

A Model to Explore how Communal Traits Affects Stay Intent Amongst Taiwanese Nurses

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Abstract

Aims: This study discusses the model built to explore low levels of communal traits' influence on nurses' stay intent.

Background: The high turnover rate and low stay intent amongst Taiwan's nurses is a serious issue. One reason for the low stay intent is nurse-to-nurse interpersonal conflict. Surface-level difference, such as low levels of communal traits, may be an important antecedent factor. Previous studies have found that this type of conflict can frequently arise in female-to-female relationships.

Design: This was quantitative, cross-sectional research using a questionnaire survey.

Method: 249 registered nurses participated in the survey, which employed convenience sampling. The data was collected from January 10th 2020 to February 10th 2020. **Results/Findings:** We found that nurses with low levels of communal traits become frustrated, creating psychological need thwarting and decreasing stay intention. Belonging perception appears to weaken this. In addition, autonomy and relatedness of need thwarting but not competence mediates the relationship between frustration experience and stay intent. Unlike in past studies, this was not found to be an exclusively female phenomenon.

Conclusion: Improving belonging perception may be the answer to overcoming negative outcomes caused by surface-level difference in the nursing profession. However, why surface-level difference has a negative influence remains a question that needs to be further explored. In addition, Taiwanese nursing managers in this low status and relationship-oriented nursing culture should also focus on improving frontline nurses' confidence and self-conceptualizations.

Keywords

surface-level difference, communal traits, stay intent, frustration, psychological need thwarting

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Introduction

Taiwan's National Health Research Institution (TNHRI, 2010) has found that in Taiwan a nurse's average tenure is 6.5 years. This is much lower than in other countries, such as Japan (where it is 14.8 years) and Canada (over 20 years). Buchan et al. (2018) noted that the high turnover rate in Taiwan has an adverse effect on care quality. Factors specific to Taiwan's nurses including tension with co-workers, stress, and inequity welfare, continue to affect retention (Al-Hamdan et al., 2017; Chang et al., 2018; Hong & Lee, 2016; Kudo et al., 2006). Previous research has found that nurses' main source of workplace stress and unhappiness is abuse from both colleagues and patients' families (Goss & DeJoseph, 1997; Sofield & Salmond, 2003).

Nurses' interpersonal conflict caused by verbal abuse, such as rude, humiliating behaviors and unjust criticism,

will often lead to the recipients feeling undervalued (Woelfle & McCaffrey, 2007). This can result in high absence rates from work, especially in first-year nurses (Woelfle & McCaffrey, 2007). These nurse-to-nurse conflicts can also increase mental and physical problems, such as cardiovascular and skin disorders, exhaustion and mental health issues (Elbejjani et al., 2020; Karkar et al., 2015). There is a

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disjunct between the association of health care with nurture and this type of negative behavior.

In Taiwan, interpersonal conflict between nurses is the most powerful factor in workplace stress and decreased retention intent (Hsu, et al., 2020). Interpersonal conflict among nurses frequently occurs without any apparent cause and is more often found in junior rather than senior nurses (Hsu et al., 2020). Although the tension created by such interpersonal conflicts may appear to be small-scale and harmless, it can leave nurses feeling mentally and physically exhausted (Hsu et al., 2020). Most exist nursing research in both the Chinese and Western cultures do not mention this phenomenon or provided a convincing explanation for it. Recent literature reviews have found that a reason that nurses tender their resignations is discrimination, which can be from colleagues and/ or managers (Eggert, 2010; Woelfle & McCaffrey, 2007). Accordingly, we have used this key word, discrimination, to try to explain how this phenomenon occurs. Namely, the purpose of this study was to build a model including the process of how interpersonal conflict caused by discrimination undermines nurses' stay intent.

Why Do Communal Traits Become A Problem?

In general, discussions on the issue of discrimination toward nurses have pointed out that surface-level difference, such as race and ethnicity, remain a problem that can harm team collaboration and negatively affect interpersonal harmony (Jones-Berry, 2019; Masoumeh, 2019). Interpersonal relationships, especially pressure from peers, is one of the main causes of workplace stress and decreased retention in nurses (Al-Hamdan et al., 2017; Chang et al., 2018; Hong & Lee, 2016; Kudo et al., 2006). This type of interpersonal conflict caused by surface-level difference is known as the 'black sheep effect', which occurs when normative in-group members insult and/or exclude those who are different to themselves (Abrams et al., 2014; Breakwell et al., 2003; Lewis & Sherman, 2010; Zouhri & Rateau, 2015). This effect, frequently found in elementary students' behavior towards peers (Abrams et al., 2014), is likely to be prevalent among all sectors of society and in all professions, including nursing. Such misrepresentation and, in its worse form bullying, can cause conflict to occur that is both mental – which is most likely in the workplace – and physical. People who are marginalized in the workplace are likely to leave; thus, to prevent this, it is necessary to consider how informal social networks may prevent such a loss of personnel (Kwon, 2017).

