



# THE RELATIONSHIPS BETWEEN ONLINE LEARNING READINESS & LEARNING STYLES AMONG REGISTERED NURSES IN GOMBAK DISTRICT



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CLINICAL NURSE U9  
KLINIK KESIHATAN TAMAN EHSAN



# CONTENT OUTLINE



1

BACKGROUND

2

METHOD

3

RESULT

4

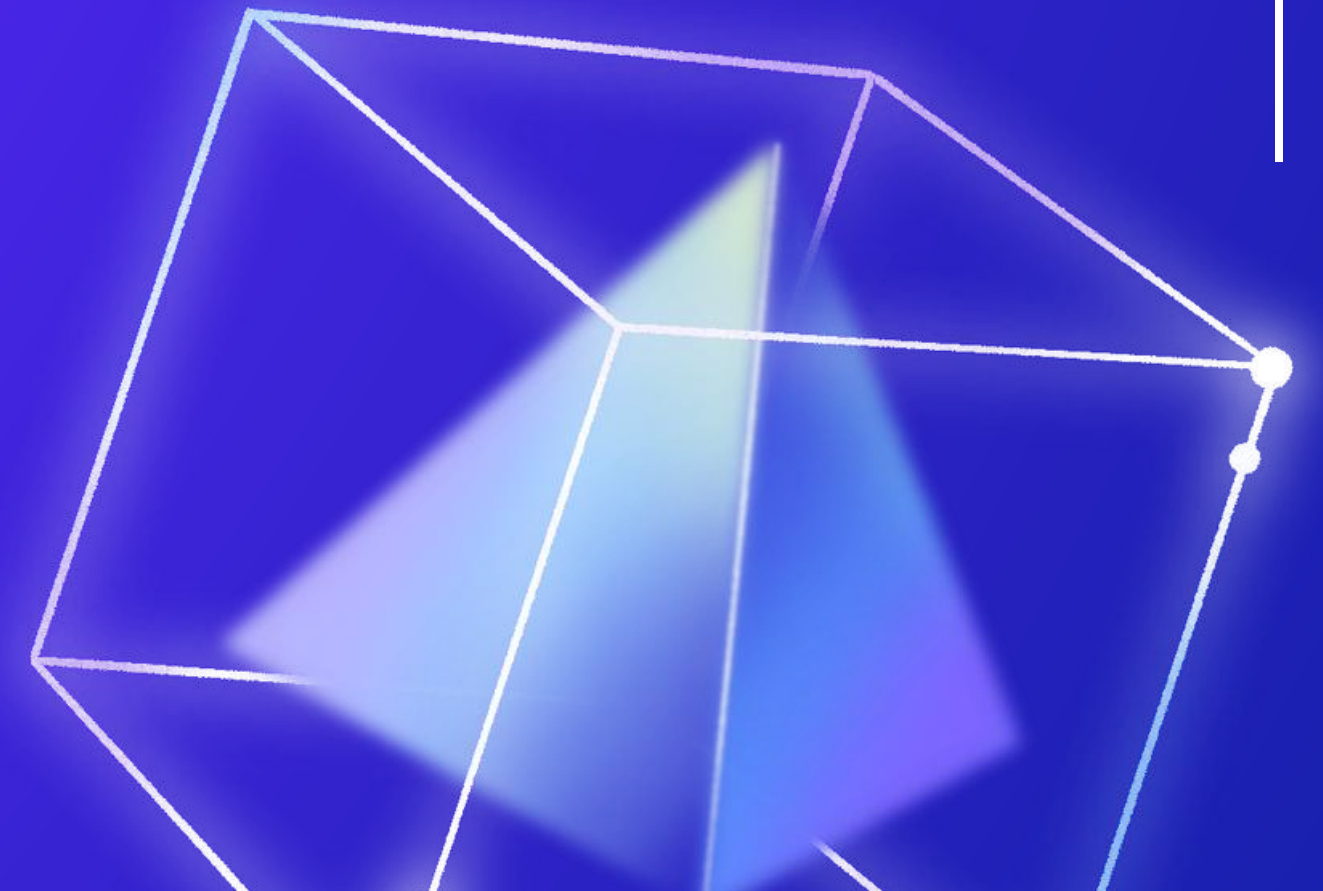
DISCUSSION

5

REFERENCES



Let's cultivate a culture of curiosity,  
scientific rigor and collaboration so  
that every client benefits from the  
best that nursing science has to  
offer





