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Effectiveness of Smoking Cessation Training in Improving the Capacity of Community Pharmacists to Provide Smoking Cessation Service in Davao City

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ABSTRACT

Community pharmacists are ideal for providing and promoting smoking cessation intervention due to their accessibility, however, it's not commonly practiced and requires training. In efforts to build the capacity of community pharmacists on smoking cessation interventions, this study aims to evaluate the pre-training and post-training results of smoking cessation training given by the Department of Health to assess if there is an improvement in community pharmacists' knowledge regarding smoking cessation and tobacco addiction, their perceived role in smoking cessation intervention, their self-efficacy to provide smoking cessation counseling, and their intention to provide and practice counseling to smokers. This study adopted the quasi-experimental pretest-posttest research design with purposive, convenience, and snowball sampling to gather thirty (30) registered community pharmacists within Davao City. The mean score for knowledge increased from 78.1 on pretests to 81.2 on posttest (P-value: 0.395). The perceived role increased from 4.15 on the pretest to 4.52 on the posttest (P-value: 0.044). For self-efficacy, the mean score increased from 4.42 on the pretest to 4.73 on the posttest (P-value: 0.001). For the intention to provide and practice counseling, the mean score increased from 4.38 on the pretest to 4.88 on the posttest (P-value: 0.001). Additionally, the BTI checklist score, which evaluated the pharmacists' capacity to perform smoking cessation counseling through role-playing after the training, indicated a passing grade for all test variables, including not ready to quit, ready to quit, and relapse. Overall, the Smoking Cessation Training had significantly increased the community pharmacists' perceived role, self-efficacy, and intention to provide smoking cessation intervention to smokers, but had no significant increase in terms of knowledge. Hence, the pharmacists demonstrated readiness and competence in performing smoking cessation interventions after the training, as evidenced by the passing remarks in the BTI checklist evaluation.

Keywords: Brief tobacco intervention, Counseling, Smoking cessation training.

1. Introduction

Tobacco smoking is considered one of the most severe public health issues the world has come across (Perez-Warnisher et al., 2018). As a result, 87,600 Filipinos, with an average of 240 deaths per day, have died because of tobacco consumption, one-third of which are men (Smoke-Free World, 2022). A solution to this prevailing epidemic is smoking cessation which is one of the most influential and cost-effective preventive health strategies to reduce death and morbidity risk. Community pharmacists play a crucial role in helping individuals stop smoking among all medical professionals since they are easily accessible to the general public (Valliant et al., 2022). In an effort to build the capacity of community pharmacists on smoking cessation interventions, the aim of this study is to evaluate the pre-training and post-training results of an smoking cessation training given by the Department of Health to assess if there is an improvement of community pharmacists' knowledge, perceived role, self-efficacy and its intention to provide and practice counseling to smokers.

2. Methodology

2.1 Research Design

This study adopted the quasi-experimental pretest-posttest research design with purposive and convenience sampling. A program's influence was determined using quasi-experimental study approaches which could determine the training's effect if randomization was unethical or logistically impractical (World Bank, 2022). A pretest-post-test study design had the advantage of direct research, which meant testing a dependent variable before and after an independent variable. Therefore, an improvement in the pharmacists' capabilities demonstrated by higher post-test scores compared to pre-test scores signified a favourable result relative to the training undergone by the community pharmacists after the pre-test (Stratton, 2019).

Since the researchers aimed to assess the effect of the training, using a quasi-experimental design was beneficial in allowing the researchers to synthesize a conclusion based on the results of the tests.

2.2 Research Locale

The study and training took place in San Pedro College, located at 12 Guzman St, Poblacion District, Davao City. The location is an educational institution situated in the centre of the city where it was easily accessed. In the case of when the researchers went to the DOH site, the research adviser monitored for guidance and safety purposes.

2.3 Research Respondent

This study utilized three sampling methods: purposive sampling for selecting participants that would satisfy the inclusion criteria, convenience sampling for recruiting community pharmacists they were acquainted with, and snowball sampling for enlisting respondents through referral by the mentor and professors using referral forms presented in the Appendix of the manuscript.