Surface-level difference, which means different external characteristics categorized by sociological factors such as race, length of service, individual background, beliefs, and even personality traits (Smoyak, 2006), may be an antecedent factor in the workplace, increasing individuals' psychological stress and withdrawal behavior (Cranmer & Cranmer, 2013; Rullo et al., 2015). Shinnar (2008) found that migrants

of different races are more susceptible to marginalization or verbal attacks due to the influence of stereotypes and that relatively vulnerable people may suffer unfair treatment by employers because of difference in skin color, language, and appearance, even if they exhibit the same work performance as their colleagues. Gabriel et al. (2018) also pointed out that diverse individuals tend to experience more negative behavior, such as rudeness, from peers. In terms of nurses, scholars often consider race to be a main factor in surface-level difference that initiates marginalization and interpersonal conflict (Jones-Berry, 2019; Masoumeh, 2019).

However, race and gender issues do not seem to pertain to nurses in Taiwan. Contravening the dominant opinion of nursing researchers across the globe, a recent study indicated that male nurses generally adapt well and feel less stressed than female ones in Taiwan (Huang et al., 2021). Recent studies also not indicated the race issue in Taiwanese nurses. On the other hand, organizational support and co-worker support were still the top three factors that predict Taiwanese nurses' job satisfaction (Tzeng et al., 2017). There must be some undetected factors related to the interpersonal conflict among Taiwanese nurses. Hsu et al. (2020) found that Taiwanese nurses are commonly harmed by other nurses, especially female-to-female, but not by patients or doctors. Moreover, Sheppard and Aquino (2017) pointed out that same-sex conflict was more prevalent in women than in men due to lack of communal traits in the former, because people often see communal traits as belonging predominantly to females whereas 'agency' is a trait more often linked to males. Patients tend to view nurses as community-minded, and this is likely to be due to the stereotype of members of this profession being predominantly concerned with others (Aranda et al., 2015). Thus, it is reasonable to presume that lack of communal traits may cause interpersonal issues and decrease stay intent in nurses. Nurses frustrated by the surface-level difference in their workplace are likely to consider new roles in different organizations or even leave the profession altogether. Accordingly, we proposed the following hypotheses:

Hypothesis 1: Communal traits are positively related to stay intent.

Hypothesis 2: Frustration experience mediates the relationship between communal traits and stay intent.

What Connects Frustration Experience and Stay Intent?

Above, we discussed the relationship between communal traits and nurses' stay intent. According to the 'black sheep effect', surface-level difference is a key element that causes interpersonal conflict, especially female-to-female, causing frustration and decreasing stay intent. Does frustration

experience always decrease stay intent, however? Work frustration is defined as ‘the negative emotion resulting from unsatisfied needs and motivation due to the obstacles and interference experienced by an individual in a workplace’ (Chang et al., 2018, p. 963). Namely, frustration experience will cause negative emotions and motivate a person’s behavioral response due to their psychological needs being unsatisfied or thwarted (Fox & Spector, 1999).

Nursing research is often focused on the issue of psychological need satisfaction but does not discuss need thwarting (Bai et al., 2021; Boudrias et al., 2020). In addition, previous nursing research has placed more of an emphasis on the antecedent causes of nurses’ frustration, rather than the psychological processes (Chang et al., 2018). Scholars have verified the strong link between negative consequences and psychological need thwarting, but not satisfaction (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011). Thus, to seek to verify the relationship among frustration experience, psychological need thwarting, and stay intent in nurses seems to be both necessary and reasonable.

Psychological need thwarting has been defined as “the mechanism that links negative dimensions of the social environment to indices of compromised functioning and ill-being” (Bartholomew, Ntoumanis, Ryan, Bosch, et al., 2011, p. 1460). The psychodynamic perspective posits that when individuals feel frustrated and/ or that their psychological needs are not being met, they endeavor to escape from the particular uncomfortable environment, such as a stressful workplace and embarrassing situation, or alternatively address that which is undermining their psychological needs: for example, providing suggestions and altering procedures (Glen, 2014; Maslow, 1943; Ryan & Deci, 2000; Rouse et al., 2020; Wu et al., 2019). Need satisfaction and thwarting are distinct issues (Bartholomew, Ntoumanis, Ryan, & Thøgersen-Ntoumani, 2011). In Ryan and Deci’s (2000) theory of motivation, they redefined three different basic needs: the need for autonomy (individuals may display behavior according to their willingness to be responsible for this); the need for competence (individuals feel confident that they can accomplish their goals); and the need for relatedness (individuals want to feel connected with others in the same social context). When these three basic needs are fulfilled, people are more able to gain sufficient intrinsic motivation to promote personal growth, integration, and well-being; as well as to effectively interact with groups or communities. However, in real life, the constant thwarting of basic needs can lead to the occurrence of negative behaviors, such as borderline personality disorder developed due to frustrated relationships with parents in childhood, or anorexia caused by excessive dieting.

