Objectives: The purpose of this study is to examine the relationship between psychological safety, job resources, and work engagement among fitness club employees.

Materials and Methods: The survey included 427 fitness club employees (147 men and 280 women) in Japan. A web-based questionnaire survey was used in the study. The survey period was from August to September 2020. The team psychological safety scale, the Utrecht work engagement scale (short version with 9 items), and items related to work resources in the Brief Job Stress Questionnaire were used in the study.

Results: Correlation and multiple regression analyses revealed that work engagement was significantly positively associated with employees’ job satisfaction and rewarding job, job aptitude, and psychological safety.

Conclusions: Results suggest that increasing job satisfaction and rewarding job is important for fitness club employees and an increase in employees’ psychological safety enhances their work engagement. Furthermore, the study indicated that psychological safety is mediated by work engagement and the support provided by colleagues and supervisors.

Key words: psychological safety, job resource, work engagement, sports facility, fitness club

Introduction

In the current rapidly changing social environment, the tasks required of workers in fitness clubs are becoming more sophisticated and complex every day, necessitating urgent efforts by companies to secure talented human resources. Under uncertain circumstances, involving diversification and sophisticated customer needs, such as home-based fitness and 24-hour fitness, and complicated law revisions such as the Personal Data Protection Act, it is necessary to retain talented human resources by promoting values other than tangible rewards. Furthermore, the high demands of fitness club jobs have been linked to employee burnout. Burnout is common in human service jobs, where the need to maintain conflicting emotional and intellectual attitudes towards clients for long periods is one of the causes of burnout. In response, managers and researchers have recently started examining aspects of work engagement. Work engagement is defined as an individual’s ‘positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption’. The promotion of work engagement has been reported to have various positive effects, such as improve-
ments in employees’ task performance and contextual performance\textsuperscript{6}, psychological and physical health\textsuperscript{5}, and job satisfaction and organisational commitment and a reduction in their intention to leave the company or change jobs\textsuperscript{8}. Research reports a link between work engagement and burnout, as well\textsuperscript{6}\textsuperscript{,9}.

One factor that affects work engagement is job resources, which ‘(1) are functional in achieving work goals; (2) reduce job demands and the associated physiological and psychological costs; or (3) stimulate personal growth and development\textsuperscript{9}. According to empirical studies\textsuperscript{7,8}, job resources include supervisory feedback and coaching, social support, an innovative work climate, rewards, recognition, and a value fit between the organisation and individual. One concept that has recently drawn attention is psychological safety, which is defined as ‘the degree to which people view (their) environment as conducive to interpersonally risky behaviours like speaking up or asking for help\textsuperscript{9}'. Edmondson uses “team psychology safety” as a group-level construct and argues that psychological safety is not a characteristic of a single employee but a property of a small group\textsuperscript{10}. Moreover, several studies report that psychological safety is positively associated with work engagement\textsuperscript{11-13}, which suggests that employees with high perceived psychological safety achieve high performance\textsuperscript{9}.

In recent years, in the context of an increase in citizens’ health consciousness, the fitness market has been growing in Japan; in 2019, the market saw its eighth consecutive year of positive growth and broke all previous growth-based records\textsuperscript{14}. The fitness market comprises diverse types of businesses and services that satisfy various needs of users, as evidenced by online services such as home and mobile fitness and outdoor fitness services to be implemented in parks. Therefore, one of the issues faced by fitness club employees is that the employee turnover rate is higher in fitness clubs than in other occupations. According to data provided by the Ministry of Health, Labour and Welfare\textsuperscript{15}, the turnover rate within three years of university graduation in the ‘Living-Related and Educational Services and Amenity Services’ category, which includes fitness clubs, is 46.2%, which is the second highest after the rate for ‘Accommodation, Eating and Drinking Services’. The main reasons for the high turnover among sports instructors have been identified as health reasons, relationship problems, and dissatisfaction with income or job description\textsuperscript{16}. Although jobs offered by fitness clubs are highly professional and have high social importance, they require hard work and are largely socially unpopular\textsuperscript{17}; further, the high volumes of work done by fitness instructors have been reported to negatively affect their mental health\textsuperscript{18}. Furthermore, in general, the health status of sports club employees is not good, despite their young age\textsuperscript{19}. These findings suggest that fitness club employees in Japan work in a physically and mentally demanding environment, which may be related to the high turnover rate. Furthermore, some other issues affect their well-being, for instance, recent changes in the social environment, such as declining birth rates and an ageing population; high concentration of population in urban areas; and the rapid development of information and communication technology (ICT), which has increased the level of sophistication and complexity of their work. Measures must be taken urgently to effectively respond to these changes. A study conducted by Park et al.\textsuperscript{18} suggested that interpersonal relationships in the workplace affect the mental health of fitness club instructors, whereas job satisfaction affects the mental health of administrators. Therefore, for fitness club employees, increased psychological safety leads to improved interpersonal relationships in the workplace, and a higher level of work engagement leads to greater job satisfaction. Together, these two aspects positively influence employees’ professional lives. However, sports facility instructors have different characteristics from the professionals working in other business sectors, since the former perform intense physical activity while providing services to their clients. The factors of work engagement are probably different among the two groups, as well. Hence, the purpose of this study is to reveal the relationship between the psychological safety, job resources, and work engagement of fitness club employees.

