was performed as presented in Figure 1, referring to the literature (Higuchi, 2016) and previous studies (Medina-Hernandez et al., 2024) that described the procedure for using KH Coder. The details are described below.

Task A: First, the raw data were arranged in a spreadsheet, and the first author examined and corrected the typographical errors. After the complete data were re-examined and validated by the co-researchers, an English native-equivalent co-researcher inspected the text and corrected typographical errors and omissions.

Task B: Word-frequency analysis was conducted following Task A. In word frequency analysis, a sentence, for example 'I will study sports at the university', is broken down into individual parts 'I / will / study / sports / at / the / university' and the number of occurrences of each word is counted. The text data organised in Task A were then imported into WordMiner as primitive variables and analysed, after which the number of occurrences of all words in all sentences was counted. Based on the number of occurrences of each word, a set of common words not used in the analysis is displayed in Table 1. The reason for this parameter setting is to avoid possible errors such as common words (i.e. 'I') becoming falsely related to words that are out of context in subsequent analysis.

Task C: Following the previous tasks, a co-occurrence network diagram was created by connecting words using KH Coder. A co-occurrence network is a chart in which words highly relevant in terms of context and definition are connected by lines. The positional relationship of the words in the diagram is not related to the degree of co-occurrence. A minimum-spanning tree was used to plot the dataset.

A minimum spanning tree is a setting that minimises the number of lines to the minimum number that maintains the connection between words because the number of lines connecting words used in many sentences increases, making it difficult to interpret the chart. The Jaccard coefficient (Jaccard, 1901) was set to indicate the relationship between words connected by lines.^{*1} In addition, the 'subgraph detection (modularity)' was set to automatically detect words that are strongly connected to each other and colour-code each group (subgraph) when plotting. Consequently, 42 words were used in the plot and the number of occurrences was four or more. After drawing the co-occurrence network, we used KH Coder's KWIC (keyword in context concordance function)^{*2} to evaluate how each word in the colour-coded subgraphs was handled in the text to determine the names of the subgraphs.

Task D: To examine the relationship between each subgraph and age and gender, the coding rules presented in Table 1 were created, and descriptions corresponding to each subgraph were tabulated by age and gender. Coding refers to the aggregation of statements containing a specified word using a specified external variable. The results of the tabulation indicated that there was no difference in the number of each statement by age, however, the tendency of the statements differed by gender; therefore, the present study examined the difference by gender.

To eliminate possible interpretation bias, the results analysed by the first author were triangulated with those of the three co-researchers. At each stage of the analysis, the interpretation of the results was discussed multiple times by the researchers. All questionnaires were administered and answered in Japanese, however, the co-researchers, who hold Michigan University ECPE (Examination for the Certificate of Proficiency in English), translated all the questionnaires into English for this paper.

Statistical Analysis

A χ^2 test was used for the cross tabulation between gender and each subgraph with the significance level set at 5% (Pearson's chi-square value). Provided that the data were tabulated for men and women, KH Coder automatically corrected for Yates' correction (continuous correction). Additionally, the expected frequencies of some variables in this analysis were less than 5, and Fisher's exact establishment test was conducted with the significance level set at 5%.