Studies have shown that psychological need thwarting decreases individuals’ stay intent (Chen et al., 2020; Huyghebaert et al., 2018). Research on the black sheep effect points out that it is extremely stressful for a group member when they feel different from the group, which

can relate to behavior or decision-making (Dubé & Thiers, 2017). Members who deviate from a group norm (e.g., black people in a predominantly white society, or overly masculine females) may easily experience problems in a group, such as pressure and exclusion behavior from peers and inappropriate treatment from managers (Breakwell et al., 2003; Cranmer & Cranmer, 2013). This thwarts their psychological relatedness needs and may result in their choosing to leave the group (Kwon, 2017; Shinnar, 2008). With relevance to this study, nursing research shows that poor teamwork and the inability to complete tasks are the main sources of frustration and stress (Chang et al., 2018). Nurses’ poor teamwork caused by the black sheep effect can indirectly cause mistakes to be made in daily tasks, affecting patients’ treatment (Hsu et al., 2020; Mia et al., 2020). The nurse in question, who has suffered from the black sheep effect or another form of marginalization, may attribute their failure to having insufficient knowledge, a lack of professional ability or poor communication skills, resulting in competency need thwarting; an internal factor. They may receive insufficient support from their department, and experience a lack of power in decision-making, an external factor causing autonomy need thwarting. These are all frustration experiences (Hsu et al., 2020). If a nurse’s team fails to effectively resolve such issues, there are likely to be more similar incidents and the turnover rate will rise accordingly (Chang et al., 2018; Hsu et al., 2020). Thus, psychological need thwarting was regarded as a target variable that mediates the relationship between frustration experience and nurses’ stay intent. Accordingly, the following hypothesis was proposed:

Hypothesis 3: Psychological need thwarting mediates between the effect of communal traits on stay intent in the second stage.

How can the Negative Influence of Surface-Level Difference be Rectified?

The frustration experience caused by surface-level difference can be attributed to two factors: individual and environmental (Sheppard & Aquino, 2017). First, different individuals may be more sensitive than normative individuals in a group and feel uneasy participating in their activities. They may feel that their professional skills, knowledge, and abilities have a detrimental effect on others’ evaluations of them and on their self-perceptions (e.g., Browning, 2008; Glen, 2014; Radulović & Ilić, 2018). Normative members may assess and punish members perceived as different more harshly. If individuals feel unfairly punished, mocked, left out, rejected, and/or persecuted in their group, they may leave it (Glen, 2014; Maslow, 1943).

According to the psychodynamic perspective, these factors that can trigger personal perceptions of frustration

are caused by doubt and uncertainty in interpersonal relationships (Glen, 2014). That is, a person who does not feel they belong in a group finds both physical and psychological support difficult to access, and easily becomes frustrated in the workplace (Healy, 2016; Maslow, 1943). Previous studies have found that although the effect of surface-level difference on job performance is limited, the effect of negative perceptions and feelings is detrimental to individuals and ultimately causes turnover (e.g., Gabriel et al., 2018; Dubé & Thiers, 2017). In Taiwan, as nursing is a typically feminine profession it would seem likely that there would be an emphasis placed on equity and a concern for individual difference, as well as teamwork and support, and a will to create and maintain feelings of belonging (Priola, 2004; Catanzaro et al., 2010; Rodrigues & Blumberg, 2000).

Accordingly, 'belonging perception' is an important environmental factor that can be used to decrease the negative effect of surface-level difference in the nursing profession. Perceiving a feeling of belonging in a workplace team will weaken the impact of frustration on psychological basic needs and further increase stay intent, which is relevant to the present study. We therefore proposed the research model shown in Figure 1 and the following hypothesis:

Hypothesis 4: Belonging perception moderates the relationship between frustration experience and psychological need thwarting.

Methods

Aims

Our study explored how surface-level difference impacts nurses' stay intent. Based on the available literature, we developed a model in which frustration experience caused by lack of communal traits thwarts psychological basic needs and decreases stay intent. Belonging perception as an environmental factor was regarded as weakening the negative influence of surface-level difference.

Design

This was a piece of quantitative research incorporating a cross-sectional design with a questionnaire survey.