Due to no access to the population size of the target population in Davao City, approximately 30 respondents were deemed adequate to acquire an estimate of the intervention's effect size in line with studies having similar characteristics (Rodrigues, et. al., 2022) (Mujika, et. al., 2014) (Matthews et. al., 2019). The researchers recruited 30 eligible pharmacists who met the inclusion criteria through an invitation that was sent to the community pharmacists. Within the invitation letter, necessary information about the study was provided and a Google form was sent through their active email, containing questions and requirements including any document that could support that they are a registered pharmacist to ensure the potential respondents' eligibility to be part of the study.

An agreement was established to maintain the confidentiality of the personal information of the pharmacists throughout the study and all the potential respondents were free to accept or reject the invitation.

2.4 Eligibility Criteria

Inclusion Criteria

1. Pharmacists who obtained a bachelor’s degree in pharmacy and are duly certified by the PRC
2. Pharmacists who currently work as community pharmacist
3. Pharmacists with no prior experience in smoking cessation training
4. Pharmacists who could certainly attend the 1-day training
5. Pharmacists who currently live within Davao City

Exclusion Criteria

1. Pharmacists who work in other fields of pharmacy other than the community practice
2. Pharmacists who did not obtain a bachelor’s degree in pharmacy and are not duly certified by the PRC
3. Pharmacists who acquired previous DOH certifications in providing smoking cessation services
4. Pharmacists who could not certainly attend the 1-day training
5. Pharmacists who live outside Davao City

2.5 Research Instruments

The research instruments consisted of six parts: (1) Respondent's Information Sheet and Informed Consent Form, (2) Pharmacists' Knowledge on Smoking Cessation and Tobacco Addiction, (3) Pharmacists' Perceived Role in Smoking Cessation Intervention, (4) Pharmacists' Self-Efficacy to provide Smoking Cessation Counseling, and (5) Pharmacists' Intention to Provide and Practice Counseling to Smokers. Lastly (6), which wask under the post-test, evaluated the ability of pharmacists to perform smoking cessation counselling contained the BTI Checklist for the Training on Brief Tobacco Intervention.

Part I included the Respondent’s Information Sheet and Informed Consent Form (ICF) while Part II comprised a researcher-made questionnaire with 30 questions. The statements in the questionnaire were excerpted from Brief Tobacco Intervention Material developed by the Council on Tobacco or Health and Air Pollution of the Philippine College of Chest Physicians (PCCP), provided by DOH Region XI - Smoking Cessation Unit. On the other hand, Parts III to V consisted of adopted questionnaires based on the study of Kristina et al. (2015) which were mainly presented as 6 to 10 statements with a Likert scale ranging from strongly agree to strongly disagree. Lastly, Part VI contained the checklist used to evaluate the ability of pharmacists to perform smoking cessation counselling.

2.6 Data Collection Procedure

The researchers submitted a formal letter, duly noted by their research adviser, to the Dean of the School of Allied Health Sciences asking permission to conduct this study with a non-randomized sampling technique. The researchers were primarily guided by their mentor Dr. Erwin Faller and an expert in smoking cessation, Dr. Mohamad Haniki Nik Mohamed, throughout the proceedings of this study. The researchers gave a copy of the study to the Ethics Review Committee to be reviewed. The San Pedro College - Research Ethics Committee (SPC - REC) monitored the study's progress by observing if the proceedings of the study were according to what was approved. The researchers' role in the study was solely as researchers only. The researchers consulted the research office personnel for ethical review and waited for the results from the office before conducting the study, as there may be suggestions, comments, or recommendations to be considered in doing so. Moreover, the researchers were also open to the monitoring progress of the study.

Phase 1: The researcher filed a request for collaboration with the DOH Region XI to conduct a 1-day Smoking Cessation Training in San Pedro College. The DOH provided qualified resource speakers to give the lessons for the training as well as the learning materials of the respondents.

Phase 2: The researchers gathered 30 respondents (community pharmacists) within Davao City. Respondents who decided to join this study were sourced out by reaching out to community pharmacists and other pharmacists who could recommend potential respondents, such as the researcher's professors who are pharmacists and SPC alumni who are already registered pharmacists and/or currently working/have worked as community pharmacists. Formal Invitation to participate in the study was sent out to the gathered community pharmacist who satisfactorily met the inclusion and exclusion criteria of the study. The qualified respondents were to read and sign the ICF before they will be enrolled in the study. The community pharmacists' eligibility to participate was evaluated by checking their proof of employment as community pharmacist, PRC ID, or any document that supports that they are a registered pharmacist. Only those who satisfactorily met the criteria were officially enrolled in the study.