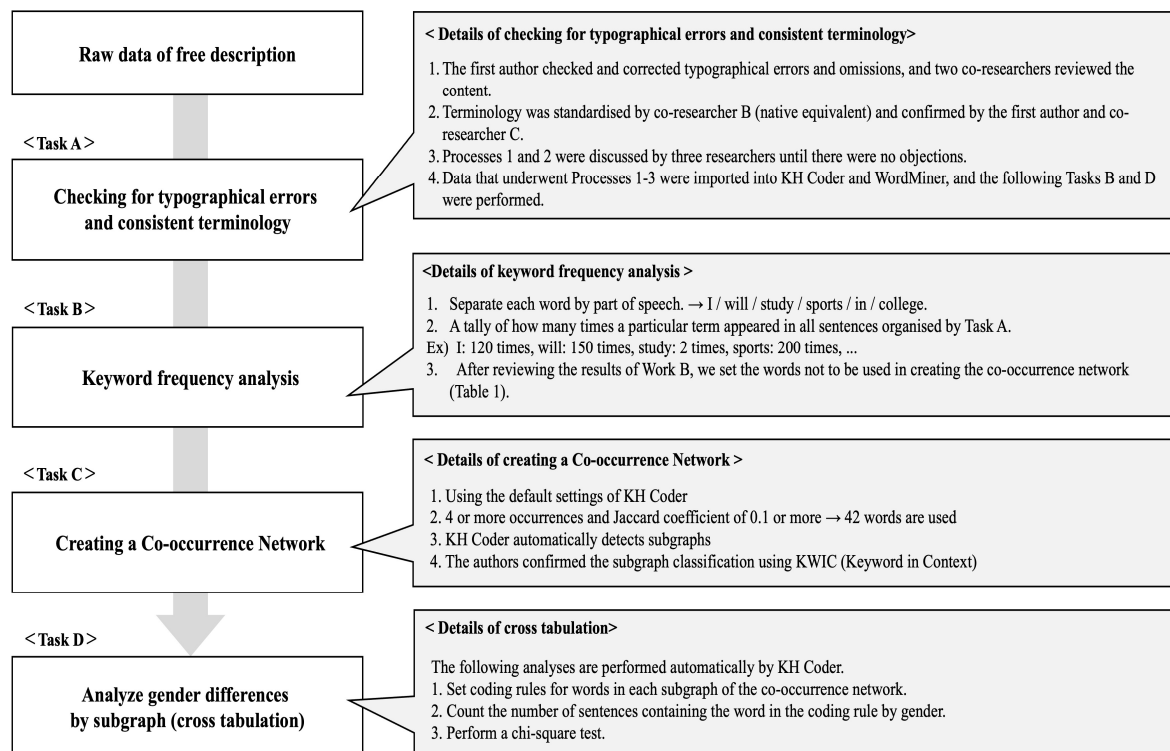


Figure 1. Schematic diagram of the analytical procedure in this study

Table 1. List of words and coding rules not used in the analysis

Words not used in the analysis	
I, think, out, go, reason, attend, follow, part, can, do, myself, self	
Coding rule	
Sub-graph	Word
Attainment of training benefits	benefit, feel, fitness, weight, need, muscle
Training teaching skills and knowledge	form, exercise, correct, advice, nutrition, knowledge, always, new
Reservations availability	reservation, cancel
Ease of access	near, home
Ability to communicate and motivate	continue, fun, talk, increase, motivation, keep
Relationship of mutual trust	trust, charge
Goal setting skills	good, physical, start, achieve, goal, coaching, improve
Ability to design training programmes	adapt, condition, programme, load, suggest, bear

Results

List of Frequently Occurring Words

Table 2 presents the 42 words used in the analysis of the participants' descriptions of the aforementioned questions, sorted by frequency of occurrence. Consequently, 'training' was the most frequent word (71 times), followed by 'programme' (28 times), 'benefit' (21 times), 'trainer' (19 times), 'advice' (17 times), and 'motivation' (17 times).

Table 2. List of words with four or more occurrences and the number of times they appear

No	Extraction word	Frequency	No	Extraction word	Frequency	No	Extraction word	Frequency
1	training	71	15	increase	11	29	improve	6
2	programme	28	16	talk	10	30	knowledge	6
3	benefit	21	17	charge	10	31	new	5
4	trainer	19	18	exercise	9	32	need	5
5	advice	17	19	adapt	9	33	coaching	4
6	motivation	17	20	correct	9	34	keep	4
7	suggest	17	21	load	9	35	start	4
8	personal	15	22	reservation	9	36	trust	4
9	condition	14	23	nutrition	7	37	weight	4
10	continue	13	24	home	7	38	fitness	4
11	form	12	25	near	7	39	achieve	4
12	feel	12	26	cancel	6	40	bear	4
13	physical	12	27	fun	6	41	always	4
14	goal	12	28	muscle	6	42	good	4

Co-occurrence Network Diagram

Figure 2 presents the co-occurrence network diagram of the frequently occurring words, which was plotted using KH Coder, and displays that the phrases 'Ability to design training programmes', 'Ability to communicate and motivate', 'Attainment of training benefits', 'Goal setting ability', 'Training teaching skills and knowledge', 'Reservation availability', 'Ease of access', and 'Relationship of mutual trust' were the most frequently occurring phrases in the co-occurrence network diagram.

The ‘ability to design training programmes’ comprised six terms: ‘load’, ‘training’, ‘programme’, ‘condition’, ‘adapt’, ‘suggest’, and ‘bear’. The actual statement was, ‘The training programmes are well-thought out and you will never become bored, and if you attempt the programme and it is extremely difficult, the trainer will change the training volume and/or intensity or suggest a programme that suits your physical condition for that day’. Another statement was, ‘As I pay less for personal training and the trainer suggests a training programme adapted to my physical abilities and physical condition’. ‘Ability to communicate and motivate’ comprised five words: ‘talk’, ‘fun’, ‘continue’, ‘increase’, ‘motivation’, and ‘keep’.