Participants

The participants were 249 registered nurses from 27 departments of 13 hospitals in Taiwan; data was collected through convenience sampling. There were no registered nurses excluded. All of the questionnaires were valid. Most of the nurses were female (90.0%). The average age and total number of service years were 29.5 and 3.8, respectively. The descriptive statistics for the sociological variables are presented in Table 1. There are no traveling nurses in

Taiwan by law and participants did not include agency nurses. Thus, the descriptive statistics did not include traveling or agency nurses as items. A post-hoc power analysis showed that based on the medium effect size detected ($f^2 = .15$), with seven predictors and an alpha level of .05, the power achieved was $>.99$.

Data Collection

The researchers gave the participating nurses envelopes containing the self-report questionnaires, which were immediately sealed after completing. To prevent sampling bias, we invited some nursing students who had finished a research methodology course into the research group to assist the process of data collection. Each student was asked to recruit 10–20 participants from their home town or city during their winter break. Before the data collection began, these nursing students did not know why and how the authors had designed the survey. If the participants had questions, these would be explained through phone calls and emails to the authors. There were no questions or comments received from the participants in this process. The data was collected from January 10th 2020 to February 10th 2020.

Measures

Chinese versions were provided for all measures through the commonly used back-translation procedure (Brislin, 1986). All the items were measured on a six-point Likert scale, ranging from one (strongly disagree) to six (strongly agree).

Psychological Need Thwarting. The term psychological need thwarting means that 'the psychological needs are actively blocked or thwarted' (Chen et al., 2015, p. 217). The psychological need thwarting scale, comprising 12 items, was used (Chen et al., 2015). This contains three sub-scales: autonomy, refers to the feeling controlled through externally enforced or self-imposed pressures (four items, such as: "At work, I feel forced to do many things I wouldn't choose to do"); relatedness, refers to the experience of relational exclusion and loneliness (four items, including: "I have the impression that people I work with dislike me"); and competence, refers to the feelings of failure and doubts about one's efficacy (four items, such as: "I feel insecure about my abilities at work") (Chen et al., 2015). The Cronbach's alpha for these sub-scales were .85, .85, and .85, respectively. The Cronbach's alpha for the scales overall was .90.

Stay Intent. Nurse's stay intent refers to 'the probability of a nurse staying in the current job' (Gregory et al., 2007). Stay intent was measured with a four-item scale including two reversed items (Hunt et al., 1981). Example items were: "My work at this organization is very important to me" and

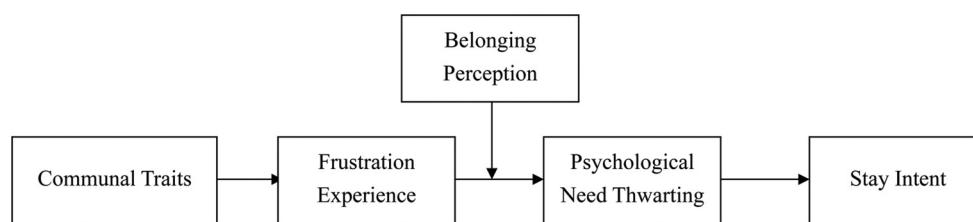


Figure 1. Research model.

Table 1. Descriptive Statistics ($N = 249$).

	Mean	Standard deviation	N	%
Age	30.28	4.69		
Tenure (years)	4.63	4.80		
Gender*				
Female			224	90.0%
Male			24	9.6%
Marital*				
Married			141	56.6%
Unmarried			107	43.0%
Highest qualification*				
High school and associate degree			80	32.1%
Bachelor's degree			145	58.2%
Master's degree			2	0.8%
Department				
Acute ward			164	65.9%
Emergency room			25	10.0%
Operation room			24	9.6%
Intensive care unit			19	7.6%
Other			17	6.8%

Note * means that item had missing data.

“I will definitely leave this organization in the next year.” The Cronbach’s alpha was .83.

Belonging Perception. Belonging perception refers to ‘the sense of individual social needs as important to social relationships, networks, emotional support, and social integration in general’ (Böhnke, 2008, p. 197). The sense of belonging scale, which comprises seven items including five that were reversed, was used as another measurement (Böhnke, 2008). Example items included: “I am optimistic about my future at work” and “I don’t feel the value of what I do at work is recognized”. The Cronbach’s alpha was .78.

Frustration Experience. Frustration experience refers to ‘the obstacles and interference experienced at work’ (Peters et al., 1980). The job frustration scale, which comprises three items of which one was reversed, measured frustration experience (Peters et al., 1980). Example items included: “I often feel very frustrated at work” and “Overall, I experience

very little frustration while doing my job.” The Cronbach’s alpha was .76.

Communal Traits. The phrase communal traits refers to ‘the characteristics of being a part of community and intimate relationships with others’ (Abele et al., 2008). Peng’s (2006) version of the Bem Sex Role Inventory (Bem, 1981), which comprises a communal trait scale with ten items, was used. Example items included “understanding” and “sensitivity to others”. The Cronbach’s alpha was .74.

