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Original Article

An education program improves knowledge, attitude and implementation of the long-term care 2.0 policy among nursing staff: an example from a rural regional hospital

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Purpose: Due to the rapidly ageing population in Taiwan, the government began to implement the Long-Term Care 2.0 policy in 2017 to expand care for elderly patients with dementia and/or disabilities. Most of the elderly population in rural areas have limited access to health information and, therefore, rely on nurses to provide relevant information related to care. This study explored the effectiveness of an education training program on the knowledge, attitude and implementation of the Long-Term Care 2.0 policy among nurses working at a rural hospital.

Methods: Quasi-experimental study design, conducted as a single-group intervention with repeated measures. A self-developed Long-Term Care 2.0 policy education and training course was delivered to a total of 259 clinical nurses at a regional hospital in a remote township between June and September 2020. Due to the COVID-19 pandemic, the implementation of education and training courses is in accordance with the regulations of the Centers for Disease Control(CDC) of the Ministry of Health and Welfare, with a 60 minute education and training course. The self-developed "Nursing Staff Questionnaire on Policy Knowledge, Attitudes, and Implementation Behaviors for Long-Term Care 2.0" was employed before (T1) and immediately (T2), four weeks (T3), and eight weeks (T4) after the intervention. SPSS version 20.0 was used to calculate frequencies, percentages, averages, standard deviations, paired t tests, repeated measures, and linear regression analysis.

Results: A total of 335 registered nurses were initially considered. After applying the exclusion criteria, 259 nurses were included in the study. The mean age of the participants was 34.3±7.7 years. Among them, 96% were female, and 57.9% were married. Regarding their professional status, 41.3% held positions at the N2 level. The average professional experience among nurses was 10.4±7.1 years. The education and training course significantly improved ($p < 0.05$) the nurses' knowledge of the Long-Term Care 2.0 policy immediately (T2), four weeks (T3), and eight weeks (T4) after the intervention. The attitude towards the Long-Term Care 2.0 policy was significantly better immediately after the intervention (T2; $p < 0.05$ vs. before the intervention), but not four and eight weeks later ($p > 0.05$). In the eighth week after the intervention, the nurses' attitude towards the Long-Term Care 2.0 policy and their understanding of the patient's need for the Long-Term Care 2.0 policy significantly affected the nurses' implementation behavior.

Conclusion: The education and training intervention improved knowledge and attitude towards the Long-

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Term Care 2.0 policy, and improvements in attitude and understanding of the patient's need significantly increased the implementation behavior of the Long-Term Care 2.0 policy of nurses. The research provides a practical reference for promoting the Long-Term Care 2.0 policy in clinical practice, in order to address the ageing population and enhance care needs.

Keywords: education program, nursing staff, knowledge, attitude, implementation,

1. Introduction

Taiwan's elderly population reached 14% of the total population in 2018(1). To cope with the rapid ageing of the population and improve the long-term care system, Taiwan began to promote the Long-Term Care 2.0 policy in 2017 to achieve aging in place and enhance Taiwan's long-term care services through the "Long-Term Care 2.0 policy". The goals are to enable aging in place by providing a continuum of services ranging from family support and home-based care to community and institutional care. The policy seeks to universalize the care service system and create caring communities, ultimately improving the quality of life for those in need of long-term care and their caregivers(1). Nantou County, a rural area in Taiwan, has an elderly population that accounts for 17% of its total population, with indigenous people making up 6.62% of it (2). Most of the residents of the county are farmers. Ageing in place is the greatest wish of older people in a simple agricultural society. Therefore, the proportion of the population that requires long-term care may also be relatively large(2). However, the rapidly increasing aging population in Taiwan has heightened the demand for long-term care, and access to care resources can be particularly limited in rural areas. Among these, the availability of diverse and continuous long-term care services in communities is notable. Therefore, whether medical personnel can actively provide assistance according to the needs of people is an essential factor in implementing the Long-Term Care 2.0 policy in rural areas.

