摘要

重返校園對擁有孩子的職業婦女來說，是一件挑戰，目前在台灣有越來越多的媽媽重返校園繼續讀書，求取更高的學歷，如何面對隨之而來的多重角色壓力是一個重要議題。本研究的目的在於了解身為媽媽的護理人員重返校園後的多重角色壓力問題，並進一步探討角色壓力與工作狀態、生理狀態、及支持系統間的關係。本研究為一橫斷性相關性研究，使用自填式問卷，以方便性取樣收集資料，共 135 位在職之護理媽媽學生參與本研究。結果發現工作負荷、生理狀態中之自覺健康、活動、及睡眠狀態與角色壓力成顯著相關，迴歸分析呈現全部預測變項對角色壓力的解釋力為 **42.3%** ，進一步逐步迴歸則發現顯著的預測變項為活動狀態、工作負荷、及睡眠狀態，此三項預測變項的解釋力為 **41.5%** 。未來對護理職業型態進一步的分析，可以有助於對工作狀態與角色壓力間的關係有更深入的了解。

關鍵字：多重角色、媽媽學生、護理學生、角色壓力

Abstract

Returning to school is a challenge for employed women who have children. There is an increasing number of Taiwanese women who have children and who are going back to school seeking higher degrees. How to face multiple role strain after returning to school is an important issue for these women. The purpose of this exploratory study was to assess multiple role strains among female nurses who had children and re-entered nursing schools. Further, relationships among role strain, employment status, physical status, and supporting system were determined. The current study employed a cross-section correlational (ex post facto) design using self-report written questionnaires. A total of 135 participants were recruited through a convenience sampling procedure. Result of the study shows that work load, health perception, activity, and rest had significant relationships with role stain. In regression analysis, all six predictors accounted for 42.3% variance in predicting role strain ($P < .05$). Further, a stepwise regression revealed that three significant predictors, namely activity, work load, and rest, went into the regression model. These three predictors accounted for 41.5% variance. Further study that focus on job characteristics may provide in depth information about the relationship between working status and role strain among multiple role nurses.

Key Word: multiple role, mother student, nursing student, role strain

Background

Going back to school is not an easy task for women who have children, especially for those who have jobs. There is an increasing number of Taiwanese women who have children and who are going back to school seeking higher degrees. Because the majority of nurses are women, women's multiple role issues are more likely to occur in nursing students. In addition, nursing education has both generic and vocational paths in Taiwan, which increases the variety of nurses' education levels. Thus, the proportion of female nurses returning to school will be higher than that of other disciplines.

Many studies have done related to the multiple role issues among adult women. Most of them that focused on the relationships between women's family roles and career roles claimed negative consequences in terms of women's multiple role occupations (Barnett & Baruch, 1985; Chen, 1988). Since early in the 1980's, many educational studies have begun to pay attention to the multiple role situations among reentry women students (Edwards, 1993; Gerson, 1985; Home, 1998; Mikolaj & Boggs, 1991). Researchers who particularly interested in multiple role issues in nurses returning to schools commonly reported that women with children had more negative effects such as role conflicts (Campaniello, 1988; Derstine, 1988; Gigliotti, 1999; Lengacher, 1993; Lin, 2003; Lin, Lien, Huang, Ho, Sheu, 2003; Wang & Lethbridge, 1995). Currently, most of major health institutes (hospitals) in Taiwan do not offer part-time jobs. The official working hours per week are 40 hours. The average working hours of 118 participants in Lin's (2003) study was 41.19 hours per week. Thus, the possibility of role strain is a problem for these women in dealing with their multiple role responsibilities.

The purpose of this exploratory study was to assess multiple role strains among female nurses who had children and re-entered nursing schools. Further, relationships among role strain, employment status, physical status, and supporting system were determined. The research questions were:

1. What are relationships between employment status and role strain among female nurse who are currently working as a nurse, with children at home, and re-enter schools?
2. What are relationships between physical status and role strain among female
    nurse who are currently working as a nurse, with children at home, and re-enter schools?
3. What are relationships between supporting system and role strain among female nurse who are currently working as a nurse, with children

at home, and re-enter schools?