Data Analysis

This study employed the commercially available SPSS macro, PROCESS, and the bootstrapping method (there were 5,000 resamples) to conduct a descriptive statistics analysis to find the direct, indirect, and moderated effects of the research model (Hayes, 2013; Preacher et al., 2007).

Discriminant and Convergent Validity

Following the procedures recommended by Fornell and Larcker (1981), the square root of the average variance extracted estimates was found to be greater than the square of correlations, thus providing support for the discriminant validity of these measures. The range of standardized factor loadings for the indicators onto the latent variables ranged between 0.51 and 0.95. The composite reliability ranged between 0.83 and 0.91, and all of the $p < .01$, providing support for convergent validity. These results demonstrated that these variables were distinct, as shown in Table 2.

Common Method Variance

Harman’s single-factor test was used as a post-hoc statistical analysis to examine the potential problem of common method bias. The results of an unrotated factor analysis indicated that seven factors with eigenvalues greater than one explained 69.14% of the total variance. The first factor accounted for 31.52% of the variance and, as it was less than 50%, this showed that no single factor significantly accounted for most of the variance in the variables. Common method bias was thus not a major concern.

Table 2. Discriminant, Convergent Validity, and Intercorrelations.

	LF	CR	AVE	1	2	3	4	5	6	7	8
Psychological need thwarting	–	.90	.51	.72*							
Autonomy	.77–.95	.91	.77	.81**	.88*						
Relatedness	.77–.93	.90	.74	.83**	.51**	.86*					
Competence	.83–.94	.91	.78	.80**	.46**	.51**	.88*				
Frustration experience	.62–.94	.87	.70	.49**	.41**	.44**	.34**	.84*			
Communal traits	.51–.80	.83	.41	–.59**	–.39**	–.48**	–.57**	–.41**	.64*		
Stay intent	.75–.95	.91	.78	–.57**	–.38**	–.47**	–.54**	–.37**	.61**	.88*	
Belonging perception	.57–.85	.85	.48	–.64**	–.49**	–.59**	–.48**	–.47**	.55**	.44**	.70*

Note LF, loading factors; CR, composite reliability; AVE, average of variance extracted; ** $p < .01$; * $p < .05$.

Table 3. Path Analysis Results.

Path	Standardize Coefficient	Standard Error	Bootstrapping 95% CI	
			Lower	Upper
Model 1:				
CT→SI	.295	.030	.235	.355
CT→FE→SI	.038	.018	.004	.076
Model 2:				
CT→SI	.226	.033	.162	.290
CT→FE→SI	.010	.016	–.020	.045
CT→PNT→SI	.076	.022	.036	.123
CT→FE→PNT→SI	.020	.008	.007	.039
Further test:				
CT→FE→Autonomy→SI	.009	.005	.001	.021
CT→FE→Relatedness→SI	.014	.007	.003	.032
CT→FE→Competence→SI	.008	.005	–.001	.019

Note SE, standard error; CI, confidence interval; CT, Communal trait; SI, stay intent; FE, frustration experience; PNT, psychological need thwarting; psychological need thwarting, including three subscales: autonomy, relatedness, and competence.

Results

Direct Effects

The results supported Hypothesis 1: communal traits were positively related to stay intent ($\beta = .61, p < .01$). Other direct effects were that communal traits had a negative relationship to frustration experience ($\beta = -.41, p < .01$); frustration experience was positively related to psychological need thwarting ($\beta = .49, p < .01$); and psychological need thwarting was negatively related to stay intent ($\beta = -.57, p < .01$).

One-Stage Mediation Model

The results also supported Hypothesis 2 (as shown in Model 1 of Table 3). In the one-stage mediation model, the direct effect of communal traits on stay intent had a positive significance ($\beta = .30, p < .01$, with a 95% CI = [.24, .35]). Frustration experience partially mediated the influence of communal traits on stay intent ($\beta = .04$, with a 95% CI = [.01, .08]).

Two-Stage Mediation Model

Hypothesis 3 was also supported (as shown in Model 2 of Table 3). In the two-stage mediation model, the direct effect of communal traits on stay intent was positively significant ($\beta = .23, p < .01$, with a 95% CI = [.16, .29]). Psychological need thwarting mediated the second-stage of the model, having an effect on communal traits, frustration experiences, and stay intent ($\beta = .03$, with a 95% CI = [.01, .06]). We also tested the mediation effects of autonomy, relatedness, and competence (sub-scales of psychological need thwarting). The results showed that autonomy ($\beta = .01$, with a 95% CI = [.00, .02]) and relatedness ($\beta = .01$, with a 95% CI = [.00, .03]), in the second-stage of the mediation model, mediated the effects of communal traits, frustration experience, and stay intent; but competence ($\beta = .01$, with a 95% CI = [–.00, .02]) did not have a mediation effect.