In 2016, the Ministry of Interior Statistics Office found that the rate of illiteracy of residents in Nantou County was 1.1% overall and 5.6% among people over 65 years old. A person's level of education correlates with their health cognition: the lower their level of education, the lower their level of health cognition(3-5). People in rural areas face various risks. The degree of urban-rural development is essential to the expansion and deployment of long-term care service resources and delivery systems. During the 10-year period of long-term care, indigenous areas not only generally lack medical resources but also lack dedicated personnel to understand their care needs. This situation has led to a low connection rate between indigenous elders who need long-term care resources (such as caregiving services, home aids, etc.) and the available long-term care services, due to cultural characteristics and language barriers. Therefore, the well-being of older people in agricultural counties and cities requires special attention. Furthermore, with respect to ethnic differences, the aboriginal population has a shorter average life expectancy. Thus, to reduce the medical disparities between different ethnic groups, it is necessary to improve the living environment, economic conditions, and public health in remote mountain areas to improve medical and health standards. The WHO's 2012 "*Knowledge Translation Framework for Ageing and Health" mentions "that in the social environment of population ageing, medical personnel must understand the relevant knowledge of ageing and health and provide relevant information to those who need long-term care services*" (6). Nurses come into contact with all types of patients in the workplace and are also the front-line personnel who can best identify the urgent needs of patients and their families in a timely manner.

Knowledge-Attitude Practice (KAP) is based on the cognitive influence behavior devised by the social psychologist(7). The literature revealed that most nursing education and training programs are delivered in the KAP mode. Education and training can significantly improve the knowledge, attitude, and confidence of nurses (8). A study conducted a systematic review and found that most of the nurses in the 18 eligible studies had sufficient knowledge and

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a positive attitude(9). Evripidou et al. (2019) reviewed 19 articles and concluded that the implementation of education and training positively improved knowledge and attitude toward dementia care (10). It also showed that the participation in education and training is directly proportional to the effectiveness of changes in clinical nursing behavior. In addition to increasing their knowledge and skills, nurses' attitudes must be improved to provide high-quality care (11). This research uses the Knowledge, Attitude, and Practice (KAP) framework to illustrate the necessity for rural nurses to have a complete understanding of the Long-Term Care 2.0 policy. Therefore, the purpose of this study was to explore the effects of an education and training intervention on knowledge, attitude, and implementation of Long-Term Care 2.0 policies among nurses in rural areas.

2. Methods

2.1. Study Design

This study adopted a quasi-experimental research design with a total of four repeated measures in a single group using a questionnaire for clinical nurses before educational training (T1), immediately after an educational training intervention (T2), in the fourth week after the educational training intervention (T3) and in the eighth week after the educational training intervention (T4).

2.2. Participants

The study subjects were clinical nurses working in a hospital in a remote rural area. The inclusion criteria included nurses with a nurse certificate, who have registered on the job, have worked for at least one year, and agreed to participate in this research. The exclusion criteria are clinical nurses who are intern nurses, off-site support, maternity leave, and parental leave. There are 335 registered nurses in total. After deducting the exclusion conditions, the number of subjects included in this study is 259.

2.3. Instruments

The research tool consists of two sections. The first section used a questionnaire to collect data on the long-term care experience and demographics. The data collected included age, sex, job title, work experience, clinical ladder, marital status, education level, and workplace attributes. Information on the long-term care experience of nurses included: 1. ‘Are you participated in courses related to Long-Term Care 2.0?”; 2. ‘patient demand for long-term care 2.0’ and 3. ‘The public's demand for long-term care 2.0’.