Materials and Methods

Procedures and study subjects

We requested two fitness clubs with nationwide
branches to cooperate with our research and administered an anonymous online questionnaire survey to all their 495 employees. We explained to the employees that survey participation was voluntary and would not affect their personnel evaluation. The survey was conducted from August 25 to September 9, 2020, and 427 respondents (mean age: 25.92 years, SD±5.34, 147 men and 280 women) were included in the analysis (response rate: 86.3%) (Table 1).

Table 1  Demographic characteristics of survey participants

|                         | n   | Percentage | Mean | SD   |
|-------------------------|-----|------------|------|------|
| Gender                  |     |            |      |      |
| Male                    | 147 | 34.3       |      |      |
| Female                  | 280 | 65.6       |      |      |
| Age                     |     |            | 25.92| 5.34 |
| Years of work experience|     |            | 2.34 | 1.81 |
| Years of experience as an instructor | |     | 2.35 | 2.36 |
| Occupation              |     |            |      |      |
| Instructor              | 339 | 79.4       |      |      |
| Instructor and administrator | 49 | 11.5       |      |      |
| Administrator           | 39  | 9.1        |      |      |
| Job title               |     |            |      |      |
| Non-manager             | 313 | 73.3       |      |      |
| Manager                 | 114 | 26.7       |      |      |

SD, standard deviation.

Measures

Team psychological safety scale
The 7-item team psychological safety scale developed by Edmondson9 was translated into Japanese and used with the original author’s consent. Some experts in organisational theory9 performed the first round of the scale’s translation. Subsequently, a translation company conducted back-translation. Further, we reviewed the differences of the translated version from the original version and developed the final scale. The survey was answered using a 7-point scale with options ranging from 1, ‘Strongly Disagree’, to 7, ‘Strongly Agree’.

Work engagement
To measure work engagement, we used the 9-item Utrecht work engagement scale (UWES) developed by Schaufeli et al.3. This shortened version of the scale has been used to compare work engagement in various countries. The survey was answered using a 7-point scale with options ranging from 0, ‘Never’ to 6, ‘Always (every day)’.

Job resources
We used the following items related to job resources that could affect work engagement as control variables: control over work, skill utilisation, job aptitude, rewarding job, support from colleagues, support from superiors, and job satisfaction. These items were developed in compliance with the questions provided in the Brief Job Stress Questionnaire20.

Personal attributes
Subjects were asked to provide various demographic details, such as their gender, age, educational qualification, work location, work hours per week, number of team members, occupation, job title, years of work experience, and years of experience as an instructor. To clarify the number of team members, since team psychological safety is a property of small groups10, we added question items to examine whether the number of team members affected team psychological safety and work engagement. However, since neither of the surveyed companies had small teams as official
organisational units, the question was rephrased as ‘the number of team members (in the same branch or division) you normally work with’.

Statistical analysis
In this study, statistical analysis was carried out as follows: Pearson’s correlation analysis was performed to evaluate psychological safety, work resources, and work engagement. This was followed by multiple regression analysis with work engagement as the objective variable. Further, we used IBM SPSS 26 for Windows for statistical analysis.