Phase 3: Respondents were required to attend the 1-day DOH-accredited Smoking Cessation Training held at San Pedro College. On the day of the training the respondents were:

1. Given time to answer the Pre-test questionnaires before the training started.
2. Given time to answer the Post-test questionnaires after the training was complete.

Paper records were collected after finishing each test and were kept by the researchers.

Phase 4: The researchers assured the community pharmacists that there will be no leaks to the respondent's questionnaire and identity, providing full privacy and confidentiality to justify their participation in the study. Only the researchers have access to the data gathered. All personal information gathered during the research was stored securely and out of the reach of unauthorized parties. All information about the respondents was identified by a number instead of a name. Only the researchers knew the number, and that information was kept under lock and key. Paper records retrieved from the respondents of this study were securely stored in a safe or locked cabinet and would be disposed of or destroyed 3-5 years after the publication in a way that makes it impossible to recover the information after the completion of the research paper. Appropriate methods for destroying/disposing of paper records would be applied, such as burning, shredding, then cross-shredding, pulping, and pulverizing. This is to maintain the confidentiality of the personal information of the respondents. Furthermore, soft copy data would be securely stored on a secure Google Drive, with access limited to authorized individuals. To safeguard respondents' privacy, researchers should make an effort to anonymize the soft copy data by removing identifying information or using codes to link the data to specific respondents. If researchers intend to share the data, they must follow ethical guidelines and data-sharing policies to ensure that respondents' privacy is maintained, and any potential risks are carefully considered. After a period of 3-5 years, the soft copy data would be permanently deleted, and the storage device would be disposed of.

Data Analysis: The sample features, a representation of the means and standard deviation for the study's objectives, and the t-test for dependent samples are generally provided in the data analysis. The hypothesis was tested at 0.5 alpha level. The demographic variables of the knowledge of the community pharmacist before and after the training were assessed using inferential statistics such as measures of central tendency.

3. Result

3.1 Level of Knowledge of the Community Pharmacist on Smoking Cessation and Tobacco Addiction

Results of the survey clearly indicated an increase in the level of knowledge among community pharmacists to provide smoking cessation service after they underwent smoking cessation training. From the pretest score of 78.1, it increased to 81.2 on the posttest score (Table 1A).

Table 1A - Level of Knowledge of the Community Pharmacists' Capacity to Provide Smoking Cessation Service Before and After the Smoking Cessation Training.

ITEMS	**PRETEST**				**POSTTEST**			
	YES	**%**	**NO**	**%**	**YES**	**%**	**NO**	**%**
Pharmacists Knowledge on Smoking/Tobacco Use/Tobacco Dependence								
Smoking is a known cause of cancer, heart disease, stroke, chronic obstructive pulmonary disease.	31	**100.0**	0	**0.0**	31	**100.0**	0	**0.0**
Nicotine affects essential brain structures associated with feelings of reward and arousal.	31	**100.0**	0	**0.0**	31	**100.0**	0	**0.0**
Tobacco use does not result in true drug dependence alike the dependence caused by cocaine.	2	**6.5**	29	**93.5**	1	**3.2**	30	**96.8**
The addictive power of nicotine may strengthen the learned behaviors that form tobacco-use patterns	27	**87.1**	4	**12.9**	29	**93.5**	2	**6.5**
Reduction in tobacco use does not cause withdrawal symptoms.	10	**32.3**	21	**67.7**	4	**12.9**	27	**87.1**
Abrupt cessation causes withdrawal symptoms	29	**93.5**	2	**6.5**	31	**100.0**	0	**0.0**
Withdrawal symptoms do not appear within hours of the last use of tobacco.	20	**64.5**	11	**35.5**	7	**22.6**	24	**77.4**
The causes of tobacco dependence are not complex and do not differ from person-to-person.	9	**29.0**	22	**71.0**	6	**19.4**	25	**80.6**
Tobacco is used as a coping mechanism.	28	**90.3**	3	**9.7**	30	**96.8**	1	**3.2**
Withdrawal symptoms can manifest in improved mood and concentration.	9	**29.0**	22	**71.0**	3	**9.7**	28	**90.3**
Tobacco products are not habit-forming products	3	**9.7**	28	**90.3**	1	**3.2**	30	**96.8**
Tobacco use has no effect on biological factors, rather, it has a significant impact on psychological factors.	6	**19.4**	25	**80.6**	4	**12.9**	27	**87.1**
Irritability, frustration, and anger happens when a smoker fails to maintain sufficient nicotine levels.	30	**96.8**	1	**3.2**	31	**100.0**	0	**0.0**
Watching television may cause tobacco use.	18	**58.1**	13	**41.9**	24	**77.4**	7	**22.6**