4. **What are relationships among employment status, physical status, and supporting system among female nurse who are currently working as a nurse, with children at home, and re-enter schools?**

5. **How do employment status, physical status, and supporting system contribute to role strain among female nurse who are currently working as a nurse, with children at home, and re-enter schools?**

The figure illustrates the relationship between role strain and the identified study variables.

Literature Review

Multiple Role Strain Among Reentry Women Students

According to Goode (1960), role strain was defined as "the felt [feeling of] difficulty in fulfilling role obligations" (pp. 483). Goode mentioned that, "the individual's total role obligations are overdemanding" (pp. 485), and a person could not fulfill all these demands. Types of role strain can be classified into four categories referring to the sources of this condition: (a) the rigidities of times and places required for role demands, (b) conflict requirements of allocations of time, place, and resources in different roles, (c) role strain from taking inconsistent role obligations, and (d) conflicts due to the fact that "many role relationships are 'role sets,' that is, the individual engages in many role relationships with different individuals" (pp. 485). When a woman with a family re-enters school, she can face all four sources of the role strain that Goode presented. It is not surprise that the role strain theory has been widely cited in women's multiple roles' studies.

Gerson (1985) developed a role strain instrument based on Goode's theory to assess adult women's role strain levels. She compared the level of role strain on two groups: one was women who were between 30-50 years of age with one or more children under 19 years and who were enrolling in college, and the other one was women who had similar life situations as the student group but who were not students. Gerson found that the student group had a significant higher level of role strain than the non-student group ($p < .001$). Instead of assessing the sample of students, Park and Liao (2000) measured role strain among married South Korean women by comparing a sample of professors and a sample of housewives. They found that the women professors had a higher degree of role strain than housewives (z statistic = 2.68). An early study interviewed 28 dual career families with at least one child under age 12 (Johnson & Johnson, 1977). The study revealed that wives had more feelings of role strain than their

husbands. Women described their feelings as feeling overwhelmed, guilty, and fatigued. The greatest strain for these women was from the concern of the role conflict between their career and their children. Similarly, Greenberger, Goldberg, Hamill, O'Neil, and Payne (1989) studied relationships among factors of job satisfaction, social support, organizational commitment, role strain, and health symptoms in dual career adults. They found that mothers had significantly higher role strain and more health symptoms than fathers had.

Employment Factors in Multiple Role Occupation

Employment status was found to be significant factors related to role strain among multiple role women. Hemmelgarn and Laing (1991) assessed the relationship between perceived role strain and situational factors in 113 employed mothers. They found that employed mothers who worked full-time had a significantly higher level of role strain than those who worked part-time. The study also revealed that, along with maternal identity and satisfaction with child care, work status and job satisfaction were the significant predictors of role strain. The authors also reported that the majority were satisfied with their job due to the flexibility in their work schedule to deal with family matters. In contrary, nurses in Taiwan does have much flexibility in terms of working schedule, especially in the choice of part-time or full-time employment. For instance, in a qualitative study of 11 re-entering nursing students, only 5 of them were still employed one year after re-entering school (Lin et al. 2003). They responded that in order to go to school, they had to choose a whole year night shift. As the result, one participant described, the physical status was getting worse.

Home (1998) was interested in role conflict, role overload, and role contagion among 443 women who had parental responsibilities, were employed at least 9 hours a week, and were studying in either education, social work, or nursing programs. The independent variables in this study were job demands, student demands, family demands, tangible institutional support, and demographic information. The results showed that job demands were the third strong predictor in predicting role conflict, role overload, and role contagion. Nevertheless, some studies that took the employment status into account while studying multiples role issue did not find significant relationships between role strain or role conflict and the employment status (Chien, 1994; Campanielle, 1988). Campaniello (1988) conducted a study of role conflict and well-being among nurses who are re-entering school. The author found that multiple roles did not affect perceived role conflict among these nurses. In fact, nurses who occupied three or four roles had a significantly higher level of well-being than

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nurses who occupied two roles.