The second section of the research tool was a custom-made reference to the Long-Term Care 2.0 policy of the Ministry of Health and Welfare and the knowledge, attitude, and implementation behavior questionnaire revised by experts (content validity index, CVI is 0.91; Cronbach α is 0.94). (1) There are 13 questions in the knowledge of the Long-Term Care 2.0 policy, divided into five parts: ‘Development & goals’ (two questions), ‘Service recipients’ (three questions), ‘Service items’ (four questions), ‘Service application’ (two questions), and “Benefits & reimbursement’ (two questions). Each question is presented as a true-false question scoring 1 point for one correct answer and 0 points for an incorrect answer. Total score 0-13 points. The higher the score, the better the nurse’s knowledge of the Long-Term Care 2.0 policy. (2) There are 27 questions in the attitude questionnaire, divided into three parts: "long-term care service recipients" (eight questions), "long-term care service items" (17 questions), and "long-term care education and training" (two questions). Responses to each question for the attitude options were scored using a five-point Likert scale as very important (5 points), important (4 points), no opinion (3 points) unimportant (2 points), or very unimportant (1 points); The total score is 27-135 points. The higher the score, the more positive the attitude of the nurse towards the Long-Term Care 2.0 policy. (3) There are 27 questions in the behavioral aspect, divided into three parts: "long-term care service recipients" (eight questions), "long-term care service items" (17 questions), and "long-term care services" long-term care education and training" (two questions). Responses to attitude questions are scored using a five-point Likert scale as complete (5 points), most of them (4 points), half of them (3 points) some of them (2 points) and not at all (1 point). The total score is 27-135 points. The higher the score, the better the nurse implements the long-term care 2.0 behavior (12).

2.4. Intervention

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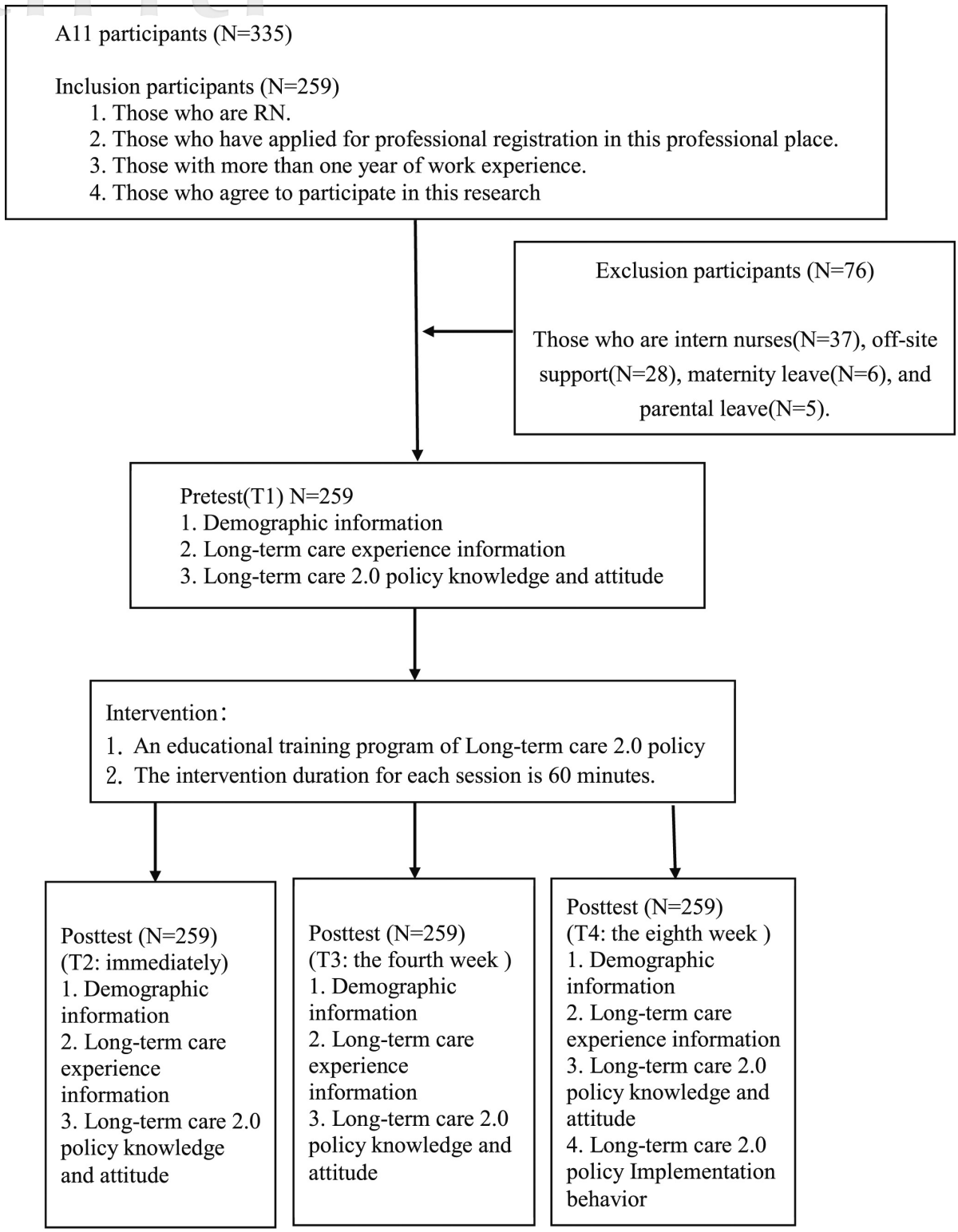