The actual statements were, ‘We have many motivating positive discussions’, ‘He always encourages me, and that increases my motivation’, and ‘We have the same taste in music, therefore, it is fun to talk during rest intervals’. ‘Attainment of training benefits’ comprised eight words: ‘benefit’, ‘feel’, ‘fitness’, ‘weight’, ‘need’, and ‘muscle’. The actual statement was, ‘As I am feeling the benefits of training, such as improvement of fitness and muscle gain’. ‘Goal setting ability’ was defined as ‘good’, ‘physical’, ‘personal’, ‘start’, ‘achieve’, ‘goal’, ‘coaching’, and ‘improve’. The actual statements were, ‘I believe the coaching is on target, not simply generalities and the training is adjusted to my individual goals’, ‘He helps me set goals that are not only effective in motivating me in the short term, but also sustainable and achievable in the long term’. ‘Training teaching skills and knowledge’ were defined as: ‘form’, ‘exercise’, ‘correct’, ‘advice’, ‘nutrition’, ‘knowledge’, ‘always’, and ‘new’. The actual statements were, ‘He always advises me on training and nutrition, therefore, I learn new activities and gain new insights’, ‘He also has good knowledge regarding nutrition and always answers my questions’, ‘He advises me until I can train with correct form, which is one of the reasons I have fewer injuries now compared with before I started’. ‘Reservation availability’ comprised two words: ‘reservation’ and ‘cancel’. The actual statement was, ‘It is easy to make reservations on LINE messenger and there is no cancellation fee’. ‘Ease of access’ comprised the two words: ‘home’ and ‘near’. The actual statement was, ‘Near home and easy to reach’. ‘Relationship of mutual trust’ comprised three words: ‘trust’, ‘charge’, and ‘trainer’. The actual statements were, ‘I trust my trainer because he has been in charge of me for a long time’ and ‘I can trust my trainer to take care of my physical condition on the day and ensure my safety’.

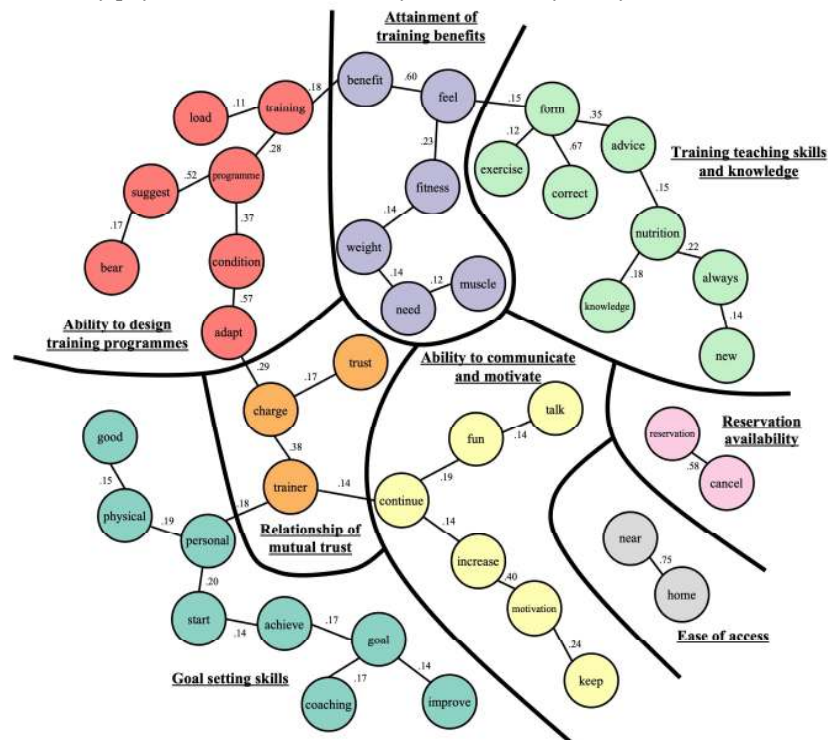


Figure 2. Co-occurrence network diagram created from free-text descriptions
Cross-Tabulation of Gender and Each Sub-Graph

Table 3 presents the results of a cross tabulation between the grades and the subgraphs, and a χ^2 test. The cross-tabulations revealed significant differences in ‘Attainment of training benefits’ ($\chi^2(1) = 6.16$, $p = 0.01$), ‘Reservation availability’ ($\chi^2(1) = 5.74$, $p = 0.02$) and ‘Ease of access’ ($\chi^2(1) = 4.53$, $p = 0.03$). Significant differences were found in the analysis of dichotomous values between the men and women participants. As the analysis was conducted for men and women participants, it was concluded that ‘Attainment of training benefits’ was significantly higher for men participants, whereas ‘Reservation availability’ and ‘Ease of access’ were significantly higher for women participants. The results for ‘Ability to design training programmes’, ‘Ability to communicate and motivate’, ‘Goal setting ability’, ‘Training teaching skills and knowledge’, and ‘Relationship of mutual trust’ were not significantly different.