Sense of loss or void is one of the advantages to which smokers who quit tobacco use feel in their cessation journey.	13	**41.9**	18	**58.1**	13	**41.9**	17	**54.8**
Pharmacists Knowledge on Smoking Cessation Intervention								
Readiness to Change Model is used to assess if a person has already quit smoking.	25	**80.6**	6	**19.4**	20	**64.5**	10	**32.3**
A person is ready to quit if he intends to quit within the next six (6) months based on the Readiness to Change model.	27	**87.1**	4	**12.9**	14	**45.2**	16	**51.6**
Readiness to Change Model is intended to assess the smoking cessation provider.	21	**67.7**	10	**32.3**	14	**45.2**	16	**51.6**
Staying Quit is part of the stages of the Readiness to Change Model.	30	**96.8**	1	**3.2**	30	**96.8**	0	**0.0**
The Five A's include Ask, Advise, Assess, Assist, and Accomplish.	14	**45.2**	17	**54.8**	9	**29.0**	21	**67.7**
When meeting a patient, the first thing to do is to arrange a plan for him.	17	**54.8**	14	**45.2**	2	**6.5**	28	**90.3**
Quit Plan includes social support.	31	**100.0**	0	**0.0**	29	**93.5**	1	**3.2**
Advice to quit should be repeated every time you intervene with a tobacco user.	26	**83.9**	5	**16.1**	28	**90.3**	2	**6.5**
Follow-up and contact after 'quit date' is part of Arrange.	29	**93.5**	2	**6.5**	30	**96.8**	0	**0.0**
Develop a Quit Plan if the patient is not ready to quit.	22	**71.0**	9	**29.0**	4	**12.9**	26	**83.9**
After Advise, Assist is next in the intervention.	31	**100.0**	0	**0.0**	7	**22.6**	23	**74.2**
No activity comes after the Quit Plan.	6	**19.4**	25	**80.6**	1	**3.2**	29	**93.5**
It can be assumed that the smoker has quit smoking after Assist and provision of quit plan.	10	**32.3**	21	**67.7**	9	**29.0**	21	**67.7**
Readiness to Change Model is more important than the Five A's model.	21	**67.7**	10	**32.3**	6	**19.4**	24	**77.4**

Relapse is part of the Readiness to Change Model.	26	**83.9**	5	**16.1**	26	**83.9**	4	**12.9**
Pharmacist's Knowledge on Pharmacotherapy								
A smoker who is willing to quit must have a nicotine dependence score of at least 4 to qualify for a pharmacologic treatment.	27	**87.1**	4	**12.9**	18	**58.1**	12	**38.7**
Fagerstrom Test is the name of the test for Nicotine Dependence.	29	**93.5**	2	**6.5**	28	**90.3**	2	**6.5**
A nicotine dependence score of 6-7 means that the smoker has medium dependence.	26	**83.9**	5	**16.1**	13	**41.9**	17	**54.8**
Interventions for physiologic dependence include the use of nicotine replacement therapy only.	19	**61.3**	12	**38.7**	15	**48.4**	16	**51.6**
Nicotine gum and patch are the only available forms of nicotine replacement therapy.	19	**61.3**	12	**38.7**	4	**12.9**	27	**87.1**
Nicotine gum provides a more regular nicotine replacement that helps prevent strong morning cravings.	27	**87.1**	4	**12.9**	28	**90.3**	3	**9.7**
Nicotine patch enables a more flexible dosing.	26	**83.9**	5	**16.1**	14	**45.2**	16	**51.6**
When giving a nicotine patch, the highest dose shall be given in weeks 1-4.	22	**71.0**	9	**29.0**	26	**83.9**	5	**16.1**
When giving a nicotine patch, in weeks 4-6, the patient can now be given the lowest dose.	27	**87.1**	4	**12.9**	28	**90.3**	3	**9.7**
Develop a Quit Plan if the patient is not ready to quit.	11	**35.5**	20	**64.5**	7	**22.6**	24	**77.4**
Tapering of doses of nicotine is not necessary when giving nicotine gum.	28	**90.3**	3	**9.7**	28	**90.3**	2	**6.5**
Nicotine gum is available in 2 and 4 mg.	23	**74.2**	8	**25.8**	27	**87.1**	4	**12.9**
Acidic beverages decrease the absorption of Nicotine when ingesting it as a gum.	23	**74.2**	8	**25.8**	29	**93.5**	2	**6.5**
Clients who are light, medium, heavy smokers and highly dependent on cigarette smokers would benefit from nicotine replacement therapy.	29	**93.5**	2	**6.5**	28	**90.3**	3	**9.7**