Fig 1. Flowchart of Long-term Care 2.0 Policy Education program

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The researchers developed clinical and practical education and training content based on the Long-Term Care 2.0 policy on the Ministry of Health and Welfare website and delivered this educational and training intervention to nurses in each unit. Due to the COVID-19 pandemic, the implementation of education and training courses is in accordance with the regulations of the Centers for Disease Control (CDC) of the Ministry of Health and Welfare. The content and teaching time of the lecture were consistent; each intervention lasted 60 minutes and all the educational training courses were delivered within one month. The study period was from June to September 2020.

2.5. Data collection

Before starting education and training, questionnaires were distributed to each nurse to complete the pre-test (T1). After all initial questionnaires were completed and returned, the 60-minute education and training course was delivered. The same questionnaire was used for the second test immediately after the course was completed (T2), the third test in the fourth week after education and training (T3), and the fourth test in the eighth week after education and training (T4) (Fig. 1). To confirm the relationship between nurses' knowledge, attitude, and the implementation of the Long-Term Care 2.0 policy, an additional item 'Nursing' implementation of the Long-Term Care 2.0 policy was added to the fourth test to check that under the KAP theory, the relationship of clinical nurses with the implementation of Long-Term Care 2.0 policy. This study was carried out after an ethical review by the Tsao-Tun Psychiatric Center of the Ministry of Health and Welfare (IRB No.109020).

2.6. Data analysis

Two hundred fifty-nine subjects were accepted to this study. Statistical analysis was performed using SAS9.4 and SPSS 20.0 software. Descriptive statistical analyses, including frequencies, percentages, averages and standard deviations, were used to summarize and present the demographic characteristics of this research sample. Inferential statistical analysis was performed using repeated measured ANOVA and multiple linear regression.

3. Results

The average age of the nurse subjects was 34.3 ± 7.7 years; 96.1% were women and 3.9% were male. 89.2% of the nurses were non-PGY (postgraduate year) students and 10.8% were PGY students. The average length of work experience was 10.4 ± 7.1 years. Most nurses were at the advanced level (N2, 41.3%), followed by N1 (25.5%), N2 (41.3%), N3 (8.5%), and N4 (1.9%); 57.9% of nurses were married and 50.2% had a university degree or higher. Regarding work units, 46.3% worked in general wards, 42.9% in special units (including emergency room, intensive care units or surgery), and 10.8% worked in outpatient departments. Regarding the long-term care experience, 84.6% of nurses had previously participated in courses related to the Long-Term Care 2.0 policy, 97.3% believed patients need Long-Term Care 2.0, and 82.2% thought that the public needs Long-Term Care 2.0 (Table 1).