# ACKNOWLEDGMENT





# BACKGROUND

POPULATION SERVED :

± 965 600

TOTAL HCW : 1216

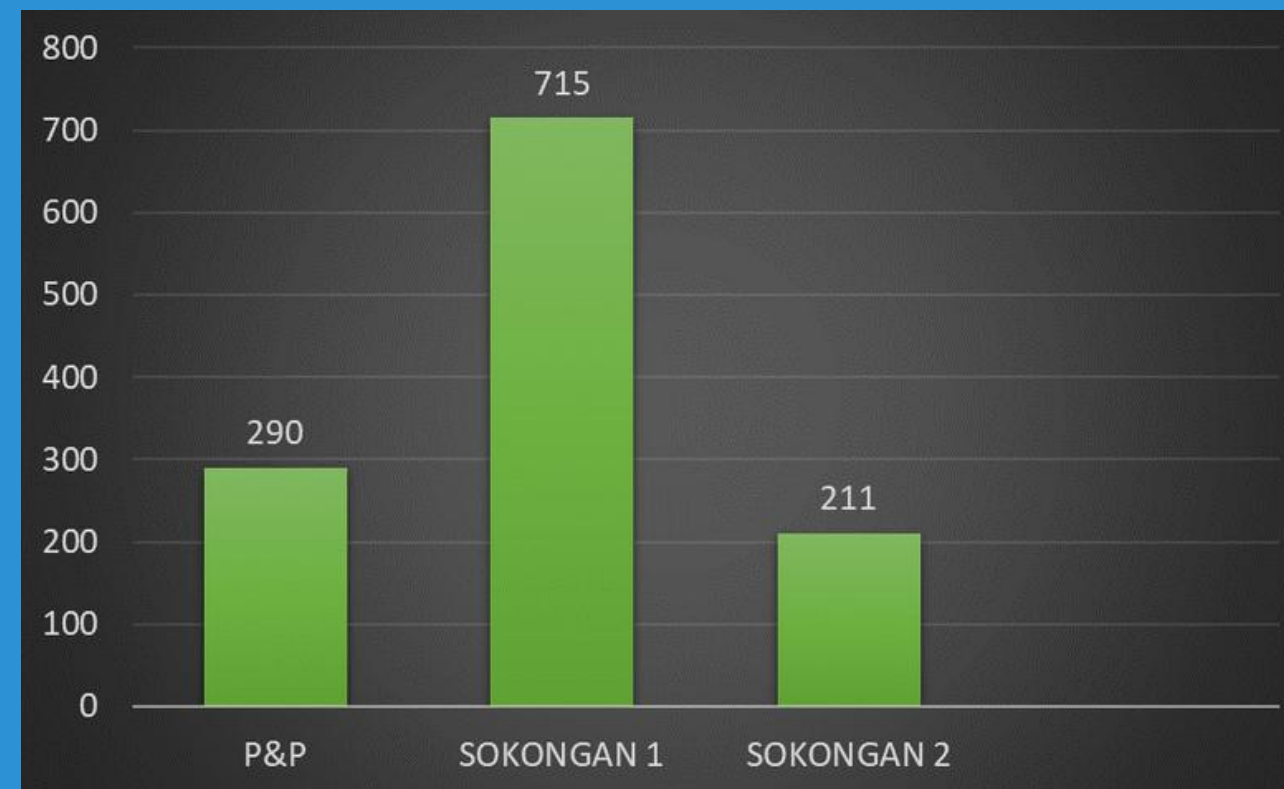
TOTAL NURSES :

361 NURSES

CONSIST OF :

10 KK AND 4 KD

TOTAL HCW



PERCENTAGE OUT OF  
TOTAL HCW





# NURSES ONLINE LEARNING

APPROACH : ONLINE PLATFORM

REGULARITY : MONTHLY

TIME : FRIDAY (12 NOON - 1 PM)

PRESENTER : NURSING PROFESSION

PROFESSIONAL TRAINER





## FACE TO FACE



LIMITED  
RESOURCE/QUANTITY OF  
SEMINAR ROOM

ABLE TO DELIVER INFO OR  
ANY UPDATE FASTER

IMPOSIBBLE TO GATHER  
LARGE NUMBER OF  
NURSES AT SAME TIME

NO LIMITED  
PARTICIPANT

NEED TO CHOOSE  
SUITABLE DATE TO  
ATTEND PHYSICALLY

CAN BE CONDUCTED  
ANYTIME IN  
PARTICIPANT SETTING

## VIRTUAL





**ANJURAN UNIT KEJURURAWATAN PKD GOMBAK**

**PENGURUSAN STRESS**

PUAN NORHANIZA BINTI SAID  
PEGAWAI PSIKOLOGI  
(KAUNSELING)