The use of more than 20 pieces of nicotine gum per day is not advisable.	27	**87.1**	4	**12.9**	12	**38.7**	19	**61.3**

3.2 Perceived role of Community Pharmacists in smoking cessation

Before the training, the mean total score of perceived role of the community pharmacists in Smoking Cessation was 4.15. In the post-training test, the mean total score was significantly higher compared to the pretest, with a mean total score of 4.52. It can also be observed that the scores were significantly higher after the training in each item of 8 statements. Overall results of the survey indicated the increased level of perceived roles among community pharmacists to serve as health professionals for smoking cessation program (Table 1B).

Table 1B - Level of Perceived Role of the Community Pharmacists' Capacity to ProvideSmoking Cessation Service Before and After the Smoking Cessation Training.

PERCEIVED ROLES	**PRETEST**			**POSTTEST**		
	MEAN	**SD**	**DESCRIPTION**	**MEAN**	**SD**	**DESCRIPTION**
Pharmacists serve as role models for their patients and the public	4.42	1.0255	VGE	4.94	0.2497	VGE
Pharmacists have a role in giving advice or information about smoking cessation to patients	4.39	1.0223	VGE	4.97	0.1796	VGE
Pharmacists should routinely advise their patients who smoke to quit smoking	4.06	1.0935	GE	4.68	0.7911	VGE
Pharmacists who smoke were less likely to advise patients to stop smoking	3.94	1.1236	GE	4.10	1.2478	GE
Pharmacists should routinely advise their patients who smoke to quit using other tobacco products	4.32	0.9087	VGE	4.39	1.2021	VGE
Pharmacists who use other tobacco products were less likely to advise patients to stop smoking	3.65	1.1986	GE	3.87	1.3842	GE
Patient's chances of quitting smoking increased if a pharmacist advised him/her to quit	3.90	1.0118	GE	4.35	0.7549	VGE
Pharmacists should get specific training on cessation technique	4.48	0.9616	VGE	4.90	0.3005	VGE
Overall Mean	**4.15**	**1.0432**	**GE**	**4.52**	**0.7638**	**VGE**

3.3 Level of Self-efficacy to perform smoking cessation counseling

In comparing the scores in the level of pharmacists' self-efficacy to provide smoking cessation service during pretest and posttest, it is evident that there is a significant increase of the total mean score after the training, from an overall mean score of 4.42 in pretest to 4.73 in posttest. It can also be

observed that for each item of 10 statements, the scores were significantly higher after training. Therefore, this study has shown that the level of confidence among community pharmacists to provide smoking cessation services have proven to increased after they underwent the training (Table 1C).

Table 1C - Level of Self-Efficacy of the Community Pharmacists' Capacity to Provide Smoking Cessation Service Before and After the Smoking Cessation Training.

SELF-EFFICACY	**PRETEST**			**POSTTEST**		
	MEAN	**SD**	**DESCRIPTION**	**MEAN**	**SD**	**DESCRIPTION**
Know the appropriate question to ask patients when providing counseling	4.48	0.9263	VGE	4.87	0.3408	VGE
Have the skills needed for counsel	4.45	0.9252	VGE	4.81	0.4016	VGE
Can provide motivation to patients who are trying to quit	4.42	0.9228	VGE	4.77	0.4250	VGE
Have sufficient knowledge on the psychology aspect of tobacco cessation	4.42	0.9228	VGE	4.71	0.5287	VGE
Can create consumer awareness of why pharmacists should ask questions about tobacco use	4.39	0.9549	VGE	4.74	0.4448	VGE
Know when a referral to a physician is necessary	4.32	0.9447	VGE	4.74	0.4448	VGE
Can make collaboration with community leaders to increase awareness on quitting	4.45	0.9252	VGE	4.68	0.5408	VGE
Are able to communicate with physicians and others to help patient quit	4.45	0.8500	VGE	4.68	0.4752	VGE
Can involve in community events for anti-tobacco campaign	4.45	0.8500	VGE	4.77	0.4250	VGE
Are able to utilize counseling education material such as leaflet and brochure quit smoking	4.42	0.8475	VGE	4.74	0.4448	VGE
Overall Mean	**4.42**	**0.9023**	**VGE**	**4.73**	**0.4661**	**VGE**

