Article

Evaluating the Impact of Workplace Friendship on Social Loafing in Long-Term Care Institutions: An Empirical Study

Feng-Hua Yang [1] and Fang-Jie Shiu [2,*]

1   Department of International Business Management, Da-Yeh University, Changhua 51591, Taiwan; leonard@mail.dyu.edu.tw
2   Ph.D. Program in Management, Da-Yeh University, Changhua 51591, Taiwan
*   Correspondence: hsufangjie@gmail.com

Abstract: In light of the aging population and the rapid growth of people with mental and physical disabilities, the demand for long-term care has increased significantly. In order to meet the massive need for long-term care, the government of the Republic of China has accelerated the training of manpower for care services, and the number of qualified staff and institutions in the long-term care industry has increased accordingly. Although the need for long-term care employees has increased, they face problems such as low pay, low levels of decent work feelings, and high work pressure. Moreover, the increase in employee numbers in the organization does not improve the overall efficiency of long-term care workers. Instead, it has a social loafing effect. Not only in Taiwan, but other countries worldwide, such as Japan, Korea, Singapore, Hong Kong, and the United Arab Emirates, are experiencing a staff shortage, a lack of training, and social loafing in long-term care institutions due to the aging of their populations. Therefore, in this study, workplace friendship as the independent variable, organizational commitment and psychological safety as the mediating variables, and service climate as the moderating variable were used to investigate the effects of social loafing on the employees of long-term care institutions in Taiwan. The results showed that workplace friendship between employees positively and significantly affects organizational commitment and psychological safety. Moreover, organizational commitment and psychological safety will negatively and significantly affect their social loafing. Second, organizational commitment and psychological safety have mediating effects between workplace friendship and social loafing. Furthermore, the service climate of employees in long-term care institutions will positively moderate the impact of their workplace friendship on psychological safety. The results will be provided to those in charge of the long-term care service industry, training institutions, long-term care business-related organizations, and government agencies, as well as for reference in subsequent studies.

Keywords: workplace friendship; organizational commitment; psychological safety; service climate; social loafing

1. Introduction

The global population is growing older, and Taiwan is no exception. As early as 2000, Japan established a long-term care insurance system for the delicate care of the elderly. However, due to declining birth rates and the workforce, Japan has been experiencing a shortage of long-term care nursing human resources. So, the Japanese government established the Asia Health and Wellbeing Initiative (AHWIN) in 2016. This initiative brought manpower from Vietnam to Japan to practice Japanese-style long-term care skills to address the shortage of long-term care nursing human resources [1]. The same problem also occurred in Korea [2], Singapore [3], Hong Kong [4], and the United Arab Emirates [5]. These countries have also brought nursing aides from the Philippines and Indonesia to fill the long-term care nursing human resource gap. In recent years, the number of elderly people, people over 50 years old with dementia, and people of any age with physical and

mental disabilities in Taiwan has been growing rapidly [6]. The demand for these long-term care services has increased from 511,000 in 2017 to 829,000 in 2022 [7]. To face the enormous demand for long-term care services and to alleviate the heavy burden of caregiving on the family, the Long-Term Care Plan 2.0 has been promoted by the government of the Republic of China since 2017 [8]. In addition, the Long-Term Care Services Act is being promoted, obliging local governments and private long-term care institutions to take charge of disability care and integrate home health services. Among those who enter the homes of people with long-term care needs and take care of them are the staff of long-term care institutions, including social workers, registered professional nurses, nurse aides, and other administrative staff. To enhance the professional ability of the staff of long-term care institutions and accelerate the training of care service personnel, a training plan for nurse aides has been promulgated by the Ministry of Health and Welfare [9]. Executive Yuan [7] pointed out that by May 2022, more than 92,000 nurse aides in Taiwan will have received their certificates of completion, a 3.7-fold increase compared to 2016.

To provide more professional, localized, and diversified long-term care services, the government of the Republic of China has pushed to increase the number of qualified long-term care institutions and their staff [10]. It stands to reason that the growth of employees in long-term care institutions should promote the overall capacity of long-term care services. However, the study revealed that increasing the number of long-term care workers did not improve overall long-term care work performance [11]. Social psychology calls this phenomenon social loafing. Social loafing means that when a group of people works together, the effort of a single member is less than the effort of that member when the task is performed alone [12]. Social loafing affects employee engagement and team cohesion [13] and leads to negative work emotions [14]. It also causes a free-rider effect, which reduces service performance [15]. In recent years, studies have also pointed to similar issues among employees of long-term care institutions. For example, long-term care of employees' negative emotions at work [16], reduced engagement and motivation [17], and inequitable pay for failing to meet performance standards [18]. The study also mentioned that what the employees of long-term care institutions faced may be caused by work stress [19,20]. That is, increasing the number of employees in long-term care institutions in the wrong way might cause social loafing. For example, the number of members in a group or the combination of their specialties is not appropriate. Social loafing in organizations tends to create a perception of an uneven workload, which in turn causes negative emotions at work and affects performance. However, the issue of social loafing depends on whether the decision-maker is intentional about prevention and the way employees are grouped. For example, having too many members with the same expertise in the same group may be one of the reasons for social loafing.

Several studies have mentioned the factors influencing the social loafing of employees in companies and institutions. For example, Fronza and Wang [21] investigate how to avoid the software developing team members' social loafing behavior in team expectation agreements (TEAs). A negative relationship between social loafing and workplace friendship was found in the study. Secondly, Şeşen et al. [22] tested the model of the effect of organizational citizenship and organizational commitment on social loafing. The results show that organizational commitment can decrease social loafing. Furthermore, Schepers et al. [23] assigned several university students to 36 software teams and experimented with the influence of psychological safety and trust among them on using groupware in teamwork. The results show a negative correlation between psychological safety and social loafing among university students. Finally, Gabler et al. [24] analyzed the relationship between employees' performance and service climate in some organizations. The study mentioned that a kind service climate could decrease social loafing.

The aforementioned studies have shown that workplace friendship, organizational commitment, psychological safety, and service climate are related to or have a significant impact on social loafing. Although the context of this study differs from previous research, the five variables may have a causal relationship when examined from a psychological

viewpoint in long-term care institutions. Therefore, in this study, employees of long-term care institutions in Taiwan were studied, with workplace friendship as the independent variable, organizational commitment and psychological safety as the mediating variables, and service climate as the moderating variable, to investigate their effects on social loafing. The purpose is to understand the social loafing effect of long-term care service workers in Taiwan and the current status of its related influences. The research data were collected through questionnaires. Furthermore, the hypotheses were tested for validity. Based on the results, this study provides practical recommendations for long-term care service providers, training professionals, relevant organizations, and government agencies responsible for long-term care affairs, as well as references for subsequent studies. The subjects of this study are long-term care institution employees, but those of most other studies are foreign caretakers. This study explored the factors that influence social loafing. However, most other studies focused on oversea caretakers' care, days off [25,26], and perceived differences between salary and workload [27].

2. Literature Review and Research Hypotheses

2.1. Workplace Friendship

Workplace friendship was defined as an interpersonal relationship of mutual commitment, trust, liking, and shared values or interests [28,29]. Friendships developed in the workplace are more than just acquaintances, as the employees involved would sense similarities and spontaneously demonstrate interpersonal trust, commitment, and interest [30–32]. The social capital pillar in Legatum Prosperity consists of five components: personal and family relationships, social networks, interpersonal trust, institutional trust, and civic and social participation [33]. Among them, interpersonal and institutional trust plays a key role in strengthening teamwork in the group. Moreover, increasing workplace friendships is a good way to improve trust [34]. Workplace friendship makes colleagues seek assistance and support, share experiences, and clear up individual or work issues with each other when problems arise [35]. Andrews et al. [36] showed that kind relationships in an organization enhance colleagues' affective closeness. In addition, workplace friendship facilitates the sharing of information and promotes interpersonal support [37], which helps lower working pressure and increase work performance [38]. As well, organizational commitment can be improved by workplace friendship [32]. In summary, this study defines workplace friendship as a mutual and spontaneous interaction among colleagues in a long-term care institution characterized by genuine mutual aid, friendship, trust, and solidarity.

There are numerous empirical studies on workplace friendship. For example, Wang [39] obtained time-lagged data in the two-wave questionnaire [40] to analyze the relationship between workplace ostracism and friendship. Second, Bilgin and Kiral [41] explored the relationship between workplace friendships and school cultural awareness among high school teachers in Turkey. Furthermore, Cao and Zhang [30] explored the effects of psychological safety and workplace friendship on employees' creative behavior. These findings confirm that workplace friendship is positively correlated with innovative behavior and psychological safety. Additionally, workplace friendship has a mediating influence on psychological safety and creative behavior. This study explores the relationship between organizational commitment, workplace friendship, and psychological safety and how those impact social loafing among employees in long-term care institutions. Employees in long-term care institutions have high stress, low salaries, and low social status. Workplace friendship and the climate among employees are two of the driving forces that support their work. Therefore, workplace friendship is crucial for the employees of long-term care institutions.

2.2. Organizational Commitment

Organizational commitment is the degree to which an individual perceives a relationship with the organization. It affects the employee's willingness to work and makes them want to stay with the organization they work for [42]. Allen and Meyer [43] defined organi-

zational commitment as an affective involvement that makes an individual participate and enjoy their membership in the institute. Organizational commitment makes employees more motivated to work and achieve higher levels of performance [44], lower turnover rates [45], and lower absenteeism [46].

Meyer and Allen [47] suggested that organizational commitment is developed with working experience. If the work experience allows the employee to satisfy the need for comfort and competence in the job role, the employee will become more involved in the institution [43,47]. In summary, this study defines organizational commitment as the strength with which an employee identifies with, attaches to, and enjoys participating in the workplace of a long-term care institution, which affects their willingness to stay with the organization.

There are many studies on organizational commitment. For example, Chhabra, Ubeja and Sharma [42] investigated the factors influencing employees' organizational commitment in Indian banks. Secondly, Herachwati and Rachma [48] analyzed the impact of work fulfillment on career and organizational commitment. Jehanzeb and Mohanty [49] investigated how bank employees' organizational commitment mediates the effect on organizational justice and organizational citizenship behavior (OCB). The findings reveal a positive relationship between organizational commitment and justice. Furthermore, organizational commitment mediates the influence between organizational justice and OCB. Further, Purwanto [50] analyzed the mediating effect of job satisfaction on organizational commitment and the justice of transformational leadership among employees in the automotive industry. The results indicate that job satisfaction significantly mediates the relationship between organizational commitment and the justice of transformational leadership. The above studies show that organizational commitment significantly impacts work satisfaction, company attachment, turnover intention, and willingness to dedicate themselves to work. Therefore, organizational commitment is crucial for the employees of long-term care institutions.