**14 MAC 2025 (JUMAAT)**

**12.00 PM - 1.00 PM**

**ANJURAN UNIT KEJURURAWATAN PKD GOMBAK**

**PERANCANG KELUARGA (KAEDAH PIL)**

PUAN SITI NOOR MARIAM BT AHMAD  
KETUA JURURAWAT UNIT CDC

**20 JUN 2025 (JUMAAT)**

# RELEVANT TOPIC

1. CLINICAL
2. PROFESSIONAL DEVELOPMENT
3. PSYCHOLOGY TRAINING
4. CUSTOMER RELATION

**ANJURAN UNIT KEJURURAWATAN PKD GOMBAK**

**TIME AND CLINICAL DECISION TOOLS FOR WOUND CARE MANAGEMENT**

DR THAYALA SRIDHAR A/L PICHAIKAREN  
PEGAWAI PERUBATAN U13  
KETUA UNIT PENJAGAAN LUKA  
HOSPITAL SELAYANG

**14 FEBRUARI 2025 (JUMAAT)**

**12.00PM - 1.00PM**

**ANJURAN UNIT KEJURURAWATAN PKD GOMBAK**

**KEPENTINGAN WAKTU MAKAN, SAIZ PORSI & TEKNIK PEMBERIAN MAKANAN KEPADA KANAK-KANAK**

PUAN NURUL HIDAYAH AMINUDIN  
PEGAWAI SAINS PEMAKANAN C10  
KLINIK KESIHATAN GOMBAK SETIA

**30 MEI 2025 (JUMAAT)**

**CNE PKD GOMBAK**

**Anaemia in Pregnancy**

Dr. Liang Sook Fung  
Pakar Perubatan Keluarga Pra-warna  
Klinik Kesihatan Taman Ehsan  
17.05.2024

KLINIK KESIHATAN TAMAN EHSAN is prese...

**6 Components of Surveillance**

1. 2. 3. 4. 5. 6.

TERAPI CARA KERJA is presenting



## ONLINE LEARNING

Numerous studies have used online learning in nursing education and shown that it produces learning results that are both equal to and more satisfying than traditional learning.

Online learning is more flexible, accessible, convenient, cost-effective, and increases learning opportunities (Lahti, Hatonen & Valimaki, 2014).

## LEARNING STYLES

Appropriate CNE should include consideration of different ways of learning observed between different generations of nurses. (Kataoka-Yahiro et al., 2011). Assessment of nurses' online learning readiness can provide suggestions regarding learning program design and delivery.

## CONTINUOUS EDUCATION

According to Tachtsoglou et al. (2019) the current environment requires nurses to be constantly trained and educated as the world of healthcare continues evolving.

Heavy workloads, time or energy constraints and lack of learning opportunities or support from supervisors were the key barriers to nurses' participation in continuing education programs (Shahhosseini & Hamzehgardeshi, 2015)



# PROBLEM STATEMENT

## LITERATURE GAP

There is **little research** that explores nurses' experiences with 'online' learning.

Most literature has **only focused on attitudes** toward online learning, but, research on online **learning readiness is not widespread**. Online learning readiness is required to make sure the users are capable of using the online learning environment technology in the best way possible.

Most of the literature had only focused more on online learning among **nursing students**.

## STATISTIC

**Younger generation** of nurses is more familiar with online education than the older ones. (Kataoka-Yahiro et al., 2011)

Education must be treated as an **ongoing lifelong process** (Arslanian-Engoren et al., 2011).