The average knowledge scores for the Long-Term Care 2.0 policy at each time point (8.10 ± 0.96, 10.96 ± 1.31, 9.90 ± 1.55, and 9.34 ± 1.28) were significantly different ($p < 0.05$) (Table 2). In paired comparisons, the average knowledge score increased by 3.10 points in T2 compared to T1, 2.10 points in T3 compared to T1and 1.38 points in T4 compared to T1(Table 3). The average scores improved significantly in T2, T3 and T4 after the education and training intervention compared to T1 (Table 2 & 3).

The Long-Term Care 2.0 policy includes three major attitude items: "service recipients", "service items" and "education training". The average total score for the long-term care 2.0 policy attitude items was 117.05 ± 14.43, 121.15 ± 12.88, 120.47 ± 10.0, and 120.16 ± 13.15 in T1, T2, T3 and T4(Table 2). In paired comparisons, the average attitude score increased significantly by 4.11 points at T2 compared to T1 ($p < 0.05$), indicating that the education and training intervention immediately significantly improved the attitude toward the importance of the Long-Term Care 2.0 policy(Table 3). However, the average differences between T3 vs. T1 and T4 vs. T1 were not significant ($p > 0.05$), suggesting that there were no significant differences in the attitude towards the importance of the Long-Term Care 2.0 policy in the fourth and eighth weeks after the

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Table 1. Demographics of Participants (N=259)

variable	N (%)	Mean±SD
Age		34.3±7.7
Gender		
Male	10 (3.9%)	
Female	249 (96.1%)	
Education level		
Junior college or below	129 (49.8%)	
college or above	130 (50.2%)	
Marriage		
Married	150 (57.9%)	
Unmarried	109 (42.1%)	
Working year		10.4±7.1
Advanced level		
N	59 (22.8%)	
N1	66 (25.5%)	
N2	107 (41.3%)	
N3	22 (8.5%)	
N4	5 (1.9%)	
Post Graduate Year Nurse(PGYN)		
No	231 (89.2%)	
Yes	28 (10.8%)	
Work unit		
OPD	28 (10.8%)	
General ward	120 (46.3%)	
Special unit	111 (42.9%)	
Attended long-term care related courses		
Yes	219 (84.6%)	
No	40 (15.4%)	
Think that patients need long-term care 2.0		
Very much needed	108 (41.7%)	
need	144 (55.6%)	
unnecessary	4 (1.5%)	
have no idea	4 (1.5%)	

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Table 2. Changes in nurses' KAP scores on long-term care 2.0 policy before and after the education and training intervention (N=259)

	T1	T2	T3	T4	
Knowledge	Mean±SD	Mean±SD	Mean±SD	Mean±SD	*p*
Development & goals	0.52±0.10	0.88±0.22	0.77±0.26	0.67±0.25	
Service recipients	0.91±0.18	0.88±0.19	0.93±0.15	0.93±0.15	
Service items	0.50±0.07	0.85±0.17	0.65±0.20	0.57±0.16	
Service application	0.68±0.26	0.93±0.18	0.88±0.22	0.83±0.25	
Benefits & reimbursement	0.51±0.25	0.64±0.29	0.61±0.30	0.62±0.26	
total	**8.10±0.96**	**10.96±1.31**	**9.90±1.55**	**9.34±1.28**	**0.000**
Attitude	Mean±SD	Mean±SD	Mean±SD	Mean±SD	*p*
Service recipients	4.25±0.62	4.43±0.54	4.43±0.53	4.39±0.52	
Service items	4.40±0.53	4.54±0.49	4.49±0.49	4.40±0.51	
Education Training	4.35±0.60	4.50±0.55	4.47±0.55	4.35±0.59	
total	**117.05±14.43**	**121.15±12.88**	**120.47±10.0**	**120.16±13.15**	**0.046**
Implementation				Mean±SD	
Service recipients				3.45±0.99	
Service items				3.41±0.97	
Education Training				3.61±0.88	
total				**92.49±25.34**	

education and training intervention (Table 3).