Related studies suggest that employees' workplace friendships affect their organizational commitment. First, Ali and Kashif [51] studied the effect of workplace friendship, resonant leadership, and service manners on organizational commitment among employees in Pakistani healthcare organizations. The findings reveal that workplace friendship significantly influences organizational commitment. Secondly, Chao [52] analyzed how employees' workplace friendship influences organizational commitment and their production. The findings show that workplace friendship influences employees' organizational commitment positively. Moreover, organizational commitment also mediates the influence between employees' workplace friendship and their production. In summary, the study concludes that the increase in workplace friendships among employees in long-term care institutions will lead to an increase in organizational commitment. Therefore, the following hypothesis is presented:

H1. *The workplace friendship of employees in long-term care institutions positively affects their organizational commitment.*

2.3. Social Loafing

Ringelmann [53] mentioned in the classical social loafing theory that when people find out that someone is already helping with a job, their motivation and contribution to help or solve the problem decrease. Conversely, people's motivation and contribution to helping increase when they find that there are fewer interveners or helpers in a job. This statement is similar to the definition of modern social loafing-related studies. For example, Khan et al. [54] defined social loafing as the degree to which a member pays less effort to perform a task in a team than to perform it alone. Furthermore, social loafing occurs when employees' efforts and willingness to work in a group or team are less than what an individual would do to do the same work [55]. Nevertheless, social loafing also depends on the existing top-management vision, how teams are organized, the size of each group, etc. In addition, social loafing is employees' reaction to injustice from management

or colleagues [56]. When social loafing is perceived in an institute, it may decrease the motivation of organization members [57].

Figure 1 shows the organizational principles for long-term care institutions in Taiwan. Most long-term care institutions are staffed by the following four departments to provide care and attention to the elderly and disabled people: Disability Care, Home Care, Day Care, and Community Integrated Services. According to the management's ongoing vision, the goal is to transform any employee group into a more efficient team and reduce social loafing. Studies have mentioned that through humanistic leadership and four-stage transitions at the management and training levels [58], as shown in Figure 1, employees can improve their team's trust, skills, and mindfulness over time [59]. Among them, trust is also related to the reduction of social loafing [60]. The four stages are Stage 1: immature group, Stage 2: fractured group, Stage 3: shared group, and Stage 4: effective team. Of these, Stage 3 is particularly critical; Group members in Stage 3 form a minimum level of trust with the staff of management and training departments and a cohesive force that ensures teamwork affects itself and thus reduces social loafing. When an organization operates in an efficient mutual aid mode, synergy effects are generated through Stage 4: an effective team. Through these synergy effects, such as workplace friendship, service climate, organizational commitment, psychological safety, etc., social loafing can be reduced. In addition, work avoidance is defined as the intention to reduce effort, to do as little as possible, or to not work hard [61]. The meaning of work-team avoidance is similar to social loafing. However, social loafing only happens in teams, and work avoidance also happens in individuals. Slightly different from other studies, this study defines social loafing as follows: in the workplace of a long-term care institution, because of the vision that the decision-maker has and the way employees are divided into groups, resulting in employees working in teams, the degree to which the effort and motivation to pay are reduced compared to when the same work is performed alone.
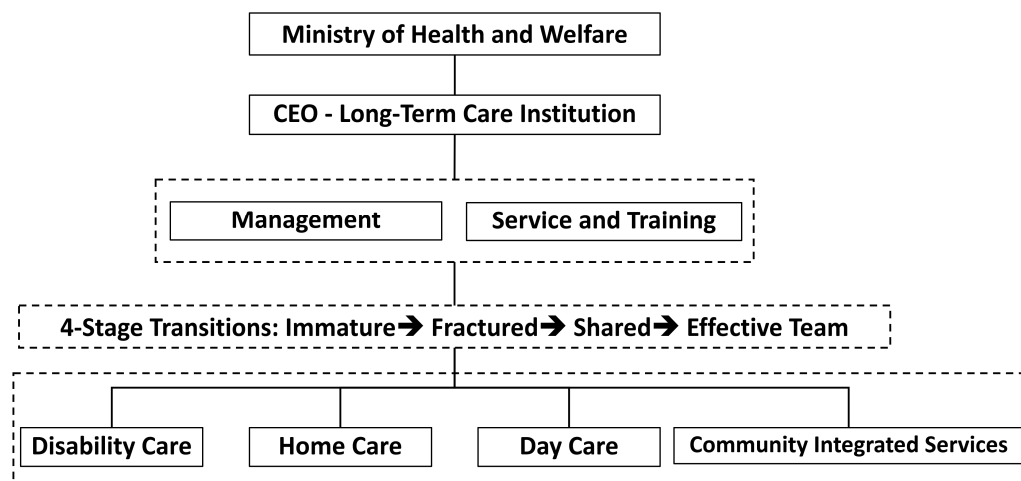

Figure 1. Organizational principles for long-term care institutions in Taiwan.

The relevant studies of social loafing are as follows. First, Yeh [62] investigated the relationship between negative emotions, social loafing, and service achievement among international hotel executives and employees. The results reveal that social loafing positively influences negative emotions. Moreover, negative emotions negatively affect service performance. Secondly, Yildiz and Elibol [63] investigated the impact of nurses' behaviors based on coercible volunteerism and the intention to leave on social loafing. The findings indicate nurses' behaviors based on coercible volunteerism and turnover intentions positively correlate with social loafing. The intention to leave mediates the effect between compulsory citizenship behavior and social loafing. Furthermore, Byun et al. [64] investigated how employees' social loafing influences their attitudes toward communication and teamwork in Korean companies. The results show that mutual professional respect, social communica-

tion, and task visibility negatively correlate with social loafing. Additionally, these factors increase the level of employee effort. From the above study, social loafing positively affects negative emotion, and negative emotion negatively affects service performance. With the increasing need for long-term care teamwork, studying the potential social loafing effects in interpersonal interactions is essential.

Studies have shown that employees' workplace friendships affect their social loafing. First, Shih and Wang [65] analyzed the relationship between coworkers' friendships in the workplace and social loafing in an accounting firm. The results showed friendships in the workplace were negatively correlated with social loafing between certified public accountants. Second, van Dick et al. [66] assumed that individual work contribution loss is unavoidable when working in a team. In this context, they analyze how to overcome the social loafing problem. The results show that workplace friendships can reduce the loss of work contribution due to social loafing. The reason should be good workplace friendships, which can reduce how colleagues compare each other's work amounts, improve mutual aid, and thus reduce social loafing. To sum up the above studies, this study makes the assumption that the increase in workplace friendships among employees in long-term care institutions will decrease social loafing. Hence, the following hypothesis is presented:

H2. *The workplace friendship of employees in long-term care institutions negatively affects their social loafing.*

2.4. Psychological Safety

Psychological safety is the extent to which an individual interacts with the environment without psychological threats or fears and maintains trustful communication [67]. Psychological safety allows group members to speak without feeling embarrassed by someone or being punished for disagreeing; it is an atmosphere where people feel comfortable, and it affects group members' perceptions of interpersonal risk in the context [68]. Moreover, this view is often conceptualized as a team-level structure. In addition, the higher the degree of psychological safety of a person, the freer he or she can express himself or herself without worrying about the negative effects of his or her image, status, or occupation [69]. In recent years, relevant studies have examined psychological safety at the institutional and individual levels [70]. Among them, Akan et al. [71] defined psychological safety as the extent to which an institution's employees can safely take interpersonal risks during open discussions of problems, issues, and tasks in the workplace. Moreover, mutual understanding and trust in the organization would significantly impact the employees' psychological safety [72]. In summary, this study defines psychological safety as the degree to which employees in a long-term care institution can safely take interpersonal risks without psychological threats or fears during open discussions of problems and long-term care tasks.

There are many studies on psychological safety. For example, Zhou and Pan [73] explored the influence of psychological safety and transformational leadership on employees' creativity and engagement at work. The findings indicate transformational leadership affects employees' creativity and engagement through the mediating effect of psychological safety. Similar studies have indicated that low psychological safety hinders employee creativity [74]. Psychological safety climate in SME organizations is positively correlated with innovation performance, capacity for innovation, skill for creativity, innovative service, and a creative work model [75]. Moreover, Obrenovic et al. [76] investigated the relationships between psychological safety, work performance, and conflict in the family. The findings show that conflict in the family negatively affects psychological health and safety at work. That is to say, if the personnel perceive that they are psychologically unsafe or unhealthy, work performance will decline. From the above study, it was found that stress in the workplace may lead to family conflicts and reduce psychological safety, which may affect work performance accordingly. Therefore, psychological safety is essential for organizational employees.

Research indicates that employees' workplace friendships affect their psychological safety. First, Durrah [77] analyzed the influence of friendship at work on the work engagement of Omani service industry personnel through the mediating effect of psychological safety. The findings reveal that friendship is positively related to a personal sense of safety at work. Second, Cao and Zhang [30] investigated how friendship at work and psychological safety influence individual creative behaviors. The findings point out that friendship at work positively affects psychological safety and influences creative behaviors through the mediation effect of psychological safety. In summary, this study assumes that the increase in workplace friendships among employees in long-term care institutions will increase psychological safety. Therefore, the following hypothesis is presented:

H3. *The workplace friendship of employees in long-term care institutions positively affects their psychological safety.*

Relevant studies have mentioned that employees' organizational commitment will affect their social loafing. For example, Rastgar and Pourebrahimi [78] analyzed the relationship between social loafing and organizational commitment among employees of a public bank in Iran. The results indicate that organizational commitment negatively affects employees' social loafing behavior. In other words, the management should raise the employees' organizational commitment to reduce the level of social loafing. In addition, Luo, Qu and Marnburg [56] investigated the effect of organizational commitment and intention to leave on the employees' social loafing behavior in the Chinese accommodation industry. The study revealed that the organizational commitment of hotel employees negatively affects the intention to leave and positively affects social loafing through the mediating effect of the intention to leave.