Public more knowledgeable and technologically savvy, higher demand and expectation to healthcare

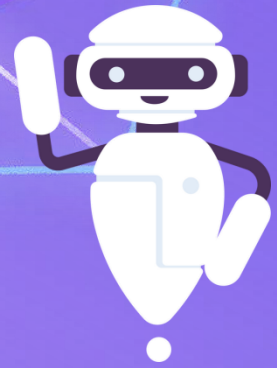
## SITUATION

**<70%** attendance rate in online learning

Limited resources : limited quantity and size of seminar room make it impossible to gather large number of nurses at the same time



# AIM AND OBJECTIVES



## OBJECTIVE 1

**To determine the level of online learning readiness among registered nurses in Gombak district, Selangor.**



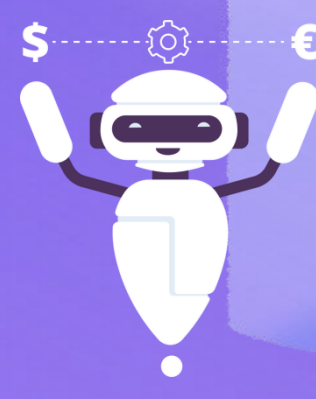
## OBJECTIVE 2

**To determine the types of learning styles among registered nurses in Gombak district, Selangor.**



## OBJECTIVE 3

**To determine the association between selected demographic factors with online learning readiness among registered nurses in Gombak district, Selangor.**



## OBJECTIVE 4

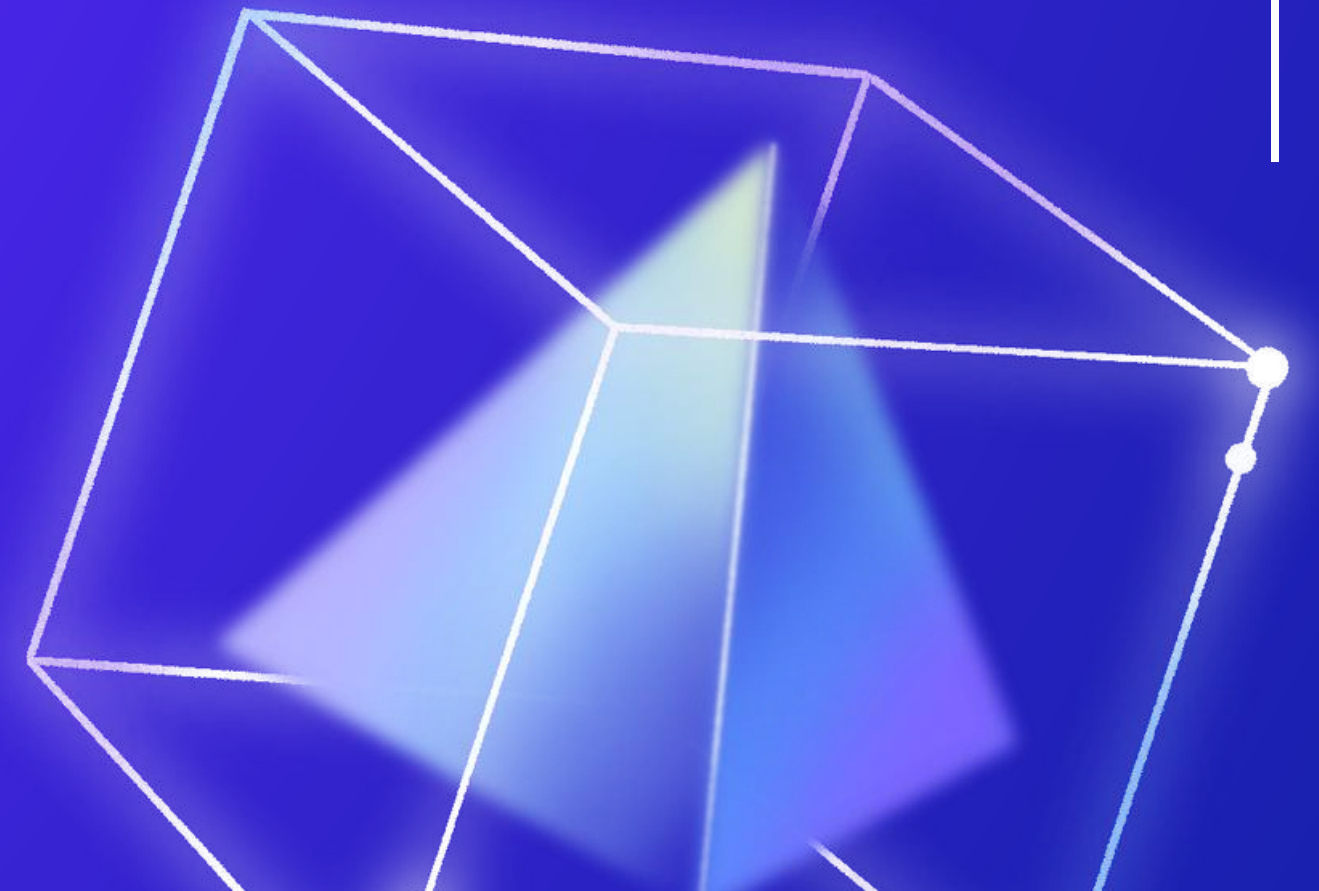
**To determine the relationship between online learning readiness and learning styles among registered nurses in Gombak district, Selangor.**