Table 3. Results of cross-tabulations between each sub-graph and gender

	Ability to design training programmes	Ability to communicate and motivate	Attainment of training benefits	Goal setting ability	Training teaching skills and knowledge	Reservation availability	Ease of access	Relationship of mutual trust	Number of cases
Women (row %)	18 (26.1)	19 (27.5)	▽ 8 (11.6)	9 (13.0)	13 (18.8)	▲ 8 (11.6)	▲ 7 (10.1)	2 (2.9)	69 (100.0)
Men (row %)	26 (30.6)	20 (23.5)	▲ 25 (29.4)	20 (23.6)	15 (17.7)	▽ 1 (1.2)	▽ 1 (1.2)	2 (2.9)	85 (100.0)
Total (row %)	44 (28.6)	39 (25.3)	33 (21.4)	29 (18.8)	28 (18.1)	9 (5.84)	8 (5.19)	4 (2.6)	154 (100.0)
Chi-square value	0.19	0.15	6.16 *	2.10	0.00	5.74 *	4.53 *	0.00	
Significance establishment	0.66	0.70	0.01	0.14	1.00	0.02	0.03	1.00	
Fisher's exact test	0.59	0.58	0.01	0.14	1.00	0.01	0.02	0.59	

- In both cases, the degrees of freedom were 1.
- ▲ indicates statistically significantly higher, ▽ indicates significantly lower.
- The number of cases represents the total number of sentences for each gender.

Discussion

This study examined the factors that motivate clients to participate in PT using an open-ended questionnaire. The results revealed that the key words ‘programme’, ‘benefit’, ‘advice’, and ‘motivation’ were frequently used by the participants in this study to describe the factors that compelled them to adhere to PT long-term. The participants described training programmes, training effects, advice from trainers, and motivation as factors contributing to their continuation. The results of the co-occurrence network created using participants' descriptions indicated that ‘Ability to design training programmes’, ‘Ability to communicate and motivate’, ‘Attainment of training benefits’, ‘Goal setting ability’, ‘Training teaching skills and knowledge’, ‘Reservation availability’, and ‘Ease of access’ were the most common factors that contributed to the participants' adherence to training programmes. The results revealed that men participants stated ‘Attainment of training benefits’ more frequently than women participants ($p = 0.01$), and women participants stated ‘Reservation availability’ ($p = 0.02$) and ‘Ease of access’ ($p = 0.02$) more frequently than men participants.

Melton et al. (2011) interviewed five women participants who continued their personal training and qualitatively examined their clients' reasons for hiring trainers. They reported that clients' reasons for hiring a trainer included that they were dissatisfied with their own body image and that they wanted support to motivate themselves to maintain their exercise habits. Melton et al. (2010) also reported that personal trainers and club managers may be more likely to have clients adhere to a programme if they exhibit empathy, listening skills, and motivational skills. In summary, the results of these studies suggest that trainers' motivational skills, empathy, and listening skills are important factors in PT client retention. As presented in Table 3, descriptions of a trainer's ability to motivate clients and communication skills appeared to be valued by both men and women participants. This finding partially supported the results reported by Melton et al. Further, the results of this study revealed that the ease of reservation and access to a training gymnasium may be more important factors for women to continue long-term training. In contrast, men may continue to train because they receive proper training instructions and experience the benefits of the training programme. This is the novelty of this study, as it has not been found in previous studies.