To sum up, this study supposes that the increase in organizational commitment among employees in long-term care institutions will decrease social loafing. Therefore, the following hypothesis is presented:

H4. *The organizational commitment of employees in long-term care institutions negatively affects their social loafing.*

Studies have shown that employees' psychological safety affects their social loafing. For example, to understand whether bringing up psychological safety in a group contributes to industrial design, Cole et al. [79] conducted an experiment with student groups for industry design to investigate whether psychological safety has an impact on team production of work contributions. The results mentioned a negative correlation between psychological safety and social loafing. Second, Peng et al. [80] explored how psychological safety affects group innovation from a social-cognitive perspective. The study mentions that psychological safety is negatively associated with social loafing. To sum up, this study supposes that the increase in the psychological safety of employees in long-term care institutions will decrease social loafing. Therefore, the following hypothesis is presented:

H5. *The psychological safety of employees in long-term care institutions negatively affects their social loafing.*

In addition, based on the above studies, this study proposes mediating hypotheses H6 and H7 as follows:

H6. *The organizational commitment of employees in long-term care institutions mediates the relationship between workplace friendship and social loafing.*

H7. *The psychological safety of employees in long-term care institutions mediates the relationship between workplace friendship and social loafing.*

2.5. Service Climate

Earlier, Schneider et al. [81] defined service climate as the common awareness that employees receive rewards, support, expectations, and well-being from customer service. Employees' behavior, commitment to work, and service-centered leadership and manage-

ment can produce a better service climate [82]. This is because organizations with higher levels of service climate allow employees to exercise self-direction and self-management in various situations [83] and enhance the ability of the organization's employees to work independently, thereby improving overall performance [84]. In addition, service climate is a workplace atmosphere that allows employees to behave innovatively [85]. That is, a healthy and positive service climate promotes employee engagement and provides innovative services to customers in the organization. Moreover, employees can be valued and appreciated by company executives and clients [86]. To summarize the above, service climate is defined as the degree to which personnel perceive being rewarded, supported, happy, and expected in long-term care institutions. A good service climate can also enhance employees' performance through these feelings.

Many studies related to service climate. First, Wang et al. [87] explored the impact of employees' capabilities on the information technology service climate and the mediation effect of the service climate on information technology aid quality. The results show that training and rewarding employees for using information systems can improve the service climate of an organization. Furthermore, the service climate's mediating effect affects service quality. Second, Al-Hawari et al. [88] investigated how colleague socialization and organizational service climate moderate workplace well-being, service innovation behaviors, and work involvement. The results reveal that workplace well-being and work engagement affect employees' service innovation behaviors. Among them, service climate and colleague socialization have moderate effects on employees' work engagement and service innovation behaviors. Furthermore, Walumbwa et al. [89] analyzed the impact of service climate factors, including motivation, negative attitudes and health, and burnout, on employees' service achievements and leaving rates. The results show that meaningful encouragement for employees affects service climate and employees' mental health, enhances employees' service performance, and reduces the turnover rate. Summarizing the above studies, service climate would influence the quality of service, innovation behavior, work happiness, engagement, turnover rate, and mental health of the employees. Therefore, the service climate is crucial to the employees of the organization.

Related studies have pointed out that employees' service climate will affect their workplace friendship, organizational commitment, psychological safety, and social loafing. First, Herman et al. [90] used hierarchical linear modeling (HLM) to analyze data from 215 managers and employees in 36 teams. The influence of the emotional climate on friendship at work among supervisors, subordinates, and employees in teamwork was investigated. The findings reveal that the emotional climate among personnel has a moderating effect on workplace friendship. Secondly, to improve the understanding of health perceptions among casino employees and supervisors, Wong et al. [91] explored the relationship between workplace sense of safety, organizational commitment, and service climate. Furthermore, Higgins et al. [92] analyzed the relationship between work climate and organizational-level psychological safety among teachers in 545 schools. According to the above studies, this study supposes that the service climate of employees in long-term care institutions has a moderation effect between workplace friendship and organizational commitment, psychological safety, and social loafing. Hence, the following hypotheses are presented:

H8. *The service climate of employees in long-term care institutions positively moderates the relationship between workplace friendship and organizational commitment.*

H9. *The service climate of employees in long-term care institutions negatively moderates the relationship between workplace friendship and social loafing.*

H10. *The service climate of employees in long-term care institutions positively moderates the relationship between workplace friendship and psychological safety.*

2.6. Conceptual Framework

This study regards social loafing as the theme, workplace friendship as the independent variable, organizational commitment and psychological safety as the mediating variables, and service climate as the moderating variable to investigate the impact of social loafing on employees of long-term care institutions in Taiwan. According to the literature in the second chapter, the conceptual framework of this study is drawn up in Figure 2.
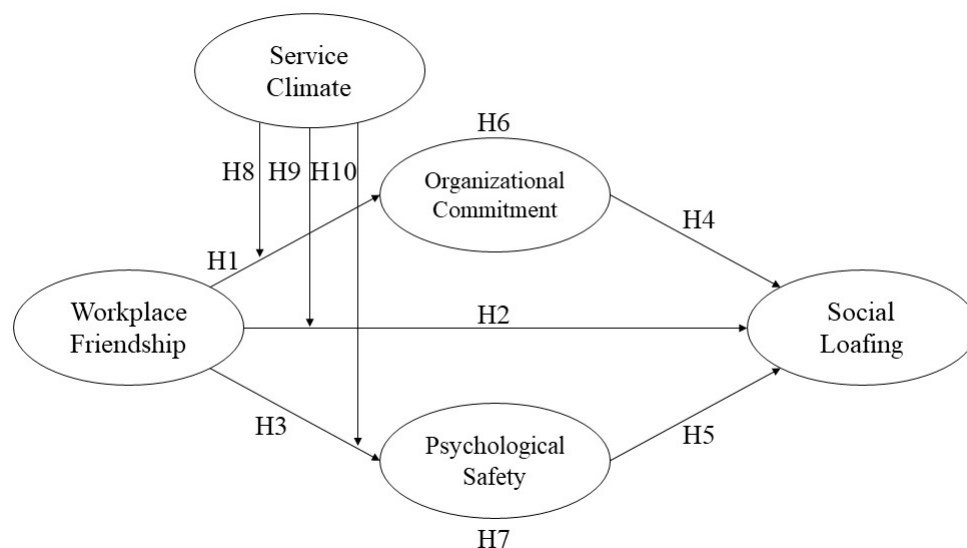

Figure 2. Conceptual framework.

Next, we will describe the methods of this study, including research subjects, data collection, measurement scales, data processing, and analysis methodology.

3. Methods

3.1. Research Subjects and Data Collection

This study examines the factors influencing social loafing among employees of Taiwan's long-term care institutions, in which employees are the research subjects. Researchers contacted executives and directors of long-term care institutions by telephone to explain the purpose and future contribution of the study. This study also personally asked senior executives to help send paper-based questionnaires to employees to complete, including registered professional nurses, nurse aides, and social workers. To maintain the quality of the questionnaire, respondents will receive a convenience store product card after completing the survey. This study used a two-wave time-lagged paper-based questionnaire to collect demographic data and all study variables from the research subject. The questionnaires were completed by the same employees in two stages, two months apart. The first stage of the release period is 1 August 2022–31 August 2022, and the second stage is 1 October 2022–31 October 2022. To reduce common method variance (CMV), this study followed the questionnaire design suggestions of Podsakoff et al. [93]. To detect the presence of CMV, this study used the Harman and Harman [94] single-factor test as suggested by Podsakoff, MacKenzie, Lee and Podsakoff [93]. Harman's single-factor test was analyzed using SPSS software, and the ratio of the first accumulated variance of the sum of squares must be less than 50%. The accumulated variance of the first factor of the result is 39.970%, and that of the thirteen factors is 76.111%. This percentage belongs to 13 constructs, respectively, and is not concentrated in the first factor. This result indicates no significant CMV issue for the variables in this study. A total of 405 paper-based questionnaires were collected. This study used several principles to identify invalid questionnaires, including missing too many questions, filling out the same option or with the same rule for the entire questionnaire, repeated answers by the same respondent, and filling out more than one option for the same question. After eliminating the invalid data, the number of valid questionnaires

was 324. Based on Jackson [95] and Schumacker and Lomax [96], the sample size of this study is in agreement with the general recommendations for sample size requirements for empirical studies.

3.2. Measurement Scales

The scale investigated the subjects' demographic data, including marriage, position, gender, years of experience, and education level. Their opinions on all variables were measured using a seven-point Likert scale. The scale ranged from strongly disagree (1) to strongly agree (7). Experts would review and give their opinions on the scale after it was designed.

(1) Workplace Friendship Scale

The workplace friendship scale refers to Yan et al. [97] and Nielsen, Jex and Adams [32]. The items were modified to the following: "I still interact with colleagues after work." "I would tell my secrets to my colleagues," etc. A total of five items were designed.

(2) Service Climate Scale

The service climate scale refers to [98]. The items were modified to the following: "The overall climate in our institution is excellent." "The employees in our institution receive excellent rewards for superior customer service," etc. A total of four items were designed.

(3) Organizational Commitment Scale

The organizational commitment scale refers to Allen and Meyer [43] and Van den Hooff and de Leeuw van Weenen [99]. The items were modified to the following: "This is the right place to work for me." "I will put in extra effort to make our institution successful," etc. A total of six items were designed.

(4) Psychological Safety Scale

The psychological safety scale refers to May et al. [100] and Kahn [69]. The items were modified to the following: "I feel emotionally secure when interacting with colleagues at work." "I do not feel any form of emotional or verbal abuse at work," etc. A total of five items were designed.

(5) Social Loafing Scale

The social loafing scale refers to Akgunduz and Eryilmaz [101] and Price, Harrison and Gavin [57]. The items were modified to the following: "When colleagues need help, I often claim I have other things to do." "I sometimes avoid work and responsibility," etc. A total of four items were designed.