# METHODOLOGY

- **DESIGN & STUDY SETTING**
- **SAMPLING & SAMPLE SIZE**
- **INSTRUMENTS**
- **DATA ANALYSIS**





# METHODOLOGY

Study design : Cross-sectional

Study setting : PKD Gombak

- Gombak District is an administrative district located in the state of Selangor Covering 65,008 hectares.
- Gombak borders with other districts and it is an area with constant population mobility





## INCLUSION CRITERIA



- Nurse working in any of the health or rural clinics
- Employed permanently
- Having at least one year of experience practicing as RN in the subject clinic.
- Willing to participate and consented

## EXCLUSION CRITERIA



- Registered nurses who are on long leave such as maternity leave, study leave, or unpaid leave.
- Registered nurses who refused to participate in the study.



# SAMPLING METHOD

The sampling method in this study is Proportionate Stratified Random Sampling to maximize the representation of the characteristics of the said population, because each stratum will have a fractional representation in the study

## SAMPLE SIZE

1. determination overall sample size
2. determination of sample quantity from each of the stratum

*Finite Population Correction Factor:*

$$n_a = \frac{n_r}{1 + \frac{(n_r - 1)}{N}}$$

Proportionate stratified random sampling formula:

$$nh = (Nh / N) * n$$

**nh**= Sample size for hth stratum

**N**= Entire population size

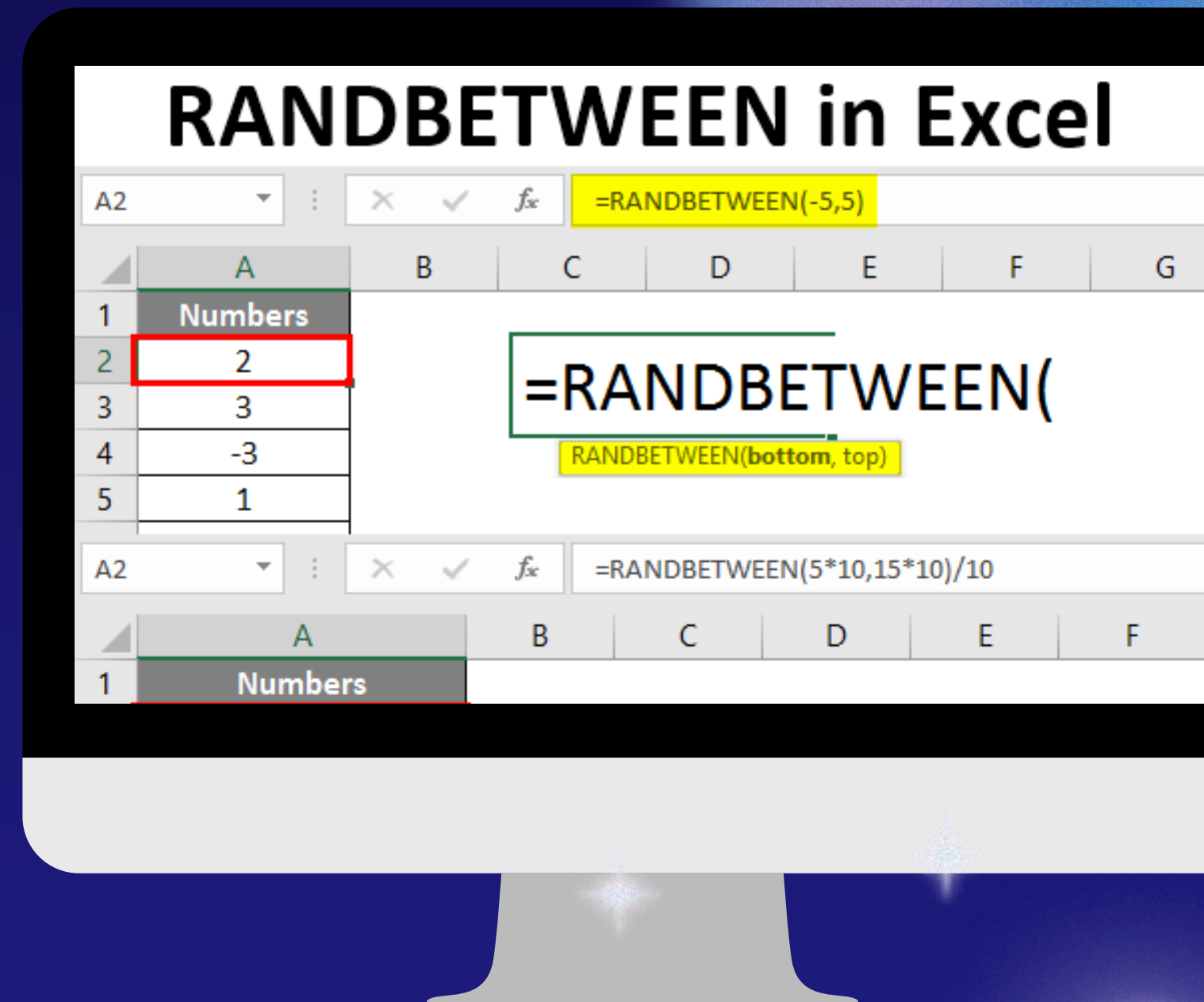
**Nh**= Population size for

**n**= Entire sample size



# SELECTION OF PARTICIPANTS USING RANDOMIZATION TECHNIQUE

- Names of the nurses in the Target Population Sampling Frame will be encoded using Microsoft Excel
- The names of the nurses will be categorized according to the clinic where they are working in
- Random number generator in Microsoft Excel will be used to assign unique random identifiers for each of them (by using the Excel RANDBETWEEN function)
- Top most sorted identifiers will be selected.



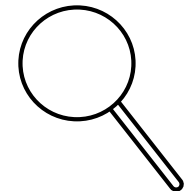