In the eighth week after the education and training intervention, the behavior of the long-term care 2.0 policy implementation of nurses was divided into three categories: "service recipients", "service item", and "education training". A linear regression model was used to examine the impact of the nurse's knowledge and attitude towards the Long-Term Care 2.0 policy on their implementation behavior in the eighth week after the education and training intervention. The results showed that the attitude towards the Long-Term Care 2.0 policy significantly impacted their implementation behavior ($p < 0.05$, mode 1). After controlling for primary demographic data (mode 2), advanced level (mode 3), and variables 'have participated in previous long-term care courses', 'patient need for long-term care 2.0' and 'public need for long-term care 2.0' (mode 4), the attitude toward Long-Term Care 2.0 the policy still had a significant impact on its implementation behavior ($p < 0.05$). Nurses' knowledge of the Long-Term Care 2.0 policy did not significantly affect their implementation behavior ($p > 0.05$). Furthermore, the nurse's understanding of the patient's need for long-term care also significantly affected behavior ($p < 0.05$) (Table 4).

4. Discussion

The average age of the nurse subjects in this study was 34.3 years, 96% were women, 58% were married, 50% had a college education or higher, and most of the participants were N2. Data on registrations in nursing practice from the Taipei Nurses Association show that the average age of their members is 33.6 years and that most nurses are female, married and have a college degree or higher (13). The clinical

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Table 3. Pairwise comparison of nurses' knowledge and attitudes towards long-term care 2.0 policy after education and training intervention in one-way repeated measures ANOVA

	(I) time	(J) time	mean difference (I-J)	SE	Significance[a]
Knowledge	1	2	-3.10*	0.14	0.001
		3	-2.10*	0.15	0.001
		4	-1.38*	0.13	0.001
	2	**1**	**3.10***	**0.14**	0.001
		3	1.01*	0.12	0.001
		4	1.73*	0.12	0.001
	3	**1**	**2.10***	**0.15**	0.001
		2	-1.01*	0.12	0.001
		4	.72*	0.11	0.001
	4	**1**	**1.38***	**0.13**	0.001
		2	-1.73*	0.12	0.001
		3	-.72*	0.11	0.001
Attitude	1	2	-4.11*	1.43	0.028
		3	-3.34	1.43	0.128
		4	-3.11	1.48	0.225
	2	**1**	**4.11***	**1.43**	0.028
		3	0.76	0.94	1
		4	0.99	1.20	1
	3	**1**	**3.34**	**1.43**	0.128
		2	-0.76	0.94	1
		4	0.23	1.19	1
	4	**1**	**3.11**	**1.48**	0.225
		2	-0.99	1.20	1
		3	-0.23	1.19	1

Explanation: Depends on estimated marginal mean
* $p < 0.05$
a. Adjust for multiple comparisons：Bonferroni

ladder-2 has the highest proportion in teaching hospitals in Taipei (14). The demographic data and the nurses' distribution of the ranks serving in rural areas in this study are similar to those of nurses in metropolitan areas (13, 14). This study focusses on rural nurses and compares them with those in the Taipei metropolitan area to determine if there is a unique demographic and professional development among rural vocational nurses. Furthermore, 84.6% of the nurses in this study had previously participated in courses related to the Long-Term Care 2.0 policy. In implementing this policy, the government also handles the certification of nurses in long-term care level I or level II long-term care (15), demonstrating