3.3. Data Processing and Analysis Methodology

In this study, the data from the valid samples collected were analyzed through descriptive and inferential statistics using SPSS Statistics 24. The data analysis methods include the following: First, the frequency distribution table includes the frequency distribution and percentage of gender, marriage, position, years of experience, and education level of the sample. Second, descriptive statistics were used to calculate the mean and standard deviation of each construct to learn its extent of concentration. Third, reliability and validity analysis: The standardized factor loadings of confirmatory factor analysis (CFA) were used to test the reliability and composite reliability of the items. The average variance extracted (AVE) was used to examine the convergent validity of all the constructs. The root of the AVE was used to compare the correlation coefficients between the variables to validate the discriminant validity between the variables. Fourth, the structural equation test includes the goodness-of-fit test and the direct hypotheses between the various variables through path analysis. Fifth, indirect hypothesis test: bootstrap indirect effects estimations of the structural equation modeling (SEM) were used to test the mediating hypotheses of the study.

4. Data Analysis

4.1. Descriptive Analysis

The basic data of the survey sample in this study included five items: gender, marriage, position, education level, and years of experience. Table 1 shows the number and percentage of their distribution, and the analysis results are as follows.

Table 1. Frequency distribution.

	Category	Label	Frequency	Percentage
Total Sample: 324	Gender	Male	71	21.9
		Female	253	78.1
	Marriage	Married	205	63.3
		Unmarried	119	36.7
	Position	Social worker	26	8.0
		Registered professional nurse	54	17.7
		Nurse aide	191	59.0
		Else	5	1.1
	Education Level	Junior high school and below	33	10.2
		Senior high school	116	35.8
		Junior college	46	14.2
		University	116	35.8
		Master's degree and above	13	4.0
	Years of Experience	Less than 3 years	135	41.7
		3–5 years	97	29.9
		5–10 years	46	14.2
		More than 10 years	46	14.2

Gender: The sample data of this study indicated that 71 males (21.9%) and 253 females (78.1%) were in the majority. According to the Gender Equality Committee of the Executive Yuan [102], there were 17,153 women and 4774 men working in long-term care institutions in Taiwan in 2020, for a total of 21,927 employees, of whom 78.22% are women. The statistics show that the majority of employees in long-term care institutions in Taiwan are female. The gender sample data collected in this study are concordant with the distribution of the population.

Marriage: The sample data of this study indicated that 205 (63.3%) were married and 119 (36.7%) were unmarried, with the majority being married. The proportion of married people in the marriage sample collected in this study was broadly in line with 62% in previous studies [103]. The study also shows that the majority of employees in long-term care institutions in Taiwan are married.

Position: The sample data of this study showed that there were 26 social workers (8%), 54 registered professional nurses (17.7%), 191 nurse aides (59.0%), and five others (1.1%), and most of them were nurse aides. The proportion of sample positions collected in this study is approximately the same as the actual proportion of positions in the population in the Gender Equality Committee of the Executive Yuan [102].

Education level: According to the sample data of this study, 33 people (10.2%) were in junior high school, 116 people (35.8%) were in high school, 46 people (14.2%) were in college, 116 people (35.8%) were in university, and 13 people (4.0%) were in graduate school and above, mostly in high school and university. The proportion of nurse aides in terms of duties is 59.0%, which is similar to the total proportion of 60.2% for junior high school and below, high school, and college. Those are in line with the realistic data distribution of the population.

Years of experience: According to the sample data of this study, 135 people (41.7%) had less than 3 years of experience, 97 people (29.9%) had 3–5 years of experience, 46 people (14.2%) had 5–10 years of experience, and 46 people (14.2%) had more than 10 years of experience, with most of them having less than 3 years of experience. Most of the long-term care institutions in Taiwan were established during the period of long-term care development policy 1.0 to 2.0, and they have not been in place for a long time. Except for

some employees who had been in long-term care in large hospitals before the enactment of the Long-Term Care Services Act, most of the employees in long-term care institutions have a low number of years of service, with 71.6% working for less than 5 years.

4.2. Convergent Validity

Fornell and Larcker [104] and Nunnally [105] revealed the factor loadings should be greater than 0.7. Table 2 shows the convergent validity of the scales, in which composite reliability needs to be greater than 0.7, average variance extracted must be greater than 0.5, and Cronbach's α must be greater than 0.7 [104]. As shown in Table 2, except for OCO5, the factor loadings of all questions are greater than 0.7, which is in the range of 0.758–0.957. OCO5 was removed due to low factor loading. The range of composite reliability for all constructs is 0.881–0.952, which is greater than 0.7. The AVE range is 0.650–0.869, which is greater than 0.5. The range of Cronbach's α for all constructs is 0.819–0.933, which is greater than 0.7. This study has good convergent validity according to the above statistical data.

Table 2. Convergent validity.

Construct	Item	Std	Cronbach's α	Composite Reliability	AVE
Workplace Friendship	WF1	0.856	0.916	0.937	0.747
	WF2	0.868			
	WF3	0.851			
	WF4	0.859			
	WF5	0.887			
Organizational Commitment	OCO1	0.874	0.933	0.949	0.789
	OCO2	0.915			
	OCO3	0.915			
	OCO4	0.916			
	OCO6	0.818			
Psychological Safety	PS1	0.957	0.924	0.952	0.869
	PS2	0.954			
	PS3	0.884			
Social Loafing	SL1	0.759	0.819	0.881	0.650
	SL2	0.838			
	SL3	0.865			
	SL4	0.758			

Std = Standardized factor loadings; AVE = Average variance extracted.

4.3. Discriminant Validity

In this study, the reflective indicator adopts AVE for discriminant validity analysis. Fornell and Larcker (1981) showed that the root of the AVE for each variable is greater than the correlation coefficient between the variables' pairs, indicating that the constructs have discriminant validity. As shown in Table 3, most of the AVEs were greater than the squared correlation coefficients, indicating that the results have discriminant validity. In addition, this study also uses the HTMT method to prove the discriminant validity of this study. Table 4 shows the conceptual similarity values of constructs HTMT, which are less than 0.90 according to Hair et al. [106].

Table 3. Discriminant validity.

	Organizational Commitment	Psychological Safety	Social Loafing	Workplace Friendship
Organizational Commitment	**0.888**			
Psychological Safety	0.679	**0.932**		
Social Loafing	−0.481	−0.491	**0.806**	
Workplace Friendship	0.331	0.275	−0.269	**0.864**

The diagonal bold font value is the square root of AVE. The items on the diagonal in bold represent the square roots of the AVE; off-diagonal elements are the correlation estimates.

Table 4. Discriminant validity: HTMT results.

	Organizational Commitment	Psychological Safety	Social Loafing	Workplace Friendship
Organizational Commitment	-			
Psychological Safety	0.737	-		
Social Loafing	0.547	0.560	-	
Workplace Friendship	0.348	0.295	0.305	-

4.4. Goodness-of-Fit

The goodness-of-fit (GoF) is the overall indicator of the structural model. This study used Smart PLS3 to validate the GoF. GoF values = 0.1, 0.25, and 0.36 represent weak, medium, and high goodness-of-fit, respectively [107]. The value for this study was 0.349, indicating a medium to high degree of goodness-of-fit.

4.5. Regression Coefficient

Table 5, the regression coefficient analysis table, shows that the path coefficient of organizational commitment to social loafing is −0.245; standard deviation = 0.096 (*t*-value = 2.556, *p*-value = 0.011 < 0.05). It indicates that organizational commitment has a significant impact on social loafing, which means that H4 is accepted. The path coefficient of psychological safety to social loafing is −0.296; standard deviation = 0.097 (*t*-value = 3.053, *p*-value = 0.002 < 0.05). It indicates psychological safety significantly influences social loafing, which means that H5 is accepted. The path coefficient of workplace friendship to social loafing is −0.107; standard deviation = 0.062 (*t*-value = 1.719, *p*-value = 0.088 > 0.05). It indicates that workplace friendship has no significant impact on social loafing, which means that H2 is rejected. The path coefficient of workplace friendship to organizational commitment is −0.296; standard deviation = 0.053 (*t*-value = 6.226, *p*-value = 0.000 < 0.05). It indicates that workplace friendship significantly influences organizational commitment, which means that H1 is accepted. The path coefficient of workplace friendship to psychological safety is 0.275; standard deviation = 0.070 (*t*-value = 3.951, *p*-value = 0.000 < 0.05). It indicates that workplace friendship significantly influences psychological safety, which means that H3 is accepted. In addition, the value of explanatory power is an index to tell whether the model is good [108]. $R^2 > 0.67$, $R^2 > 0.3$, and $R^2 > 0.19$ for endogenous latent variables indicate high, moderate, and low explanatory power, respectively [108,109]. The R^2 value of 0.292 for social loafing has low to moderate explanatory power. The R^2 values of organizational commitment and psychological safety are 0.109 and 0.076, respectively, and the explanatory power of both variables is weak.

Table 5. Regression coefficient.

Path Relationships	Regression Coefficient	Standard Deviation	*t*-Value	*p*-Value	R^2
Organizational Commitment→Social Loafing	−0.245	0.096	2.556	0.011	0.292
Psychological Safety→Social Loafing	−0.296	0.097	3.053	0.002	
Workplace Friendship→Social Loafing	−0.107	0.062	1.710	0.088	
Workplace Friendship→Organizational Commitment	0.331	0.053	6.226	0.000	0.109
Workplace Friendship→Psychological Safety	0.275	0.070	3.951	0.000	0.076

Figure 3 displays the SEM statistical model result.

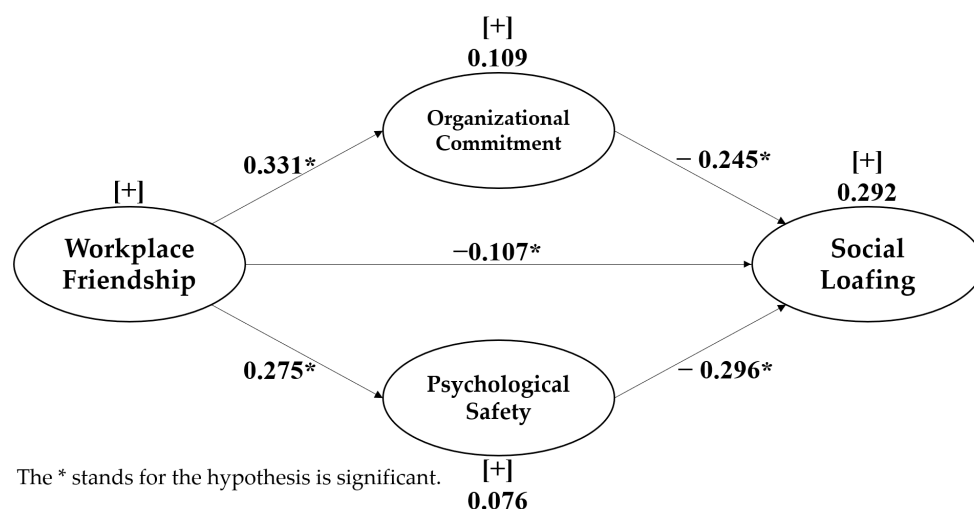The * stands for the hypothesis is significant.