## Online Learning Readiness Scale (OLRS)



- 18 items
  - 6-point Likert scale
  - 5 sub-factors
- 
- Computer and internet self-efficacy
  - Self-directed learning
  - Learner control
  - Motivation for learning
  - Online communication self-efficacy

## LEARNING STYLES SCALE (LSS)



- 22 items
  - 6-point Likert scale
  - 5 learning styles
- 
- Solitary VS. Sociable
  - Competitive
  - Imaginative
  - Perceptive
  - Analytic



# OBJECTIVE 1

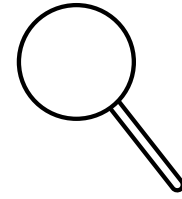


Table 1. Mean and Standard Deviation of online learning readiness (by Category) (n=198)

ORLS Dimensions	Mean (SD)	Level
Overall Online Learning Readiness	4.43 (0.81)	High
Computer/ internet self-efficacy	4.56 (0.91)	High
Self-directed learning	4.50 (0.87)	High
Learner control	4.32 (0.89)	Moderate
Motivation for learning	4.47(0.89)	High
Online communication self-efficacy	4.33 (0.94)	Moderate

Mean value (Low = 1.00–2.66; Moderate = 2.67–4.34; High = 4.35–6.00)



## OBJECTIVE 2



Table 2. The proportion of learning style preferences at individual levels between nurses (n=198)

Learning styles	Frequency (%)		
	Low	Middle	High
Solitary	15 (7.6)	158 (79.8)	25 (12.6)
Competitive	18 (9.1)	154 (77.8)	26 (13.1)
Imaginative	22 (11.1)	149 (75.3)	27 (13.6)
Perceptive	3 (1.5)	176 (88.9)	19 (9.6)
Analytic	41 (20.7)	129 (65.2)	28 (14.1)



## OBJECTIVE 3



Table 3. One way ANOVA results regarding online learning readiness according to nurses' education level (n=198)

Online learning readiness	Certificate		Diploma		Degree		F (2,195)	p value
	M	SD	M	SD	M	SD		
Overall online learning readiness	4.22	0.89	4.55	0.73	4.43	1.16	3.75	0.025*
Computer/internet self-efficacy	4.29	1.05	4.69	0.77	4.73	1.21	4.55	0.012*
Self-directed learning	4.29	0.99	4.63	0.76	4.40	1.28	3.47	0.033*
Learner control	4.12	0.11	4.43	0.08	4.27	0.71	2.72	0.068
Motivation for learning	4.31	0.11	4.57	0.07	4.25	0.48	2.03	0.134
Online communication self-efficacy	4.10	0.12	4.44	0.78	4.53	0.34	3.01	0.051