Physical Status of Multiple Role Women

Studies have found that multiple role occupation were associated with women's physical status. Coverman (1989) claimed that the role conflict increased women's psychophysical symptoms. In a study of 34 nursing assistants, Nelson (1997) found that most of these women rated their health as good (62%), 28% of them rated excellent, only 15% of them rated their health as fair. Nevertheless, in assessing the barriers to health practices, these women reported that the reason for their insufficient time and energy for their health practices was the combination of work and family role demands. Similarly, Stewart, Abbey, Meana, and Boydell (1998) reported that the combination of home and outside works was one of factors causing women's fatigue. However, in a longitudinal study of the relationship between number of roles held and health problem among 3282 women, Waldron and Jacobs (1989) reported that the number of roles held had a negative correlation with health problems. In other words, women who held more roles reported less health problems. In short, although both positive and negative relationships were found between the health perception and multiple role occupation among adult women, childcare and family responsibilities are important factors correlated with health status.

Aside to the physical status, multiple role women's activity levels may also be affected. For instance, Cheng (2000) found that role conflict commonly happened in family leisure activities. Gerson's (1985) study also revealed that role strain was negatively correlated with the involvement in leisure and volunteer activities. Nevertheless, the cause-effect relationship between role strain and the decreasing of activities was not clear. One of the informants in Lin's (2001) study described that she had no time and no energy for attending social activities due to time limitations. In addition, she said, social activities were easily disrupted when she had a little child with her.

Sleep or rest problems among multiple role women seem obvious, however, few studies have assessed the relationship between sleep quality and women's multiple role occupations. Sleep problems may have different forms, such as sleep latency, sleep duration, and sleep disturbance. In a study of 141 mothers resuming employment after child birth, Romito, Saurel-Cubizolles, and Cuttini (1994) revealed that 84% of these mothers returned to work 15 months after childbirth. Among them, 24.36% reportedly suffered from several physical problems such as lack of sleep, tiredness, and backache. Another study of the effects of rotating shiftwork on sleep and the family life among 193 nurses found that nurses who had young children had less sleep time than nurses who's

children were older (Kurumatani et al., 1994).

Supporting System

Logically, social support should have a negative relationship with negative role interaction, such as role strain. However, studies have not shown consistent results to support this. Campaniello (1988) found that social support contributed to the level of perceived role conflict significantly among re-entering woman students with multiple role occupations. Dick and Anderson (1993) also found significant negative relationships between burnout and support from family and colleagues among 50 RN-BSN students who were employed. In Cheng's (2000) study of 448 married graduate students in Taiwan, the results also showed that the need for social support was significantly correlated with the students' family-school role conflict.

In contrast, in Kirk and Dorfman's (1983) study, although both psychological and behavioral support were related to the level of satisfaction in student role, there were no significant relationships between support and the level of strain in the student role among adult woman students. Similarly, social support did not contribute perceived role strain in Hemmelgarn and Laing's (1991) study of 113 employed mothers. Furthermore, Lin (2003) did not find significant relationship between social support and role strain among 118 student mothers either.

In summary, many studies support relationships exist between role strain and physical and psychosocial factors among re-entering women students. However, these studies did not show consistent results. Further investigation is needed in order to have a better understanding of student mothers' multiple role strain and related factors.

Method

Data Collection Procedure

The current study employed a cross-section correlational (ex post facto) design using self-report written questionnaires. Before contact the potential participants, the investigator explained the study to the chair of the department, and receive permissions from the department to proceed with the study. The participants were invited to participate orally through the chair or teachers of the nursing department. After the potential participants agreed to participate, they were given the questionnaire along with an information letter and an envelope with stamp.

Sample

The population of this study was adult female nursing students in Taiwan

who had at least one child under 18 years old living with them, and who were currently working in a health related institute. To be eligible for inclusion in the sample, the participant has to be a mother who is over 20-year old with at least one child under 18 years old. A convenience sampling procedure was performed. Out of 145 potential participants, 138 returned questionnaires. The responding rate was 95.2%. Three questionnaires were excluded from data analyses due to much missing data. Thus, a total of 135 participants were recruited in the study.

Instrument

Role Strain. The role strain instrument has 12 items using a 5-point Likert scale (responses from strong disagree to strong agree, score 1 to 5) (Gerson, 1985). The range of total scores for the role strain scale is from 12 to 60. High scores indicate high role strain. Gerson (1985) did not present evidence of instrument validity. Nevertheless, she gave the theoretical rationale of the instrument, which can provide evidence of face validity. For instance, one example of items is: "I have contradictory demands placed on me" (Gerson, 1985, p. 92), which reflects the second source of role strain (conflict obligations in different roles) (Goode, 1960). The coefficient alpha was .86 in Lin's (2003) study. The current study received a coefficient alpha of .88.