Figure 3. SEM statistical model.

Next, we will show the results of mediating and moderating effects in points 4.6 and 4.7.

4.6. Mediating Effects

As shown in Table 6, the findings of the mediating effects analysis reveal that the *t*-value of the workplace friendship→organizational commitment→social loafing hypothesis = 2.082 > 1.96 and the *p*-value = 0.038 < 0.05, indicating that H6 is accepted. The *t*-value of the workplace friendship→psychological safety→social loafing hypothesis = 2.036 > 1.96, and the *p*-value = 0.042 < 0.05, indicating that H7 is accepted.

Table 6. Mediating effects.

	Regression Coefficient	Standard Deviation	*t*-Value	*p*-Value
Workplace Friendship→Organizational Commitment→Social Loafing	−0.081	0.039	2.082	0.038
Workplace Friendship→Psychological Safety→Social Loafing	−0.081	0.04	2.036	0.042

4.7. Moderating Effects

As shown in Table 7 for moderating effects, service climate is the moderating variable. First, the moderating effect of service climate × workplace friendship on organizational commitment was −0.015 (*t*-value = 0.268 > 1.96, *p*-value = 0.789 < 0.05), indicating that H8 was rejected. Second, the moderating effect of service climate×workplace friendship on social loafing was 0.058 (*t*-value = 1.123 < 1.96, *p*-value = 0.262 > 0.05), indicating that H9 was rejected. Furthermore, the moderating effect of service climate×workplace friendship on psychological safety was 0.136 (*t*-value = 2.413 > 1.96, *p*-value = 0.016 < 0.05), indicating that H10 was supported. Figure 4 displays the moderating effect of service climate on workplace friendship and psychological safety.

Table 7. Moderating effects.

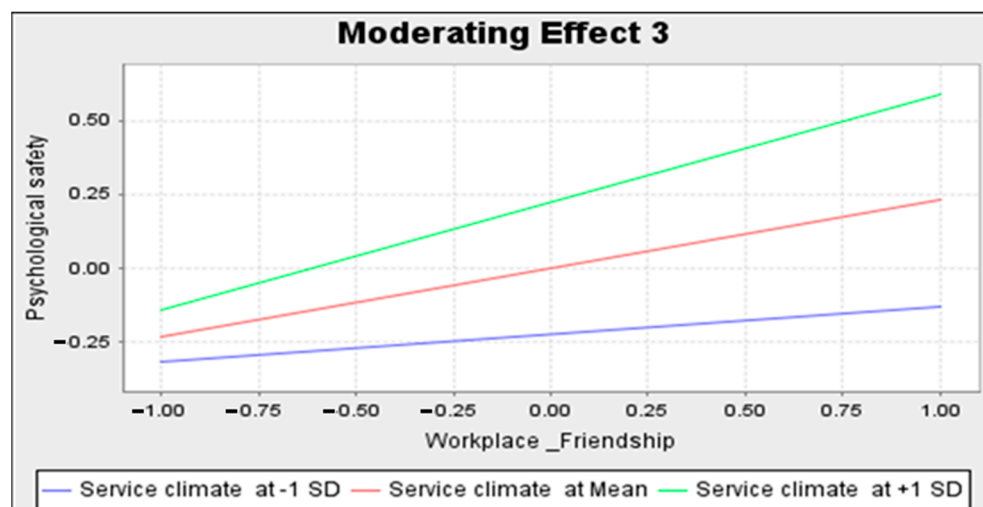|	Regression Coefficient	Standard Deviation	*t*-Value	*p*-Value
Service Climate Workplace Friendship→Organizational Commitment	−0.015	0.054	0.268	0.789
Service Climate Workplace Friendship→Social Loafing	0.058	0.051	1.123	0.262
Service Climate Workplace Friendship→Psychological Safety	0.136	0.056	2.413	0.016

Figure 4. Moderating effect of service climate on workplace friendship and psychological safety.

5. Results and Discussion

This study used workplace friendship as the independent variable, organizational commitment and psychological safety as the mediating variables, and service climate as the moderating variable to investigate their effects on the social loafing of employees in long-term care institutions. The research model and the associated direct, indirect, and moderating hypotheses are presented. After collecting data from the questionnaire, structural equation modeling was used to test and validate the relevant hypotheses.

5.1. Theoretical Contributions

Studies point out that the social loafing effect of employees in long-term care institutions affects teamwork and staff cohesion [19], leading to feelings of job isolation and avoidance of long-term care responsibilities [20]. In addition, low salaries and social status for the employees of long-term care institutions affect their identification with the industry. Poor labor conditions, a lack of rewards and happiness, tiredness from running around in traffic, high accident risks, and other factors lead to incompetence, emotional fatigue, and high stress. All of these factors can lead to social loafing among employees in long-term care institutions. So, it is essential to increase staff friendship and cohesion, a sense of identity and well-being, and to relieve stress. Nevertheless, few studies have examined the social loafing of employees in long-term care institutions from these perspectives or even examined the relationship between those factors. To validate the effects of these perspectives on long-term care institution employees, this study tried to reduce social loafing through workplace friendship, organizational commitment, psychological safety, and service climate and obtained the following findings.

The findings reveal that the workplace friendship of long-term care institution employees will positively and significantly influence their organizational commitment and psychological safety. These two results are similar to the findings of previous studies by Ali and Kashif [51] and Cao and Zhang [30]. Both indicate that employees of long-term care institutions can enhance identification and attachment to their institutions through interpersonal interaction, mutual trust, and sincere mutual assistance, allowing employees to feel more at ease in presenting the difficulties they encounter in long-term care work and in seeking and receiving help. Secondly, the organizational commitment of long-term care institution employees will negatively and significantly affect their social loafing. This result is the same as the previous study by Luo, Qu and Marnburg [56]. The study points out that when employees of long-term care institutions have increased attachment, identity, and happiness in this industry, it reduces their social loafing and may even reduce their turnover intention. Moreover, the employees' psychological safety will negatively and significantly affect their social loafing in long-term care institutions. This finding is similar

to that of previous studies by Cole, Marhefka, Jablokow, Mohammed, Ritter and Miller [79]. The study indicates that the more comfortable, secure, and healthy the work environment in long-term care institutions, the lower the social loafing for employees.

However, the study showed that the workplace friendships of employees in long-term care institutions did not significantly affect their social loafing. This result is different from the findings of the previous study by van Dick, Tissington and Hertel [66]. Although workplace friendship does not affect social loafing directly, the direct effects of workplace friendship on organizational commitment and psychological safety affect social loafing indirectly. This is an interesting and important result that highlights the importance of two mediating variables, organizational commitment and psychological safety, in the model of this study. Without these two mediating variables, increasing independent workplace friendship alone would not significantly reduce social loafing among employees in long-term care institutions. Finally, the results of the moderating effect showed that the service climate of long-term care institution employees would positively moderate the impact of their workplace friendship on psychological safety. This finding is partially similar to the previous study by Higgins, Dobrow, Weiner and Liu [92]. However, the moderating effects of service climate between workplace friendship and organizational commitment and between workplace friendship and social loafing, are not significant. That is to say, good workplace friendship can not only enhance psychological safety directly but also further strengthen psychological safety through the service climate.

5.2. Practical Contributions

The results showed that enhancing the workplace friendship of employees in long-term care institutions could enhance their organizational commitment and psychological safety, which reduced their social loafing through its mediating effects. Among them, the workplace friendship of employees can also enhance their psychological safety through the moderation of the service climate. Therefore, based on the findings of this study, it is proposed that long-term care institutions promote the following four practical directions to reduce the social loafing of their employees.

This study presents several suggestions to enhance the workplace friendship of employees in long-term care institutions, as described below. Propose new activities and programs to increase work-related communication and employee engagement and create more connections, thereby enhancing workplace friendship [110]. For example, employees are divided into groups with as few members as possible for long-term care tasks and encouraged to share their sense of accomplishment, difficulties, and solutions through mutual experience. In addition, through tea time and social gatherings, the employees of long-term care institutions are given the opportunity to talk informally with each other, thus bringing them closer to each other spiritually. Furthermore, supporting colleagues' efforts outside of work and sharing their lives is a way to gain goodwill [111]. Being interested in things other than your colleagues' work makes them more accustomed to and comfortable sharing their experiences and difficulties. The above-mentioned activities were used to enhance workplace friendship and reduce social loafing among employees in long-term care institutions by complementing the mediating effects of organizational commitment and psychological safety, as demonstrated in this study.

Suggestions to increase the employees' organizational commitment in long-term care institutions are proposed as follows: create a culture in long-term care institutions where employees are willing to give of themselves, motivate them to work hard, make them more motivated, and identify themselves with the work of their colleagues to enhance their organizational commitment, improve their work performance, and reduce social loafing [64]. For example, the management can learn more about individual employees' strengths and interests by talking to them individually and then assigning jobs according to their strengths and interests. A job that suits their interests gives employees a higher motivation for long-term care and allows them to use their unique skills and perspectives to create high-quality work results, enhancing their organizational commitment. When

employees increase their organizational commitment, they are motivated to increase their contribution and reduce social loafing for the overall performance and personal improvement of the long-term care institution. In addition, long-term care requires communication with the person being cared for and their family members, which is a relatively difficult and complex task [112]. Therefore, it is essential that long-term care institution employees can clearly describe their responsibilities and job descriptions. Training long-term care institution employees to clearly describe their job responsibilities and content can help them eliminate distractions due to a lack of clarity at work. More focused work enhances work identity and organizational commitment and reduces social loafing. Furthermore, it is important to reward the hard-working employees of long-term care institutions. When institution employees know they will be rewarded for quality work, they will be more engaged. Through rewards, hard-working employees know they are appreciated, thus increasing their organizational commitment and reducing social loafing.