3.4 Level of Intention to provide and practice counseling to smokers

Table 1D shows the intention of the pharmacist to provide and practice counseling to smokers before and after training. The result generally shows an increase of intention to perform each discipline. It can be seen that the respondents were more willing to ask a patient whether he/she smokes or not after the training, from 4.23 to 4.90. There was also an increase in willingness to advise a patient to quit, from 4.42 to 4.87. The respondents were also more eager to motivate a patient to quit and also assist those that are willing to quit. There is also an increase of willingness to arrange follow-ups and provide tobacco cessation counseling in practice sites. With the overall pre-test mean of 4.38 to an increase in the post-test mean of 4.88, this suggests that the training program effectively enhanced the pharmacists' abilities and motivation to deliver comprehensive smoking cessation services to their patients.

Table 1D - Level of Intention to Provide and Practice Counseling to Smokers Before and After the Smoking Cessation Training

Intention to Provide and Practice Counseling to Smokers	**PRETEST**			**POSTTEST**		
	MEAN	**SD**	**DESCRIPTION**	**MEAN**	**SD**	**DESCRIPTION**
Ask a patient whether he/she smokes or not.	**4.23**	**0.8450**	**VGE**	**4.90**	**0.3005**	**VGE**
Advise a patient to quit by informing the health consequence of smoking and the benefit of quitting.	**4.42**	**0.8475**	**VGE**	**4.87**	**0.3408**	**VGE**
Motivate a patient to quit or consider quitting.	**4.35**	**0.7978**	**VGE**	**4.90**	**0.3005**	**VGE**
Assist a patient who is willing to quit by providing the cessation counseling service.	**4.45**	**0.8099**	**VGE**	**4.90**	**0.3005**	**VGE**
Arrange follow-up counseling for patients who quit.	**4.42**	**0.8072**	**VGE**	**4.84**	**0.3739**	**VGE**
Provide tobacco cessation counseling in practice sites.	**4.39**	**0.8437**	**VGE**	**4.87**	**0.3408**	**VGE**
Overall Mean	**4.38**	**0.8252**	**VGE**	**4.88**	**0.3262**	**VGE**

3.5 Significance Difference

Table 1E - Testing the Significant Difference of Various Test Parameter Before and After the Smoking Cessation Training of Community Pharmacist.

Test Parameter	**Pretest**	**Posttest**	**T value**	**P value**	**Remarks***
Knowledge	78.1	81.2	0.855	0.395	Not significant
Perceived Role	4.15	4.52	2.208	0.044	Significant
Self-Efficacy	4.42	4.73	14.066	<0.001	Significant
Intention to Provide and practice Counseling to Smokers	4.38	4.88	14.835	<0.001	Significant

***Calculation was performed at 0.05 level of significance**

The findings show varied effects of the intervention on different variables. While there was no statistically significant increase in knowledge (pretest mean = 78.1, posttest mean = 81.2, t(DF) = 0.855, p = 0.395), significant improvements were observed in perceived role (pretest mean = 4.15, posttest mean = 4.52, t(DF) = 2.208, p = 0.044), self-efficacy (pretest mean = 4.42, posttest mean = 4.73, t(DF) = 14.066, $p < 0.001$), and intention to provide counseling (pretest mean = 4.38, posttest mean = 4.88, t(DF) = 14.835, $p < 0.001$). The significant changes observed suggest that the Smoking Cessation Training positively impacted community pharmacists' perceived role, self-efficacy, and intention to counsel smokers. Effect sizes, indicated by t-values (2.208 for perceived role, 14.066 for self-efficacy, and 14.835 for counseling intention), further emphasize the practical importance of these changes. The research underscores the critical role of healthcare providers, especially community pharmacists, in tobacco control efforts, including prevention, cessation support, and implementation of relevant guidelines such as the Ban Tobacco Industry (BTI) checklist by the Department of Health (DOH). Overall, the analysis indicates positive outcomes across all assessed variables.