Employment status. Employment status was assessed through two questions. The first question was the participants' self-report working hours per week. The second question was perceived workload that measured using a 10-point item. The participant was asked to rate her workload from mild to heavy (1 to 10). For this question, a 93.75% Content Validity Index (CVI) was received through a panel of experts validity.

Physical Status. The participants' physical status was assessed through health perception, activity, and rest.

Health Perception. The investigator used two subscales including 6 items from the Medical Outcomes Study 36-item Short-Form Health Survey (SF-36) (McHorney, Ware, Lu, & Sherbourne, 1994) to measure the participant's perception of health status (HP). All 6 items are rated in a 5-point Likert scale (from 1 to 5). The range of the final raw scores for the health perception is from 6 to 30, high scores indicate that the participant's self perception of health status is bad. The coefficient alpha for the HP scale (6-item) was .86 in Lin's (2003) study, and was.87 in this study.

Activity. Two subscales from the SF-36 (McHorney et al. 1994), social functioning (SF) and role limitation due to emotional problems (RE), are chosen to measure participants' activities. The SF subscale includes 2 items that measure the frequency and extent that health problems interfered with social activities.

These two items are rated in a 5-point Likert scale (from 1 to 5). The RE subscale includes 3 items with dichotomous answers (yes or no) indicating 3 problems that the participant might have experienced in the past 4 weeks. The answers to these 3 dichotomous questions will be scored 1 (yes) and 2 (no). Adding SF and RE scores together, the range of the final activity (ACT) scores will be from 5 to 16, high scores indicate bad social activity status. McHorney et al. (1994) reported a coefficient alpha .85 for SF, and .83 for RE. Lin's (2003) study revealed a coefficient alpha of .64. An alpha of .70 was received in this study.

Rest. Rest is measured through assessing sleep quality (SQ). Six questions that include 4 components (6 questions): subjective sleep quality, sleep duration, habitual sleep efficiency, and daytime dysfunction were chosen from the Pittsburgh Sleep Quality Index (PSQI) (Buysse, Reynolds, Monk, Berman, & Kupfer, 1989). Each component has a score range of 0 to 3. Thus, the range of the total score is from 0 to 12. High score means worse sleep quality. The coefficient alpha of the overall PSQI was .83 in the original study (Buysse et al., 1989). The coefficient alpha was .69 in Lin's (2003) study, and .64 for the current study.

Supporting System. To measure participants' support system, the social support scale (SS) modified from the Social Support Scale (Chien, 1994) is chosen in the current study. The SS includes 9 items rated in a 5-point Likert scale (from not match at all to extremely match). The range of the total score is from 9 to 45. High scores indicate high level of social support. The social support scale received an α = .89 in Lin's (2003) study. The coefficient alpha for this study was .88.

Demographic Information. Questions in this section cover demographic data, such as age, marital status, number of children, age of the youngest child, age of the oldest child, working hours per week, family income, and number of roles.

Analysis

The SPSS 11.0 Version software was used for data analysis. Participants' demographic characteristics were analyzed using descriptive statistics. The Pearson product-moment correlation was used in testing relationships that addressed in the research questions one to four. A linear multiple regression was used to answer the research question five. The significance level was set at *p* < .05.

Result

Sample Characteristics

The average age of the 135 participants was 36.75 years (*SD* = 4.88, range 27 to 50). The majority of participants were studying in RN-BSN programs (84.4%).

Twenty-one of them (15.6%) were graduate students. Of 135 participants, only one was single. Most of participants had two children (77 of them, 57%), followed by one child (34, 25.2%), three children (23, 17%), and four children (1, 0.7%). Ages of the youngest child in this study were between 5 months to 18 years ($M = 6.23$, $SD = 4.33$). All of the 135 participants in this study were employed. The average working hour was 42.01 ($SD = 7.79$). Table 1 shows the demographic characteristics of the participants.