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Table 4. Factors Affecting Nurse Implementation of Long-Term Care 2.0 Policy Behavior in the Eighth Week After Education and Training Intervention (N=259)

variable /ref	Model 1 *β*(S.E.)	Model 2 *β*(S.E.)	Model 3 *β*(S.E.)	Model 4 *β*(S.E.)
Knowledge	0.39(0.68)	0.36(0.67)	0.51(0.68)	0.53(0.67)
attitude	0.52(0.13)*	0.53(0.13)*	0.51(0.13)*	0.54(0.13)*
Gender/ Female (ref)		-14.71(18.03)	-12.23(18.07)	-9.57(17.92)
Marital status/ Married (ref)		4.80(4.24)	6.22(4.27)	6.20(4.25)
Educational level/below junior college (ref)		7.48(3.58)	6.68(3.59)	6.97(3.60)
age		-0.39(0.27)	-0.33(0.30)	-0.32(0.29)
N_1/N(ref)			-5.73(5.25)	-5.57(5.39)
N_2/N(ref)			-8.06(5.24)	-6.42 (5.42)
N_3/N(ref)			2.54(8.22)	3.35(8.34)
N_4/N(ref)			-15.68(12.22)	-10.67(12.22)
Outpatient / Special Unit (ref)			1.73(6.33)	0.16(6.31)
General Ward/Special Unit (ref)			5.69(3.82)	5.37(3.85)
Attended related courses/none (ref)				-6.25(5.00)
Patients need/no need for long-term care 2.0 (ref)				26.27(9.95)*
Public need/no need for long-term care 2.0 (ref)				-8.31(14.90)
Adjusted R^2	0.07	0.08	0.09	0.12

* $p < 0.05$

that nurses receive a lot of professional training on the job. E-learning/online courses are also available for nurses (16). In this study, nurses believe that 97.3% of their patients need long-term care during the clinical care process. This shows that patients in rural hospitals are mostly older, disabled, have dementia, or have physical or mental disabilities. Although rural nurses can gain knowledge through e-learning, the supply of long-term care institutions in the county is insufficient and it is difficult to obtain resource assistance and subsidies. They are also unable to meet the care needs of the elderly in the area. Nurses also believed that 82% of the general public has long-term care needs, which also shows that people in rural areas have a high demand for long-term care. In 2018, more than 14% of the population was elderly (over 65 years); therefore, Taiwan has become an elderly society (1). An ageing society can increase the potential for disability, dementia, and physical and mental disabilities and invariably increase the demand for long-term care. Therefore, there is an urgent need to build a complete long-term care system through the Long-Term Care 2.0 policy, which is actively promoted by the government.

This research evaluated five important elements of nurses' knowledge of the Long-Term Care 2.0 policy. Although 84.6% of nurses had participated in courses related to the Long-Term Care 2.0 policy prior to this education and training intervention, their understanding of actual situations, service items, payment and payment details of the policy was relatively incomplete. The result of a previous study

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also indicated that through an education and training intervention, nurses could improve their knowledge and work in dementia care (8, 10). The content of the education and training intervention in this study uses situational care questions to interact with nurses. The correct response rate for nurses' knowledge of dementia situations increased from less than 3% to more than 60%, suggesting that the education and training intervention increased the percentage of correct responses by 68.7 to 88.5%. Although the education and training intervention was effective, the average knowledge score gradually decreased. Therefore, details of important policies should be published regularly and effectively promoted to improve nurses' knowledge.

At all three time points after the education and training intervention, the component of the nurses' attitude towards the importance of the Long-Term Care 2.0 policy had the highest overall average value. In addition, nurses have the lowest attitude towards the importance as "service targets" for mountain aborigines over 55 years of age and disabled plain aborigines 55-64 years of age. Therefore, this study revealed that the attitude towards expanding the Long-Term Care 2.0 policy subsidy is biased against mountain aborigines over 55 years of age and their needs. The education and training intervention had limited effects on attitude. This may be due to nurses ignoring the expanded subsidies of the new long-term care policy. Therefore, the knowledge and attitude of the relevant medical personnel must be strengthened to improve the integrity of the Long-Term Care 2.0 policy. The effectiveness of policy promotion is closely related to the improvement of knowledge and attitude among clinical medical personnel (17-19). Therefore, it is even more critical to improve the attitude of nurses through education and training (8, 20).