Ethical considerations
This study was approved by the ethics review committee of the Graduate School of Health and Sports Science, Juntendo University, Chiba, Japan (Application Number: 31–56, 2020–65 and 2020–47).

Results
Results of the correlation analysis of variables
The study revealed that the mean score for psychological safety was 4.91 (SD±0.94) and that for work engagement (UWES-9) was 3.43 (SD±1.47). Table 2 summarises the correlation analysis results. There was a significant positive correlation between psychological safety and work engagement (r=.413, p<0.01). Among job resource items, psychological safety showed a significant positive correlation with support from colleagues (r=.475, p<0.01) and support from superiors (r=.521, p<0.01) and a significant but weak positive correlation with control over work (r=.336, p<0.01), skill utilisation (r=.340, p<0.01), job aptitude (r=.301, p<0.01), rewarding job (r=.271, p<0.01), and job satisfaction (r=.397, p<0.01). Work engagement showed a significant positive correlation with job aptitude (r=.621, p<0.01), rewarding job (r=.652, p<0.01), support from superiors (r=.422, p<0.01), and job satisfaction (r=.664, p<0.01) and a significant but weak positive correlation with control over work (r=.269, p<0.01), skill utilisation (r=.362, p<0.01), and support from colleagues (r=.372, p<0.01).

Results of multiple regression analysis with work engagement as the objective variable
Table 3 depicts the results of the multiple regression analysis. The analysis was performed using age and gender as adjustment variables. The adjusted R2 coefficient was 0.588 (p<0.001), which indicates that job resources and psychological

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### Table 2 Results of Pearson’s correlation analysis between job resources, psychological safety, and work engagement

| Mean | SD  | 1   | 2   | 3   | 4   | 5   | 6   | 7   | 8   | 9   |
|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| 1    |     |     |     |     |     |     |     |     |     |     |
| Control over work | 7.62 | 2.16 | 1   | .153** | .386** | .273** | .213** | .387** | .417** | .336** | .269** |
| Skill utilisation  | 2.76 | 0.85 | 1   | .303** | .257** | .151** | .218** | .276** | .340** | .362** |
| Job aptitude       | 3.09 | 0.78 | 1   | .717** | .312** | .357** | .615** | .301** | .621** |
| Rewarding job      | 3.24 | 0.78 | 1   | .287** | .349** | .645** | .271** | .652** |
| Support from colleagues | 9.54 | 2.26 | 1   | .614** | .383** | .475** | .372** |
| Support from superiors | 8.69 | 2.40 | 1   | .469** | .521** | .422** |
| Job satisfaction   | 2.71 | 0.91 | 1   | .397** | .664** |
| Psychological safety | 4.91 | 0.94 | 1   | .413** |
| Work engagement    | 3.43 | 1.47 | 1   |     |     |     |     |     |     |     |

SD, standard deviation.
Note: **p<0.01.

### Table 3 Results of multiple regression analysis with work engagement as the objective variable

| Work engagement (β) |
|----------------------|
| Control over work    | -0.101** |
| Skill utilisation    | 0.097**  |
| Job aptitude         | 0.169*** |
| Rewarding job        | 0.279*** |
| Support from colleagues | 0.064 |
| Support from superiors | 0.052 |
| Job satisfaction     | 0.314*** |
| Psychological safety | 0.115**  |

R2: 0.598***
adjR2: 0.588***

Note: ***p<0.001, **p<0.01.

Age and sex were adjusted in the multiple regression analysis.
safety significantly affected work engagement. The variable with the strongest relationship with work engagement was job satisfaction \((\beta = 0.314, p < 0.001)\), followed by rewarding job \((\beta = 0.279, p < 0.001)\) and job aptitude \((\beta = 0.160, p < 0.001)\). Psychological safety had the fourth strongest relationship \((\beta = 0.115, p < 0.01)\).