Role Strain and Related Factors

The outcome variable for this study was role strain. The possible score range of role strain scale is 12 to 60. The average score of role strain among 135 participants was 41.84 ($SD = 7.11$) with a range of 24 to 56. Table 2 shows the descriptive analyses for major variables of this study. Among six identified variables, work load, health perception, activity, and rest had significant relationships with role stain ($r = .42$, .33, .58, and .37 respectively, $p < .05$). Table 3 shows the zero-order Pearson's correlation among study variables. Work load was also correlated with all variables of physical status, health perception, activity, and rest significantly, $r = .24$, .30, .26 respectively. This result indicates that as participants' work load increased, their health perception, activity level, and rest were getting worse. Working hours, however, was not associated with any study variables except supporting system. Similarly, supporting system was not significantly correlated with role strain, neither with variables of physical status.

In regression analysis, all six predictors accounted for 42.3% variance in predicting role strain (Adjusted $R^2 = .423$, $P < .05$). Further, a stepwise regression revealed that three significant predictors, namely activity, work load, and rest, went into the regression model. These three predictors accounted for 41.5% variance.

Discussion

In considering employment status, Lin (2005) reported an average of 41.75 working hours per week among 118 mother students. The average working hours in this study was 42.01 hours, which is similar to previous finding. As Lin mentioned that part-time employment was not common in Taiwan, especially was not in the nursing profession. However, as the same as the Lin's study, working hours did not show significant relationship with role strain. Instead, participants' perceived work load was related to role strain significantly, and also was a significant predictor in the regression model. Similarly, previous studies that focused on job related factors other than working hours, like stage of

career development, occupation, and job satisfaction, found significant relationships exist between working status and role strain (Hemmelgarn & Laing, 1991; Lengacher, 1993). Thus, in assessing multiple role strain, work load is more significant than working hours. Further study related to the job characteristics, such as positions, working units, and levels of the institute, may be able to explain the relationship between working status and multiple role strain more efficiently.

Previous studies supported relationships between the physical status and role strain. For instance, Gerson's (1985) study revealed that role strain had a negative correlation with leisure and volunteer activities. Nelson (1997) claimed that multiple role demands affected women's exercise, relaxing activities, and adequacy of rest/sleep. Current study revealed significant relationships between role strain and the physical status, which is supported by Lin's (2003) study of 118 Taiwanese mother students. In her study, all variables in the physical status had strong relationships with role strain (r from .39 to .56). Thus, physical status can be an issue among women with children and returning to school.

Previous studies that assessed relationship between social support and multiple role occupation did not conclude consistent results (Campaniello, 1988; Cheng, 2000; Dick & Anderson, 1993; Lin, 2005). In this study, supporting system was not related to perceived role strain among mother students. This result is similar to Lin's (2003) study, in which used the same scale in measuring supporting system. Further studies that use different scales are needed for the credibility of the relationship between social support and role strain.

Conclusion

Returning to school is a challenge for women who have children. Multiple role strain is an issue for these mother students, especially for those who are full-time employers. Results of this study showed that physical factors such as sleep quality, health perception, and activity were associated to the mothers' multiple role strain. In addition, perceived work load was significantly correlated to role strain among these nurses. However, this study was limited due to lack of information related to participants' employment characteristics. Thus, further study that focus on job characteristics may provide in depth information about the relationship between employment status and role strain among multiple role nurses.

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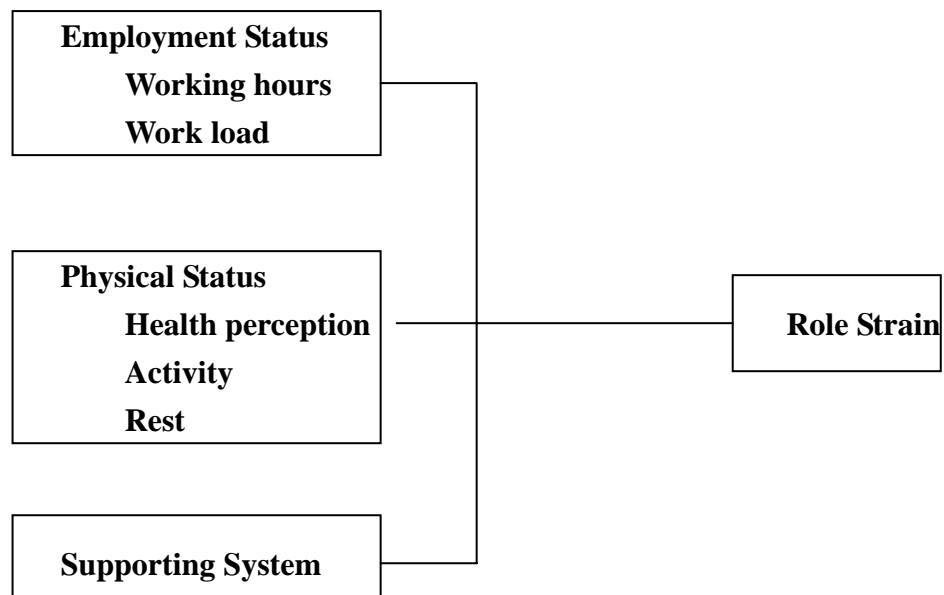
Figure: Relationship Between Role Strain and Identified Variable