After controlling for independent variables such as demographics and the work unit, the attitude toward Long-Term Care 2.0 policies significantly impacted its implementation behavior in the eighth week after the education and training intervention. Furthermore, when the nurse's attitude towards long-term care 2.0 increased by 1 point, the nurse's score in implementing long-term care 2.0 increased by 0.5 points. This result is consistent with the results of research from the regional hospital-related literature showing that attitude has a positive impact on behavior (21, 22). The result also supports the view of Fishbein & Ajzen that changing behavior performance will reflect an individual's attitude evaluation (23). The elderly population is more significant in the rural areas investigated in this study than in the national rate (16.9% vs 14.4%); thus, there may be more significant potential problems related to ageing, chronic diseases, disability, dementia and physical and mental disabilities in the study area. Nurses believed that 97% of patients in their practice have long-term care needs. The understanding that patients in their clinical care require Long-Term Care 2.0 will substantially impact nurses' behavior in implementing long-term care policies. This also shows that nurses are essential to implement long-term care policies (24).

This study demonstrates that the factor that most significantly influences nurses' implementation of the Long-Term Care 2.0 policy behavior is their "attitude factor" toward the importance of policy content. Having a positive attitude will enhance the nurse's behavior and nursing value. Furthermore, the 'knowledge factor' did not significantly affect the implementation or behavior related to the Long-Term Care 2.0 policy. The possible reason is that nursing staff are already professionals, making it easy for them to acquire knowledge, and when their attitude and understanding of the patient needs are related, they are more able to implement it practically. Therefore, strengthening the attitude of nurses is more important than improving their knowledge. However, although the average attitude score improved significantly at the time point immediately after the education and training intervention compared to the pretest, there were no significant differences in the average attitude scores at 4 and 8 weeks compared to the pretest. The reason may be due to the immediate positive response of the educational training intervention. Research in psychology suggests that while some attitudes are relatively stable, others can be quite dynamic, reflecting changes in personal experiences, information exposure, and social contexts. The challenge of changing attitudes is not only in shifting them initially, but ensuring that these changes are enduring and integrated into one's identity and actions (25). Therefore, strategies that strengthen the long-

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term impact of education and training on nurses' attitudes are worthy of further study. In general, the education and training intervention achieved behavior change, consistent with the results in the literature that education and training interventions can effectively improve nurses' knowledge and attitude and improve implementation effectiveness (26-29) and partially confirms the KAP framework, but it still has limitations. More comprehensive models are still needed in the future to evaluate the performance of nursing professionals in the long-term care 2.0 policy.

5. Conclusion

Through the intervention of the long-term care 2.0 policy education and training course, nurses' knowledge of the long-term care 2.0 policy improved significantly immediately after the intervention (T2), four weeks (T3) and eight weeks (T4) compared to before the intervention. The attitude of nurses towards the long-term care 2.0 policy improved significantly immediately after the intervention (T2) compared to before the intervention. At the eighth week after the educational training intervention, a linear regression model was used to examine the predictive factors for the implementation behavior of the Long Term Care 2.0 policy by nursing staff, including their attitude toward the Long Term Care 2.0 policy and their understanding of the patient's need for long-term care. The application of the KAP education and training intervention model can improve the knowledge, attitude, and behavior of nursing professionals towards the Long-Term Care 2.0 policy. The results of this study can provide reference for medical education and training, as for well as the implementation of care policies.

6. Limitations

This study has a design where the same group is tested before and after the intervention, but it doesn't have a comparison group. In future studies, adding a control group could help measure the intervention's effects more accurately. This study was done in a remote hospital in central Taiwan, limiting how much we can generalize the findings. Future studies could include multiple regions to expand the external validity.

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