3.6 Brief Tobacco Intervention Post-Training Counseling Skill Evaluation

The BTI checklist provided by the Department of Health was used to evaluate community pharmacists' performance in Smoking Cessation Counseling post-training. In the "Not Ready to Quit" assessment, the mean score of 11 (standard deviation = 1.672) met or exceeded the passing threshold, indicating adherence to checklist requirements and necessary counseling skills. Similarly, in the "Ready to Quit" assessment, participants achieved a mean score of 14 (standard deviation = 0.836), demonstrating outstanding performance in counseling individuals ready to quit smoking. For the relapse

assessment, the mean score of 9 (standard deviation = 0.956) indicated passing performance, although there's room for improvement in advising individuals to quit smoking. Overall, community pharmacists performed well on the BTI checklist, showcasing their ability to conduct effective smoking cessation counseling.

Table 1F - BTI Checklist Score of the Community Pharmacists' Capacity to Perform Smoking Cessation Counseling through Role-Playing after the Smoking Cessation Training.

Test Variables	**Mean**	**SD**	**Remarks**
Not Ready to Quit	11	1.672	Pass
Ready to Quit	14	0.836	Pass
Relapse	9	0.956	Pass

4. Discussion

Following the Brief Tobacco Intervention (BTI) - Smoking Cessation Training conducted by the Department of Health Region 11, discernible advancements were observed in various domains among community pharmacists. These include a notable enhancement in perceived role, self-efficacy concerning smoking cessation, and a positive inclination towards and adeptness in performing smoking cessation counseling. Although there was an increase in pharmacists' knowledge, statistical significance was not achieved. Nevertheless, this underscores the reliability of community pharmacists as frontline healthcare providers in smoking cessation initiatives. Similar studies have also shown a similar result where pharmacists or other healthcare professionals have shown improvements after taking training in smoking cessation. A study examining the impact of a one-day smoking cessation workshop for community pharmacists revealed significant increases in their knowledge of smoking cessation interventions, as well as enhancements in their perceived role and self-efficacy in counseling. Participants also demonstrated heightened willingness to ask, advise, and assess patients, although they were less inclined to assist in quitting plans and arranging follow-up counseling. Over 75% of pharmacists were proficient in cessation counseling, with 65% fully capable of conducting the 5A brief intervention (Kristina, et. al., 2015). Additionally, studies suggest that trained healthcare professionals are more likely to engage in smoking cessation tasks compared to their untrained counterparts (Lancaster, et. al., 2000).

Another study aimed to assess the effectiveness of community pharmacist smoking cessation counseling. It found that when pharmacists underwent specific training, there was a notable increase in their willingness and intention to provide smoking cessation services. Additionally, their skills, confidence, adherence to evidence-based standards, and other relevant factors showed improvement as a result of the training intervention (Alzubaidi, et. al., 2022). The heightened awareness among pharmacists regarding their roles in smoking cessation resonates with previous research, underscoring the evolving and substantial contribution of pharmacists to public health initiatives. As pharmacists embrace expanded responsibilities, their active participation in smoking cessation programs embodies a comprehensive approach to healthcare, accentuating their pivotal role within the healthcare continuum.

Furthermore, the study reveals a notable improvement in pharmacists' self-efficacy post-training, corroborating earlier findings. Additionally, the efficacy of the smoking cessation training in augmenting pharmacists' capacity to deliver cessation services in Davao City is evidenced by the proficient performance of all respondents in counseling sessions based on the 5 A's approach.

5. Conclusion

The BTI training effectively equips community pharmacists in Davao City to provide smoking cessation support. It enhances their knowledge, role perception, self-efficacy, and counseling intentions, enabling them to assist individuals in quitting smoking and reducing community smoking rates. Evaluations confirm pharmacists' readiness and competence in counseling. This intervention significantly impacts smoking cessation efforts and public health outcomes by empowering pharmacists. The study emphasizes the importance of comprehensive training programs like BTI for enhancing pharmacists' role in promoting smoking cessation and improving public health in the community.

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