This study proposes a few suggestions to promote employees' psychological safety in long-term care institutions, as illustrated below. First, building a culture of mutual trust in long-term care institutions allows employees to work without fear of judgment. Eliminating the fear of negligence and mistakes at work can enhance psychological safety [113]. This requires long-term care institutions' management to trust, respect, and believe in hiring these employees because of their drive, determination, passion, and skills. Trust employees to use their skills to the best of their ability in long-term care work. Allow employees to have open lines of communication and remove any barriers between them and management. Eliminating the frustration of communication difficulties naturally enhances psychological safety [76], which reduces social loafing accordingly. Secondly, long-term care institutions' management needs to focus on coaching employees and setting a good example so that employees can perform their work in accordance with standard operating procedures during the work process. Employees with confidence in their work will naturally have higher psychological safety and are more likely to show dedication to the institution, thus reducing social loafing. Furthermore, the fear of negligence, mistakes, and negative consequences may lower the trust and dedication of employees in long-term care institutions. If institutional employees feel they are likely to receive negative feedback regardless of their performance, it can reduce their psychological safety. Therefore, in addition to trust and respect for employees and enhanced coaching, long-term care institutions need to eliminate employees' fears of negligence and mistakes. When an employee has negligence or fault at work, provide the employee with the opportunity to correct the mistake and shape it into a chance to learn and grow instead of punishing or reducing salary. In this way, even if the employees make a mistake, they can report it with peace of mind and receive help and counseling. When employees feel that long-term care institutions value learning after making mistakes, their psychological safety increases, which reduces social loafing accordingly.

Service climate is related to the overall atmosphere of the workplace in long-term care institutions and affects employees' creative behaviors, well-being, health, and expectations of the organization. Suggestions for enhancing the service climate are as follows: First, long-term care institutions can collect anonymous feedback from their employees. In addition to the aforementioned need to treat employees with respect, management can encourage them to give honest and anonymous feedback about their work and the institution. When responding to anonymous comments, management has to solve things rather than blame employees and not speculate or imply that the comments may have come from that or those employees. Let the disagreement not hurt any employee and maintain a positive service climate [114]. In addition, incorporate humor and fun at work, in counseling, training, and activities as appropriate in long-term care institutions [115]. Long-term care work is relatively boring and complicated. Employees need to relieve their psychological tension within the institution. Adding an element of humor and fun to the institution will allow employees to enjoy their work more. While, in most cases, it is necessary to keep things serious, management can take the appropriate lead in creating fun. The training is

conducted in a humorous manner so that employees can work and learn in a good and friendly atmosphere. The above practices can enhance the service climate. Through the enhancement of service climate, the influence of workplace friendship on psychological safety is moderated, and through the enhancement of psychological safety, the social loafing of employees in long-term care institutions is reduced.

5.3. Limitations and Future Research

This study mainly sampled employees of long-term care institutions in Taiwan. The future study proposes to expand the study to include home-based and community-based long-term care institution employees. The study will be conducted to compare the effects of social loafing among different types of long-term care institutions. Secondly, this study can also compare the impact of using the caregiver rest service between those who have hired and those who have not hired a foreign caregiver. In addition, due to the time constraint of this study and the different types and numbers of long-term care institutions in Taiwan, the results of this study may not be representative of the impact of social loafing in all long-term care institutions throughout Taiwan. Future studies will be conducted with a more thorough sampling method. Finally, this study analyzed the factors influencing social loafing. Other variables such as long-term care work stressors, job adaptation, turnover intention, and amendments to relevant regulations will be investigated in the future.

Author Contributions: F.-H.Y. was responsible for idea generation, manuscript writing for the theoretical part, and data analysis. F.-J.S. was responsible for the initial method writing, data analysis, and data collection. All authors reviewed and approved the manuscript for publication. All authors have read and agreed to the published version of the manuscript.

References

1. Katsuda, A.; Naito, Y. Value Co-Creation Through Technical Intern Trainees in Japanese Healthcare. *Eurasian J. Bus. Manag.* **2022**, *10*, 27–36. [CrossRef]
2. Jeong, S.Y.; Choi, J.; Kim, J.Y.; Ga, H. Development and Application of a Surveillance Method for Healthcare-Associated Infections in Long-Term Care Hospitals in Korea. *Ann. Geriatr. Med. Res.* **2020**, *24*, 274. [CrossRef]
3. Tan, B.Y.; Kanneganti, A.; Lim, L.J.; Tan, M.; Chua, Y.X.; Tan, L.; Sia, C.H.; Denning, M.; Goh, E.T.; Purkayastha, S. Burnout and associated factors among health care workers in Singapore during the COVID-19 pandemic. *J. Am. Med. Dir. Assoc.* **2020**, *21*, 1751–1758.e1755. [CrossRef] [PubMed]
4. He, A.J.; Tang, V.F. Integration of health services for the elderly in Asia: A scoping review of Hong Kong, Singapore, Malaysia, Indonesia. *Health Policy* **2021**, *125*, 351–362. [CrossRef]
5. Al Awlaqi, A.; Koornneef, E.; Gaili, A.; Hammadeh, M. The Impact of Co-Payments on Individual Access to Long-term Care Services in the United Arab Emirates in Comparison to the Middle East. *Crescent J. Med. Biol* **2019**, *6*, 421–430.
6. Lin, P.-S.S.; Chen, S.-S. Social networks for older people's resilient aging-in-place: Lessons from the post-landslide Ksunu tribe in Taiwan. *Int. J. Disaster Risk Reduct.* **2022**, *82*, 103336. [CrossRef]
7. Executive Yuan. Long-Term Care Services 2.0, Make the Long Road of Care More Secure. Available online: https://www.ey.gov.tw/Page/5A8A0CB5B41DA11E/1e9bc8a6-99bc-41a5-b91f-96e6df4df192 (accessed on 20 September 2022).
8. Yeh, M.-J. Long-term care system in Taiwan: The 2017 major reform and its challenges. *Ageing Soc.* **2020**, *40*, 1334–1351. [CrossRef]
9. Ministry of Health and Welfare. Caregiver Training Implementation Plan. Available online: https://www.mohw.gov.tw/cp-18-71164-1.html (accessed on 26 September 2022).
10. Health and Welfare Statistics. Senior and Long-Term Care Statistics. Available online: https://dep.mohw.gov.tw/dos/cp-5223-62358-113.html (accessed on 29 September 2022).
11. Wang, Y.-F.; Lee, Y.-H.; Lu, J.-Y. Community-Based Long-Term Care in Taiwan: The Service Experiences of Tier B Centers. *J. Soc. Serv. Res.* **2022**, *48*, 385–395. [CrossRef]
12. Karau, S.J.; Williams, K.D. Social loafing: A meta-analytic review and theoretical integration. *J. Personal. Soc. Psychol.* **1993**, *65*, 681. [CrossRef]

13. Supardi, S.H.; Rosiana, A. Descriptive Review of Positive and Negative Antecedent Social Loafing During Pandemic COVID-19. *Int. J. Curr. Res. Rev.* **2021**, *13*, 177–183. [CrossRef]

14. Bokhari, S.A.A.; Aftab, M. Personality traits and social loafing among employees working in teams at small and medium enterprises: A cultural perspective data from emerging economies. *Data Brief* **2022**, *42*, 108085. [CrossRef] [PubMed]

15. Perron, B.E. Reducing social loafing in group-based projects. *Coll. Teach.* **2011**, *59*, 163–164. [CrossRef]

16. Yen, C.-M. Learning to change: Transformative outcomes of programmes and activities for family caregivers of people with dementia in Taiwan. *Aust. J. Adult Learn.* **2021**, *61*, 241–266.

17. Zeng, D.; Takada, N.; Hara, Y.; Sugiyama, S.; Ito, Y.; Nihei, Y.; Asakura, K. Impact of Intrinsic and Extrinsic Motivation on Work Engagement: A Cross-Sectional Study of Nurses Working in Long-Term Care Facilities. *Int. J. Environ. Res. Public Health* **2022**, *19*, 1284. [CrossRef] [PubMed]

18. Nguyen, Q.-T.; Lee, M.-Y.; Hu, Y.-C. An employee-oriented perspective in the value-creating mission of social enterprises. *Soc. Enterp. J.* **2019**, *16*, 1–17. [CrossRef]

19. Simons, M.; Goossensen, A.; Nies, H. Interventions fostering interdisciplinary and inter-organizational collaboration in health and social care; an integrative literature review. *J. Interprof. Educ. Pract.* **2022**, *28*, 100515. [CrossRef]

20. Rippon, D.; McDonnell, A.; Smith, M.; McCreadie, M.; Wetherell, M. A grounded theory study on work related stress in professionals who provide health & social care for people who exhibit behaviours that challenge. *PLoS ONE* **2020**, *15*, e0229706.

21. Fronza, I.; Wang, X. Social loafing prevention in agile software development teams using team expectations agreements. *IET Softw.* **2021**, *15*, 214–229. [CrossRef]

22. Şeşen, H.; Soran, S.; Caymaz, E. Dark side of organizational citizenship behavior (OCB): Testing a model between OCB, social loafing and organizational commitment. *Int. J. Bus. Soc. Sci.* **2014**, *5*, 125–135.