Moderation Effect

The results supported Hypothesis 4, as belonging perception weakened frustration experience ($\beta = -.22, p < .01$, with a

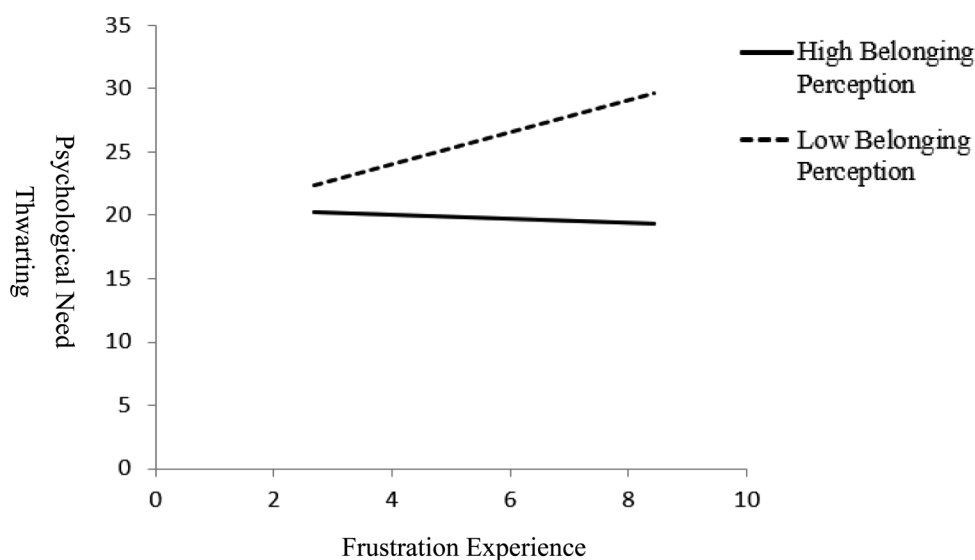


Figure 2. Moderated effect of belonging perception.

95% CI = $[-.32, -.11]$) and had a moderated mediation role in the research model ($\beta = .04$, with a 95% CI = $[.02, .06]$). The result of the moderated effect is shown in Figure 2. Furthermore, we tested the moderation effect of belonging perception on the relationship between frustration experience and autonomy and relatedness. The results showed that belonging perception also weakened the effect of frustration experience on autonomy ($\beta = -.07$, $p < .01$, with a 95% CI = $[-.12, -.02]$) and relatedness. The results of the simple main effect were that frustration experience is negatively related to psychological need thwarting when there is a high level of belonging perception ($B = 1.26$, $p < .01$), but not if there is a low level ($B = -.16$, $p = .65$).

Analysis of Gender

As previous studies have pointed to the fact that women can suffer from the effects of surface-level difference, we tested the moderated effect of gender on the relationship between communal traits and frustration experience. The results showed that gender is related to communal traits ($F = 7.60$, $p < .01$), but not associated with frustration experience ($F = 1.23$, $p = .27$), and does not moderate the relationship between communal traits and frustration experience ($\beta = -.19$, $p = .31$).

Discussion

Overall, this study verified the idea that surface-level difference creates a perception of fewer communal traits; this in turn increases individual frustration experiences and further decreases stay intent via psychological need thwarting in nurses. We also explored the influence of three types of psychological need thwarting and found that only competence

and relatedness mediated this relationship. In addition, belonging perception was perceived to weaken the effect of frustration experience on psychological need thwarting. As a result, this study provides theoretical contributions to fill the research gap in nursing retention and turnover.

Our results were similar to those found in previous studies in that psychological need thwarting mediated the second-stage of the relationship between communal traits, frustration experience, and stay intent (e.g., Chang et al., 2018; Dubé & Thiers, 2017). Following the self-determination theory, Costa et al. (2015) pointed out that, compared with psychological need satisfaction, need thwarting is more likely to incur negative outcomes in interpersonal relationships. That is, the more an individual's psychological need is thwarted, the more likely interpersonal interactions are to have debilitating impacts such as anxiety and ultimately leaving the situation in which they occur. Most research on psychological need thwarting is in the education and sport fields (e.g., Gilbert et al., 2021; Morales-Sánchez et al., 2020). Our study that extends this perspective to healthcare, specifically nursing, thereby fills a research gap.