\*p<0.05



## OBJECTIVE 4

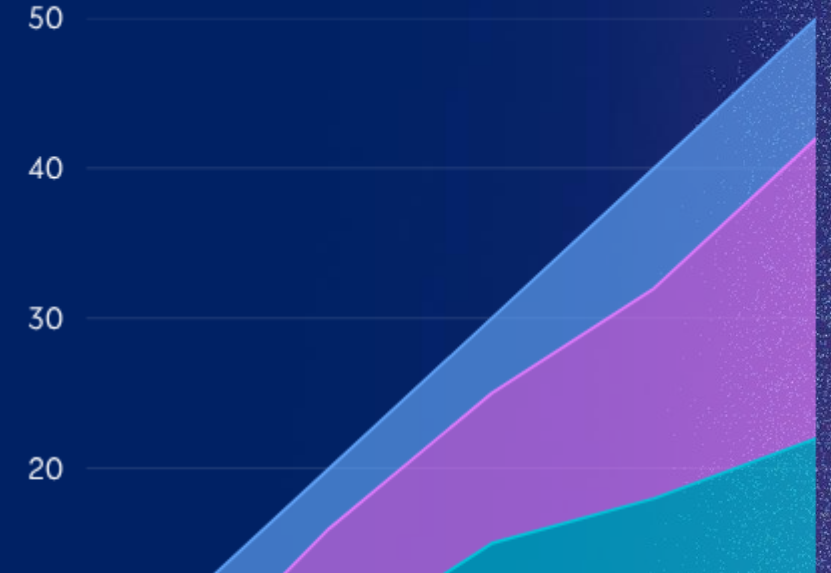


Table 4. Correlation between learning styles and online learning readiness (n=198)

Variable	Learning styles	Pearson correlation	Sig. (2-tailed)
Online learning readiness	Solitary	-0.91	0.20
	Competitive	-0.93	0.195
	Imaginative	-0.24	P<0.001*
	Perceptive	-0.14	0.053
	Analytic	-0.25	P<0.001*

\*Correlation is significant at the 0.01 level (2-tailed).



# DISCUSSION

The current environment of care and delivery, including academic, occupational, administrative and research settings, **requires nurses to** be constantly trained and **educated** as the world of healthcare continues evolving (Tachtsoglou et al., 2019).

**Online learning** has been applied in nursing education in many studies, and demonstrated **equal learning outcomes** and greater satisfaction than traditional learning (Lahti et al., 2014).

Since the research design was descriptive cross-sectional study, this study design does not cover the exploration on **causations** between variable.

**Public more knowledgeable** and technologically savvy, higher demand and expectation to healthcare

Based on Kataoka-Yahiro et al. (2011) the **younger generation** of nurses is more familiar with **online education** than the older ones. However, in this study, there were no significant different between age and online learning readiness among registered nurses

However, the findings of this study **may aid nurse managers and educators in different healthcare** settings to provide appropriate support and resources to meet nurses' online learning needs



# CONCLUSION

**These findings indicate that variation of learning styles is not the primary factor that explains online learning readiness**

**Readiness is one of the important factors of effective learning, and understanding nurses' readiness for online learning is an essential element to consider when implementing an effective virtual learning.**



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- Shahhosseini, Z., & Hamzehgardeshi, Z. (2015). The facilitators and barriers to nurses' participation in continuing education programs: A mixed method explanatory sequential study. *Global journal of health science*, 7(3), 184
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This Cross Sectional study  
might provide baseline data for  
further research such as Action  
Research.....



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# RESEARCH LEVEL IN NURSING



USING THE EBP



QUALTITATIVE &  
QUALITATIVE, META  
ANALYSIS REVIEW



LITERATURE REVIEW,  
SCOOPING REVIEW,  
INTEGRATIVE REVIEW,  
SYSTEMATIC REVIEW



ADVANCED QUALITATIVE,  
ADVANCED QUANTITATIVE,  
MIXED METHOD APPROACH







# **WHEN NURSING LEADS, HEALTHCARE FOLLOWS**

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