Tables

Table 1   Frequency distribution of demographic information, N = 135

	Category	Frequency	%	Cumulative %
School program	RN-BSN program	114	84.4	84.4
	Graduate program	21	15.6	100.0
Marriage status	Single	1	.7	.7
	Married	134	99.3	100.0
Husband education	High school	12	8.9	8.9
	Associate college	64	47.4	56.3
	College/university	54	40.0	96.3
	Graduate	4	3.0	99.3
	Missing data	1	.7	100.0
Number of children	One	34	25.2	25.2
	Two	77	57.0	82.2
	Three	23	17.0	99.3
	Four	1	.7	100.0
Monthly family income	Less than 60,000NT	27	20.0	20.0
	60,001 – 70,000NT	16	11.9	31.9
	70,001 – 80,000NT	21	15.6	47.5
	80,001 – 90,000NT	16	11.9	59.4
	90,001 – 100,000NT	26	19.3	78.7
	Over 100,001NT	28	20.7	99.4
	Missing data	1	.7	100.0

Table 2   Descriptive statistics form major variables

Variable	N	Minimum	Maximum	Mean	Std. Deviation
Role strain	135	24	56	41.84	7.11
Working hours	134	10	64	42.01	7.79
Work load	135	3	10	6.99	1.53
Health perception	135	9	30	19.30	4.45
Activity	135	5	14	9.5	2.49
Rest	135	1	12	4.93	2.10
Supporting System	135	19	50	37.10	6.39

Table 3: Pearson product-moment correlation among study variables

Variable		2	3	4	5	6	7
1. Role strain	*r*	.06	.42*	.33*	.58*	.37*	-.05
	p	.52	.00	.00	.00	.00	.55
2. Working hours ∗	*r*	1	.02	-.04	-.15	.04	-.21*
	p		.87	.69	.13	.65	.02
3. Work load	*r*		1	.24*	.30*	.26*	-.01
	p			.01	.00	.00	.90
4. Health perception	*r*			1	.38*	.54*	.05
	p				.00	.00	.57
5. Activity	*r*				1	.33*	.14
	p					.00	.15
6. Rest	*r*					1	.07
	p						.45
7. Support system	*r*						1
	p						

N = 135 (∗ N = 134)

* Correlation is significant at the .05 level (2-tailed)

<div align="center">計劃成果自評</div>

1. 以原研究目的來看，自變項與依變項的關係除支持系統外，其餘皆呈現顯著相關。

2. 與先前的研究來比較，主要的不同在發現工作負荷與角色壓力間的關係，先前研究以工作時數來代表工作變項，其與依變項的關係無法突顯，本研究除原先工作時數外，再加一簡單的自覺式 **10** 分工作負荷問題來測量工作狀態，結果工作時數仍然不是顯著的自變項，而自覺式工作負荷則和角色壓力顯著相關，且是顯著預測變項之一。此結果代表和多重角色的護理人員角色壓力相關的，並不在於工作時數長短，而是工作負荷量，同樣是護理人員，工作負荷也會因工作場所、工作單位、職務而有所不同。未來針對不同單位、職務護理人員的工作負荷分析可以進一步釐清工作狀態與角色壓力間的關係。

3. 本次研究樣本加入護理研究生，雖樣本數不多，初步分析與二技生的角色壓力也未見顯著不同，但目前護理研究生數目已逐漸增多，針對護理研究生的角色壓力研究是值得考量的方向，也可藉由相關研究增加對研究生課業、生活、工作等各方面調適的了解，對未來課程安排及輔導都可有所助益。

4. 本研究結果預計投稿學術期刊。