23. Schepers, J.; de Jong, A.; Wetzels, M.; de Ruyter, K. Psychological safety and social support in groupware adoption: A multi-level assessment in education. *Comput. Educ.* **2008**, *51*, 757–775. [CrossRef]

24. Gabler, C.B.; Rapp, A.; Richey Jr, R.G.; Adams, F.G. Can service climate detract from employee performance? The role of experience in optimizing satisfaction and performance outcomes. *Decis. Sci.* **2018**, *49*, 7–24. [CrossRef]

25. Chen, L.; Xu, X. Effect evaluation of the long-term care insurance (LTCI) system on the health care of the elderly: A review. *J. Multidiscip. Healthc.* **2020**, *13*, 863–875. [CrossRef]

26. Strommen, J.; Fuller, H.; Sanders, G.F.; Elliott, D.M. Challenges faced by family caregivers: Multiple perspectives on eldercare. *J. Appl. Gerontol.* **2020**, *39*, 347–356. [CrossRef] [PubMed]

27. Broetje, S.; Jenny, G.J.; Bauer, G.F. The key job demands and resources of nursing staff: An integrative review of reviews. *Front. Psychol.* **2020**, *11*, 84. [CrossRef] [PubMed]

28. Choi, Y.; Ko, S.-H. Roses with or without thorns? A theoretical model of workplace friendship. *Cogent Psychol.* **2020**, *7*, 1761041. [CrossRef]

29. Berman, E.M.; West, J.P.; Richter, J.; Maurice, N. Workplace relations: Friendship patterns and consequences (according to managers). *Public Adm. Rev.* **2002**, *62*, 217–230. [CrossRef]

30. Cao, F.; Zhang, H. Workplace friendship, psychological safety and innovative behavior in China: A moderated-mediation model. *Chin. Manag. Stud.* **2020**, *14*, 661–676. [CrossRef]

31. Dobel, J.P. Can public leaders have friends? *Public Integr.* **2001**, *3*, 145–158. [CrossRef]

32. Nielsen, I.K.; Jex, S.M.; Adams, G.A. Development and validation of scores on a two-dimensional workplace friendship scale. *Educ. Psychol. Meas.* **2000**, *60*, 628–643. [CrossRef]

33. Lee, J.H.; Lee, H.; Kim, J.E.; Moon, S.J.; Nam, E.W. Analysis of personal and national factors that influence depression in individuals during the COVID-19 pandemic: A web-based cross-sectional survey. *Glob. Health* **2021**, *17*, 3. [CrossRef]

34. Sias, P.M.; Tsetsi, E.; Woo, N.; Smith, A.D. With a little help from my friends: Perceived task interdependence, coworker communication, and workplace friendship. *Commun. Stud.* **2020**, *71*, 528–549. [CrossRef]

35. Sias, P.M.; Cahill, D.J. From coworkers to friends: The development of peer friendships in the workplace. *West. J. Commun. (Incl. Commun. Rep.)* **1998**, *62*, 273–299. [CrossRef]

36. Andrews, M.C.; Kacmar, K.M.; Blakely, G.L.; Bucklew, N.S. Group cohesion as an enhancement to the justice—Affective commitment relationship. *Group Organ. Manag.* **2008**, *33*, 736–755. [CrossRef]

37. Kram, K.E.; Isabella, L.A. Mentoring alternatives: The role of peer relationships in career development. *Acad. Manag. J.* **1985**, *28*, 110–132. [CrossRef]

38. Berman, E.M.; West, J.P. Productivity enhancement efforts in public and nonprofit organisations. *Public Product. Manag. Rev.* **1998**, *22*, 207–219. [CrossRef]

39. Wang, Y. The impact mechanism of constructive deviance on workplace ostracism: The roles of political skill and workplace friendship. *Curr. Psychol.* **2022**, 1–9. [CrossRef]

40. Montani, F.; Vandenberghe, C.; Khedhaouria, A.; Courcy, F. Examining the inverted U-shaped relationship between workload and innovative work behavior: The role of work engagement and mindfulness. *Hum. Relat.* **2020**, *73*, 59–93. [CrossRef]

41. Bilgin, Y.N.; Kiral, B. The relation between workplace friendship and school culture perception of teachers. *Eur. J. Educ. Stud.* **2019**, *5*, 73–93.

42. Chhabra, I.G.; Ubeja, S.; Sharma, S.S. Exploratory research of factor affecting organizational commitment: A study of private banks. *Prestig. Int. J. Manag. Res.* **2020**, *11*, 62–67.

43. Allen, N.J.; Meyer, J.P. The measurement and antecedents of affective, continuance and normative commitment to the organization. *J. Occup. Psychol.* **1990**, *63*, 1–18. [CrossRef]

44. Meyer, J.P.; Paunonen, S.V.; Gellatly, I.R.; Goffin, R.D.; Jackson, D.N. Organizational commitment and job performance: It's the nature of the commitment that counts. *J. Appl. Psychol.* **1989**, *74*, 152. [CrossRef]

45. Williams, L.J.; Hazer, J.T. Antecedents and consequences of satisfaction and commitment in turnover models: A reanalysis using latent variable structural equation methods. *J. Appl. Psychol.* **1986**, *71*, 219. [CrossRef]

46. Mathieu, J.E.; Kohler, S.S. A cross-level examination of group absence influences on individual absence. *J. Appl. Psychol.* **1990**, *75*, 217. [CrossRef]

47. Meyer, J.P.; Allen, N.J. A three-component conceptualization of organizational commitment. *Hum. Resour. Manag. Rev.* **1991**, *1*, 61–89. [CrossRef]

48. Herachwati, N.; Rachma, A. Organizational commitment versus career commitment. *KnE Soc. Sci.* **2018**, *3*, 3388. [CrossRef]

49. Jehanzeb, K.; Mohanty, J. The mediating role of organizational commitment between organizational justice and organizational citizenship behavior: Power distance as moderator. *Pers. Rev.* **2019**, *49*, 445–468. [CrossRef]

50. Purwanto, A. The Relationship of Transformational Leadership, Organizational Justice and Organizational Commitment: A Mediation Effect of Job Satisfaction. *J. Crit. Rev.* **2020**. Available online: https://ssrn.com/abstract=3986678 (accessed on 20 September 2022).

51. Ali, R.; Kashif, M. The role of resonant leadership, workplace friendship and serving culture in predicting organizational commitment: The mediating role of compassion at work. *Rev. Bras. Gestão Negócios* **2020**, *22*, 799–819. [CrossRef]

52. Chao, C. Does it work? Research on the Relationship between Workplace Friendship and Job Performance—The Organizational Commitment as Mediator. In Proceedings of the 2018 3rd International Conference on Education, E-learning and Management Technology (EEMT 2018), Bangkok, Thailand, 29–31 October 2018; pp. 67–71.

53. Ringelmann, M. Research on animate sources of power: The work of man. *Annales de l'Institut National Agronomique* **1913**, *12*, 1–40.

54. Khan, H.; Rehmat, M.; Butt, T.H.; Farooqi, S.; Asim, J. Impact of transformational leadership on work performance, burnout and social loafing: A mediation model. *Future Bus. J.* **2020**, *6*, 1–13. [CrossRef]

55. Alyahya, M.A.; Elshaer, I.A.; Sobaih, A.E.E. The Impact of Job Insecurity and Distributive Injustice Post COVID-19 on Social Loafing Behavior among Hotel Workers: Mediating Role of Turnover Intention. *Int. J. Environ. Res. Public Health* **2021**, *19*, 411. [CrossRef] [PubMed]

56. Luo, Z.; Qu, H.; Marnburg, E. Justice perceptions and drives of hotel employee social loafing behavior. *Int. J. Hosp. Manag.* **2013**, *33*, 456–464. [CrossRef]

57. Price, K.H.; Harrison, D.A.; Gavin, J.H. Withholding inputs in team contexts: Member composition, interaction processes, evaluation structure, and social loafing. *J. Appl. Psychol.* **2006**, *91*, 1375. [CrossRef]

58. Priem, R.L.; Nystrom, P.C. Exploring the dynamics of workgroup fracture: Common ground, trust-with-trepidation, and warranted distrust. *J. Manag.* **2014**, *40*, 764–795. [CrossRef]

59. Nanjundeswaraswamy, T.S.; Swamy, D.R. Leadership styles. *Adv. Manag.* **2014**, *7*, 57.

60. Gabelica, C.; De Maeyer, S.; Schippers, M.C. Taking a free ride: How team learning affects social loafing. *J. Educ. Psychol.* **2022**, *114*, 716. [CrossRef]

61. Kriegbaum, K.; Jansen, M.; Spinath, B. Motivation: A predictor of PISA's mathematical competence beyond intelligence and prior test achievement. *Learn. Individ. Differ.* **2015**, *43*, 140–148. [CrossRef]

62. Yeh, C.-W. Relationships among Social Loafing, Negative Mood, Emotional Exhaustion and Service Performance: Transformational Leadership as Moderators. *J. Hum. Resour. Manag.* **2015**, *15*, 55–86.

63. Yildiz, B.; Elibol, E. Turnover intention linking compulsory citizenship behaviours to social loafing in nurses: A mediation analysis. *J. Nurs. Manag.* **2021**, *29*, 653–663. [CrossRef]

64. Byun, G.; Lee, S.; Karau, S.J.; Dai, Y. Sustaining collaborative effort in work teams: Exchange ideology and employee social loafing. *Sustainability* **2020**, *12*, 6241. [CrossRef]

65. Shih, C.-H.; Wang, Y.-H. Can workplace friendship reduce social loafing? In Proceedings of the 2016 10th International Conference on Innovative Mobile and Internet Services in Ubiquitous Computing (IMIS), Fukuoka, Japan, 6–8 July 2016; pp. 522–526.

66. van Dick, R.; Tissington, P.A.; Hertel, G. Do many hands make light work? How to overcome social loafing and gain motivation in work teams. *Eur. Bus. Rev.* **2009**, *21*, 233–245. [CrossRef]

67. Salakhova, V.B.; Umerkaeva, S.S.; Ignatyev, S.E.; Sokolovskaya, I.E.; Nalichaeva, S.A.; Zebnitskaya, A.K. Informational and psychological safety of the educational environment in forming a person's personality: Current challenges and risks (ecological and psychological approach). *Eurasian J. Biosci.* **2019**, *13*, 1797–1803.

68. Edmondson, A. Psychological safety and learning behavior in work teams. *Adm. Sci. Q.* **1999**, *44*, 350–383. [CrossRef]

69. Kahn, W.A. Psychological conditions of personal engagement and disengagement at work. *Acad. Manag. J.* **1990**, *33*, 692–724. [CrossRef]

70. Newman, A.; Donohue, R.; Eva, N. Psychological safety: A systematic review of the literature. *Hum. Resour. Manag. Rev.* **2017**, *27*, 521–535. [CrossRef]

71. Akan, O.H.; Jack, E.P.; Mehta, A. Concrescent conversation environment, psychological safety, and team effectiveness: Examining a mediation model. *Team Perform. Manag. Int. J.* **2020**, *26*, 29–51. [CrossRef]

72. McClintock, A.H.; Fainstad, T. Growth, engagement, and belonging in the clinical learning environment: The role of psychological safety and the work ahead. *J. Gen. Intern. Med.* **2022**, *37*, 2291–2296. [CrossRef] [PubMed]

73. Zhou, Q.; Pan, W. A cross-level examination of the process linking transformational leadership and creativity: The role of psychological safety climate. *Hum. Perform.* **2015**, *28*, 405–424. [CrossRef]

74. Yang, Y.; Li, Z.; Liang, L.; Zhang, X. Why and when paradoxical leader behavior impact employee creativity: Thriving at work and psychological safety. *Curr. Psychol.* **2021**, *40*, 1911–1922. [CrossRef]

75. Andersson, M.; Moen, O.; Brett, P.O. The organizational climate for psychological safety: Associations with SMEs' innovation capabilities and innovation performance. *J. Eng. Technol. Manag.* **2020**, *55*, 101554. [CrossRef]

76. Obrenovic, B.; Jianguo, D.; Khudaykulov, A.; Khan, M.A.S. Work-family conflict impact on psychological safety and psychological well-being: A job performance model. *Front. Psychol.* **2020**, *11*, 475. [CrossRef] [PubMed]

77. Durrah, O. Do we need friendship in the workplace? The effect on innovative behavior and mediating role of psychological safety. *Curr. Psychol.* **2022**, 1–14. [CrossRef] [PubMed]

78. Rastgar, A.A.; Pourebrahimi, N. Social loafing in banking industry of Iran: Investigating the role of organizational commitment. *Asian J. Res. Soc. Sci. Humanit.* **2013**, *3*, 1–11.