We speculate that the physical changes caused by muscle hypertrophy may also be a factor in why men often report experiencing the benefits of training which motivate them to continue. Previous studies reported that women's interest in body image is mostly concerned with being thin (Tiggemann, 2012), whereas men tend to be more concerned with being muscular (McNeill & Firman, 2014; Pope et al., 2000). Ginis et al. (2005) examined changes in body image after 12 weeks of strength training and reported that subjective physical changes led to improved body image in men. Thus, men are fundamentally interested in becoming more muscular. Thus, it can be inferred that the perceived physical changes achieved through personal training led to these results. McNeill and Farman (2014) noted that in middle-aged and older adult groups, increased health consciousness is a driving force for exercise. Strength training provides individuals who exercise with feedback on their physical abilities. As their bodies become stronger, they observe an objective increase in the amount of weight they can lift, which we hypothesise may be partly owing to an improved sense of their own bodies and health. In the descriptions regarding ‘the effects of receiving training guidance’, the following comments were provided, ‘As I can experience the effects of training such as increase in weight lifted and muscle gain’ (50-year-old man), ‘I believe that I gained muscle strength in a shorter period of time than when training by myself’ (42-year-old man), ‘Since I started personal training, I can clearly see an increase in muscle strength’ (42-year-old man), ‘Since I started personal training, my muscles have clearly increased and my performance in competitions has improved’ (27-year-old man), and ‘My efforts are paying off, and I am steadily approaching my goal of bench pressing 100 kg’

(46-year-old man). This suggests that men participants' fundamental body image and its improvement, as well as their objective and subjective feedback on their health and muscle strength, influenced the results of this study.

It is noteworthy that among women, significantly more statements were made regarding 'accessibility' and 'ease of making appointments' than their men counterparts. Im et al. (2008) examined the attitudes of 15 middle-aged women participants towards physical activity and determined that lack of time, weather, and lack of family and friends to exercise may be deterrents. In addition, Raza et al. (2022) reported that an increase in the commuting distance from home to outdoor and indoor physical activity facilities is associated with the risk of infrequent exercise. Moreover, the proportion of single-person households in Japan is increasing (Ghaznavi et al., 2022), and as more women enter the workforce, the number of people juggling housework and work will also increase (Ministry of Internal Affairs and Communications of Japan, 2024). It is believed that in Japan, the social conditions surrounding women who exercise have led them to continue using personal training gyms, citing convenience factors such as the proximity of the gymnasium to their homes and the ease of making reservations (or being able to cancel their reservations) as factors for their continued use.

In addition to these gender differences, the following factors were also cited: 'Ability to design training programmes', 'Ability to communicate and motivate', 'Goal setting ability', 'Training teaching skills and knowledge', and 'Relationship of mutual trust'. Moreover, it is noteworthy that the NSCA's (National Strength and Conditioning Association) guidance documents (Coburn & Malek, 2011; Haff & Triplett, 2015) have identified a number of exercise adherence factors that have not been indicated in previous studies, such as sport psychology, exercise techniques, and other training-related physiological knowledge; the results of this study support that these findings are essential for trainers. However, the ability to adapt to each gender's demands and communication skills are non-technical abilities that include human qualities (such as values, personality, and appearance) that cannot be demonstrated in instructional manuals.

Personal trainers need to acquire non-technical abilities, such as the ability to respond to the different demands of their specific clientele, communication skills, and the ability to build trusting relationships, in addition to acquiring the basic knowledge provided in the NSCA instruction manuals. The number of participants in this study is limited to 53. We hypothesised that if the number of participants increases, other long-term adherence factors or factors determined by age may be present. It is noteworthy that this study was conducted in Japan, and the results may vary if the same study is conducted in other countries. This is a limitation of this study and an issue to be addressed in the future.

Conclusion

This study examined the factors that compelled 53 middle-aged and older adults who had been attending personal training for more than six months to continue PT for extended periods of time. The following two results were obtained:

(1) The factors that contributed to clients' adherence to personal training were the trainer's 'Ability to design training programmes', 'Ability to communicate and motivate', 'Attainment of training benefits', 'Goal setting ability', 'Training teaching skills and knowledge', and 'Relationship of mutual trust', as well as the establishment's 'Reservation availability' and 'Ease of access'.

(2) Analysis by gender revealed that 'Attainment of training benefits' was more frequently stated by men participants ($p \leq 0.01$) as an important factor for adhering to personal training, whereas 'Reservation availability' and 'Relationship of mutual trust' were more frequently stated by women participants ($p \leq 0.05$).

These results provide a novel perspective on what customers value in personal training services, which has not yet been examined in other studies on the same subject. This information can be applied to marketing personal trainers, personal training gyms, and the direction of client involvement in the future. Moreover, it could provide insight into services that offer personal trainer certifications (e.g. NSCA, ACSM) to design workshops on how to build trusting relationships with clients in the teaching environment, points, and techniques to consider when communicating with clients, in addition to standard exercise physiology and techniques.

Notes

1. KH Coder can automatically calculate the Jaccard coefficient. The calculation is made by dividing the number of sentences "containing word A" and "containing word B" by the number of sentences "containing word A" or "containing word B" or both.
2. The KWIC (Keyword in context) concordance function is a function that lists sentences in which a word is used and is a standard feature of KH Coder.

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