**Discussion**

**Participant characteristics**

This study examined the employees, most of whom were instructors, of two fitness clubs in Japan. They were characterised by their very young age, and less than three years' experience in practice and as instructors. They had high work engagement scores compared to the Japanese subjects considered in previous studies\(^{21-23}\). A study conducted by Bernabé et al.\(^{24}\) found that fitness instructors had moderate to high levels of job satisfaction due to their favourable workplace relationships the recognition of their occupation by peers and clients, their high levels of autonomy, and the job itself. Our survey revealed that job satisfaction, rewarding job, and job aptitude were associated with work engagement, which supports the findings of Bernabé et al.\(^{24}\)

**Relationships of job resources and psychological safety with work engagement**

Among job resources, job satisfaction and rewarding job were shown to be associated with work engagement. Locke\(^{26}\) defines job satisfaction as 'a pleasurable or positive emotional state resulting from the appraisal of one’s job or job experiences' and work engagement as 'a positive, fulfilling, work-related state of mind that is characterised by vigour, dedication, and absorption'. Whereas work engagement refers to employees' emotions and perceptions while working, job satisfaction refers to their overall emotions and perceptions regarding the job itself. Therefore, work engagement refers to a more active state than that referred to by job satisfaction. Although they are different in this respect, they both denote a positive psychological state, which is why job satisfaction showed a stronger association with work engagement than the other items. Further, according to Renard and Snelgar\(^{27}\), the provision of psychologically rewarding work increases employees' intrinsic motivation and intrinsic motivation, in turn, increases work engagement, which supports the analysis results of this study. In addition, Schaufeli and Dijkstra\(^{25}\) suggest that job resources such as 'social support from colleagues' and 'good relationship with superiors' increase employees’ work engagement. In the current study, correlational analysis revealed that support from colleagues and superiors was related to work engagement, whereas multiple regression analysis did not show that support from colleagues and superiors was associated with work engagement. This implies that support from colleagues and superiors is not directly related to work engagement and is mediated by psychological safety. A study by Carmeli and Gittell\(^{28}\) found that high-quality relationships are correlated with psychological safety, which confirms the current study's finding.

**Psychological safety of fitness club employees**

A study by Chang et al.\(^{29}\) revealed that employees’ emotional exhaustion and burnout are highly correlated with workplace incivility and service climate. Similarly, according to a study conducted on hotel employees\(^{30}\), who, similar to fitness club employees, work in the hospitality industry, psychological safety positively influences engagement in creative work tasks and the engagement in creative tasks, in turn, influences the innovative culture of the services provided by these employees.

The current study found that psychological safety enhanced work engagement, which prevents the occurrence of employee burnout. This result, coupled with the finding of the aforementioned study\(^{30}\) that psychological safety enhances work creativity, suggests that improving the psychological safety of fitness club employees has a positive impact on their work environment and the quality of the services provided by them.

**Conclusions**

This study found that the psychological safety and job resources of fitness club employees are positively related to their work engagement. Therefore, to ensure the provision of high-quality services at fitness clubs, companies should enhance their employees' psychological safety and job resources.
Limitations and future research

One limitation of this study is that it does not examine the factors known to affect work engagement other than job resources (personal resources and job demands). Future studies focusing on these factors will reveal more details on the relationship between psychological safety and work engagement. Another limitation of this study is that it did not consider other factors (e.g., proactive personality, positive leader relations, work design characteristics, and supportive work context) known to affect psychological safety. To implement practical measures to enhance psychological safety, the role played by these factors must be clarified. Psychological safety has been studied among various professions and industries, and the findings of the current study can be applied to not only the fitness industry and other related industries but also a wide range of organisational entities, including educational institutions. However, except for a study conducted by Higgins et al., who recently published a longitudinal study on psychological safety among school teachers, few studies have examined the impacts of psychological safety over time. We can expect future cross-sectional and longitudinal studies to further advance psychological safety research.

According to Rosen, healthy people make healthy companies and healthy companies are more likely, more frequent, and over a longer period of time, to make healthy profits and to have healthy returns on investments. There has been widespread discussion about ‘health management’ based on Rosen’s ideas among Japanese companies. From the viewpoint of corporate social responsibility, it is important for companies to invest in the health of their employees. This is particularly important in human service companies such as fitness clubs. It is hoped that this research will contribute to the promotion of health management in various industries.

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Conflicts of interest

The authors declare that there are no conflicts of interest.

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