79. Cole, C.; Marhefka, J.; Jablokow, K.; Mohammed, S.; Ritter, S.; Miller, S. What Is the Relationship Between Psychological Safety and Team Productivity and Effectiveness During Concept Development? An Exploration in Engineering Design Education. *J. Mech. Des.* **2022**, *144*, 112301. [CrossRef]

80. Peng, J.; Wang, Z.; Chen, X. Does self-serving leadership hinder team creativity? A moderated dual-path model. *J. Bus. Ethics* **2019**, *159*, 419–433. [CrossRef]

81. Schneider, B.; White, S.S.; Paul, M.C. Linking service climate and customer perceptions of service quality: Tests of a causal model. *J. Appl. Psychol.* **1998**, *83*, 150. [CrossRef]

82. Lam, C.F.; Mayer, D.M. When do employees speak up for their customers? A model of voice in a customer service context. *Pers. Psychol.* **2014**, *67*, 637–666. [CrossRef]

83. Houghton, J.D.; Pearce, C.L.; Manz, C.C.; Courtright, S.; Stewart, G.L. Sharing is caring: Toward a model of proactive caring through shared leadership. *Hum. Resour. Manag. Rev.* **2015**, *25*, 313–327. [CrossRef]

84. Beatty, S.E.; Ogilvie, J.; Northington, W.M.; Harrison, M.P.; Holloway, B.B.; Wang, S. Frontline service employee compliance with customer special requests. *J. Serv. Res.* **2016**, *19*, 158–173. [CrossRef]

85. Menguc, B.; Auh, S.; Yeniaras, V.; Katsikeas, C.S. The role of climate: Implications for service employee engagement and customer service performance. *J. Acad. Mark. Sci.* **2017**, *45*, 428–451. [CrossRef]

86. Chan, K.W.; Gong, T.; Zhang, R.; Zhou, M. Do employee citizenship behaviors lead to customer citizenship behaviors? The roles of dual identification and service climate. *J. Serv. Res.* **2017**, *20*, 259–274. [CrossRef]

87. Wang, X.; Lu, J.; Feng, Y.; Liu, L. Antecedents and mediating role of IT service climate in IT service quality: A mixed methods study. *Int. J. Inf. Manag.* **2021**, *57*, 102290. [CrossRef]

88. Al-Hawari, M.A.; Bani-Melhem, S.; Shamsudin, F.M. Determinants of frontline employee service innovative behavior: The moderating role of co-worker socializing and service climate. *Manag. Res. Rev.* **2019**, *42*, 1076–1094. [CrossRef]

89. Walumbwa, F.O.; Hsu, I.-C.; Wu, C.; Misati, E.; Christensen-Salem, A. Employee service performance and collective turnover: Examining the influence of initiating structure leadership, service climate and meaningfulness. *Hum. Relat.* **2019**, *72*, 1131–1153. [CrossRef]

90. Herman, H.; Dasborough, M.T.; Ashkanasy, N.M. A multi-level analysis of team climate and interpersonal exchange relationships at work. *Leadersh. Q.* **2008**, *19*, 195–211.

91. Wong, I.A.; Ma, E.; Chan, S.H.G.; Huang, G.I.; Zhao, T. When do satisfied employees become more committed? A multilevel investigation of the role of internal service climate. *Int. J. Hosp. Manag.* **2019**, *82*, 125–135. [CrossRef]

92. Higgins, M.C.; Dobrow, S.R.; Weiner, J.M.; Liu, H. When is Psychological Safety Helpful in Organizations? A Longitudinal Study. *Acad. Manag. Discov.* **2022**, *8*, 77–102. [CrossRef]

93. Podsakoff, P.M.; MacKenzie, S.B.; Lee, J.-Y.; Podsakoff, N.P. Common method biases in behavioral research: A critical review of the literature and recommended remedies. *J. Appl. Psychol.* **2003**, *88*, 879. [CrossRef]

94. Harman, H.H.; Harman, H.H. *Modern Factor Analysis*; University of Chicago Press: Chicago, IL, USA, 1976.

95. Jackson, D.L. Revisiting sample size and number of parameter estimates: Some support for the N: Q hypothesis. *Struct. Equ. Model.* **2003**, *10*, 128–141. [CrossRef]

96. Schumacker, R.E.; Lomax, R.G. *A Beginner's Guide to Structural Equation Modeling*; Psychology Press: London, UK, 2004.

97. Yan, C.-H.; Ni, J.-J.; Chien, Y.-Y.; Lo, C.-F. Does workplace friendship promote or hinder hotel employees' work engagement? The role of role ambiguity. *J. Hosp. Tour. Manag.* **2021**, *46*, 205–214. [CrossRef]

98. Kumar, P.; Singh, S.K.; Pereira, V.; Leonidou, E. Cause-related marketing and service innovation in emerging country healthcare. *Int. Mark. Rev.* **2020**, *37*, 803–827. [CrossRef]

99. Van den Hooff, B.; de Leeuw van Weenen, F. Committed to share: Commitment and CMC use as antecedents of knowledge sharing. *Knowl. Process Manag.* **2004**, *11*, 13–24. [CrossRef]

100. May, D.R.; Gilson, R.L.; Harter, L.M. The psychological conditions of meaningfulness, safety and availability and the engagement of the human spirit at work. *J. Occup. Organ. Psychol.* **2004**, *77*, 11–37. [CrossRef]

101. Akgunduz, Y.; Eryilmaz, G. Does turnover intention mediate the effects of job insecurity and co-worker support on social loafing? *Int. J. Hosp. Manag.* **2018**, *68*, 41–49. [CrossRef]

102. Gender Equality Committee of the Executive Yuan. Vital Gender Statistics Database. Available online: https://www.gender.ey.gov.tw/gecdb/Stat_Statistics_Query.aspx?sn=ZViStQdk5IMDCajYSMDW5Q%40%40&statsn=PsKAvsFoXLFcIub5I5r!GA%40%40&d=m9ww9odNZAz2Rc5Ooj%24wIQ%40%40&n=148282 (accessed on 23 September 2022).

103. Tsai, S.F.; Chen, W.Y.; Lin, Y.H.; Liang, Y.W. A study of work stressors, work adaptation, and intention to resign among female caregivers in long-term care facilities in Taiwan. *Taiwan J. Public Health* **2013**, *32*, 476–490.

104. Fornell, C.; Larcker, D.F. Evaluating structural equation models with unobservable variables and measurement error. *J. Mark. Res.* **1981**, *18*, 39–50. [CrossRef]

105. Nunnally, J.C. *Psychometric Theory 3E.*; Tata McGraw-Hill Education: Gautam Buddha Nagar, UT, USA, 1994.

106. Hair, J.F.; Risher, J.J.; Sarstedt, M.; Ringle, C.M. When to use and how to report the results of PLS-SEM. *Eur. Bus. Rev.* **2019**, *31*, 2–24. [CrossRef]

107. Vinzi, V.E.; Trinchera, L.; Amato, S. PLS path modeling: From foundations to recent developments and open issues for model assessment and improvement. In *Handbook of Partial Least Squares*; Springer: Berlin/Heidelberg, Germany, 2010; pp. 47–82.

108. Chin, W.W. Commentary: Issues and opinion on structural equation modeling. *MIS Q.* **1998**, *28*, vii–xvi.

109. Ringle, C.M. *Gütemaße für den Partial-Least-Squares-Ansatz zur Bestimmung von Kausalmodellen*; Institute für Industriebetriebslehre und Organisation: Karlsruhe, Germany, 2004.

110. Khairy, H.A.; Agina, M.F.; Aliane, N.; Hashad, M.E. Internal Branding in Hotels: Interaction Effects of Employee Engagement, Workplace Friendship, and Organizational Citizenship Behavior. *Sustainability* **2023**, *15*, 4530. [CrossRef]

111. Xiao, J.; Mao, J.-Y.; Quan, J.; Qing, T. Relationally charged: How and when workplace friendship facilitates employee interpersonal citizenship. *Front. Psychol.* **2020**, *11*, 190. [CrossRef]

112. Ashrafizadeh, H.; Gheibizadeh, M.; Rassouli, M.; Hajibabaee, F.; Rostami, S. Explain the experience of family caregivers regarding care of Alzheimer's patients: A qualitative study. *Front. Psychol.* **2021**, *12*, 699959. [CrossRef] [PubMed]

113. Ren, Q.; Xu, Y.; Zhou, R.; Liu, J. Can CEO's humble leadership behavior really improve enterprise performance and sustainability? A case study of Chinese start-up companies. *Sustainability* **2020**, *12*, 3168. [CrossRef]

114. Lakeman, R.; Coutts, R.; Hutchinson, M.; Massey, D.; Nasrawi, D.; Fielden, J.; Lee, M. Stress, distress, disorder and coping: The impact of anonymous student evaluation of teaching on the health of higher education teachers. *Assess. Eval. High. Educ.* **2022**, *47*, 1489–1500. [CrossRef]

115. Cadei, L.; Serrelli, E.; Simeone, D. Sustainability Practices in Working Contexts: Supervision, Collective Narrative, Generative Humour, and Professional Respect. *Sustainability* **2021**, *13*, 11483. [CrossRef]