Compared with the research on need satisfaction in nurses, our results showed autonomy and relatedness to mediate the relationship between frustration experience and stay intent, similar to samples in previous Chinese research (Bai et al., 2021). There may be two reasons for this: status and emphasis on interpersonal relationships. To expand on this idea: in Taiwan, nurses' duties and powers are restricted by doctors' orders when performing any medical task. In addition, frontline nurses, who are almost exclusively female in Taiwan, are often seen as doing 'female work' and are thus in a disadvantaged position due to traditional gender stereotyping (Luo et al., 2021). This has created a hierarchic medical system within nurses, and between

nurses and doctors in which nurses often feel that their professional knowledge and skills go unvalued (as found in statements from Hsu et al.'s study (2019): 'most of the pressure comes from the senior sisters' and the 'doctors often shout at nurses before understanding how an incident happens' (p. 54)). On the other hand, the Chinese culture emphasizes interpersonal harmony and relationships. Thus, the interpersonal conflict from colleagues and/ or managers in Taiwanese nurse is more relevant. If nurses do not feel they belong in a team, they will leave it to search for one in which they will have a more positive experience. Overall, both possible reasons pertain to the cultural factor. Future research should consider the difference of cross-culture to extend our understanding of its impact.

Second, surface-level difference as created by a sense of few communal traits increases individuals' frustrations and further decreases stay intent. Our results are similar to those of previous studies (e.g., Gabriel et al., 2018; Sheppard & Aquino, 2017). There are few studies, however, which discuss the issue of the negative outcomes of interpersonal relationships via the black sheep effect and surface-level difference. The existing research has pointed out that differences in surface-level traits can trigger conflicts especially in predominantly female groups. Although our results show that gender does not impact communal traits' influence on frustration experience, the negative influence of surface-level difference remains in a female-dominated group or culture. As only a small (10%) part of our sample was male, future research should explore this negative influence on men working in a female-dominated culture such as nursing or on females in a male-dominated group or environment. In addition, we used the Bem Sex Role Inventory as a measurement tool to assess communal traits, in this instance a socially desirable expressive feminine trait. With the same measurement tool, El Ghaziri et al. (2019) found similar results in nurses: that communal traits are negatively related to bullying and negative actions by co-workers. However, the Bem Sex Role Inventory has limitations and cannot measure socially undesirable traits (e.g., anxiety, oversensitivity, and disorientation as undesirable female-communal traits); Therese et al. (2020) found that females who have higher levels of socially undesirable expressive traits tend to have more depressive symptoms and that socially desirable feminine expressive traits are not related to depressive symptoms. We suggest that future research uses both scales of socially gendered expressive traits (desirable and undesirable) and explores the relationship between both scales, considering negative and positive consequences.

Third, belonging perception appears to weaken the negative influence of fewer communal traits. Although numerous studies have verified the positive influence of belonging, such as perception of support from organizations, supervisors, and peers, we still wanted to utilize it as an important environmental factor in reducing the negative influence of surface-level difference on stay intent. Although several

studies posit that surface-level difference causes negative outcomes via rudeness and verbal abuse (e.g., Abrams et al., 2014; Rullo et al., 2015), there is no evidence of the process of this nor of how it can be stopped from occurring in the first place. Belonging perception seems like the only means of doing so, although this idea is too generalized at present. Sheppard and Aquino (2017) have explained that this type of discrimination or conflict in a female-to-female environment (not a male one), is due to gender stereotyping and females forming collective tribes. Yet, in our case, we did not find gender to influence the relationship between communal traits and frustration experience. Future research could explore the process of how surface-level difference shapes the concomitant negative outcomes. Besides the theoretical contribution this would provide, it would be helpful to have a concrete and specific way of preventing negative outcomes in practice, as this is likely to reduce staff turnover.

Limitations and More Recommendations for Future Research

Despite its numerous theoretical contributions, the present study has limitations. First, the process from surface-level difference to negative outcomes is dynamic and cannot be proved through a cross-sectional design as having a causal relationship with the research variables. Although experimental studies and paired-sample designs can be employed to shed light on what occurs within effects due to the stressful situations being evaluated, psychological processes are more difficult to test in this type of research design than via self-report questionnaires. Thus, a future study should use a longitudinal design to better overcome such a barrier and enhance the understanding of this dynamic process. To best observe how surface-level difference can develop into abusive behavior, field research should also be seriously considered.

Second, although we collected samples from different hospitals and departments as much as possible, used post-test statistics and calculated effect size to engender a representative sample, convenience sampling is harmful to the collation of 'clean' data. Also, as our samples were all Taiwanese nurses this may cause a cultural effect. A cross-cultural study should therefore be considered.

Finally, our study's use of subjective and self-reporting measurements may have distorted the data as the respondents' memories and feelings about their negative experiences may have lessened over time. Future research may consider using more objective measurements.

Practical Implications

The study has two main practical implications. First, the present study built a model of how surface-level difference

impacts nurses' stay intent, and the model did not find a gender difference. Although existing studies do not provide a detailed or convincing argument as to what and why surface-level difference triggers unpleasant behavior, most of their results directly and indirectly highlight the importance of interpersonal interaction (not stereotypes or cultural effects) in this process. Thus, belonging perception towards a work group becomes a key but not an exact factor to consider in the weakening of negative influence caused by surface-level difference. Educational programs for eliminating discrimination and recognizing what stereotypes are and how they can be counteracted may be helpful; however, this may also intensify interpersonal conflict if group members consider that this is a merely superficial attempt to overcome a deeply rooted issue. Nursing managers should therefore have as their main focus the creation of a cohesive team as a more useful way to reduce the negative outcomes caused by surface-level difference. Scholars currently do not understand the causal link between surface-level difference, conflict, and negative influence. Surface-level difference may be present but not be a tipping point that creates conflict in some cases but not in others: managers need to consider the specific dynamics of their team to work out where issues are likely to occur and to tackle them before they result in distress to individuals and ultimately increased turnover.

Besides, in the group shaping process, each member will finally find a unique position corresponding to their role (Elfenbein, 2016; Kristof, 1996). Thus, the point of the present study is the people-people fit in a group or a department; that nursing managers should find a key factor or a way to speed up the group shaping process so staff turnover stabilizes (Kristof, 1996). Corresponding with Hsu et al.'s research (2020), the factor of surface-level difference does not influence job performance. We suggest that nursing managers do not spend extensive amounts of time trying to resolve interpersonal conflicts between nurses, if the conflict does not decrease job performance and influence the quality of care provided, and instead seek to enhance group members' belonging perception.

Second, the present study found that only autonomy and relatedness of psychological need thwarting mediate frustration experience and nurses' stay intent. The results are similar to those found in other Chinese samples. In the Chinese culture, nursing managers should take into account frontline nurses' needs. Increasing opportunities for team bonding, such as celebrating birthdays and new staff members with events, may improve group cohesion and help marginalized members to better fit in. There also needs to be careful consideration and planning of both formal and routine meetings. The Chinese culture places a high importance on harmony and community, therefore contradiction and conflict are difficult to manage. In a formal meeting, nursing managers should guide group members to talk honestly about their feelings and manage potential conflict so this does not escalate. They can also decrease autonomy need thwarting in a

formal meeting via encouraging and respecting every group member's opinion. Due to the hierarchic status between doctors and nurses in Taiwan, frontline nurses have few opportunities to fulfill their need for autonomy or show competence at work. This phenomenon can cause a lack of confidence and neglects the importance of competence needs. Nursing managers may improve frontline nurses' confidence via increasing their professional abilities and skills, and thereby helping them to have autonomy and display initiative when working with doctors as well as patients.

Conclusion

The high turnover rate amongst Taiwanese nurses is a serious issue. One reason for this is nurse-to-nurse interpersonal conflict in the workplace. Surface-level difference, such as low levels of communal traits, may be an important antecedent factor. Also, previous studies have pointed out that this type of conflict is present in women's relationships with other women. Thus, this study built a model to explore how surface-level difference influences nurses' stay intent based on the black sheep theory. A cross-sectional design and a questionnaire survey were used.

The results were that nurses who have lower communal traits were more frustrated at work, thwarting their psychological needs, and further decreasing stay intent. Belonging perception weakened the negative influence of frustration experience on need thwarting. In addition, autonomy and relatedness of need thwarting but not competence was found to mediate the relationship between frustration experience and stay intent. One of our findings, a lack of gender difference, was contrary to that of past studies.

In practice, nursing managers should emphasize the impact of belonging perception and surface-level difference, such as communal traits, on teams. However, why surface-level difference can have negative outcomes remains a question that should be answered by future research. In relation to the issue of autonomy and relatedness need thwarting associated with the status of Taiwanese nurse in a relationship-oriented culture, nursing managers can weaken this impact by working to improve frontline nurses' confidence and positive self-conceptualizations.

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Data and Code Availability Statement

The data used to support the findings of this study are available from the first author upon request due to institutional review board's authorization needed.

Ethical Approval

The data were obtained as part of a more encompassing data collection endeavor, conducted under IRB Protocol #1-108-05-010 at

Institution Review Board of Tri-Service General Hospital (Project Title: *What is a good or bad nurse? Description of nurses' value, tasks, and characteristics from patients and colleagues' perspectives in Taiwan*).

Authorship Statement

All authors contributed to the study conception and design. Material preparation, data collection and analysis were performed by WenYing Chang. The first draft of the manuscript was written by WenYing Chang and all authors commented on previous versions of the manuscript. English editing was performed by YiHsuan Lee. All authors read and approved the final manuscript.

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