

# iCARE: Using Guided Daily Reflective Journal with Weekly Feedback to Enhance Nursing Students' Clinical Self-Regulated Learning

Zeng W.Y<sup>1</sup>, Goh Y.X<sup>1</sup>, Gominda P<sup>2</sup>, Lim C.C<sup>1</sup>, Paramasivam J<sup>1</sup>, Anique de B<sup>2</sup>

<sup>1</sup>Department of Nursing, National Heart Centre Singapore  
<sup>2</sup>School of Health Professions Education (SHE), Maastricht University

## Background

Self-Regulated Learning (SRL) is a core attribute of health professional development. Nursing students often do not automatically develop or use SRL strategies to effectively navigate their learning journey in the dynamic and complex clinical environment. Reflection is an essential part of SRL and lifelong learning.

A Guided Daily Reflective Journal (GDRJ) with weekly feedback was designed based on Kuiper's (2002) SRL model in nursing (Figure 1) and APIE (Assessment, planning, implementation, evaluation) to enhance nursing students' clinical SRL.



Figure 1. Reflective SRL in Nursing Model (Kuiper, 1999)

## Aims

1. To investigate its effects compared to group reflection.
2. To explore nursing students' experience and perception of using it in their clinical learning.

## Methods

A quasi-experimental exploratory pre and posttest study was implemented on 49 final-year nursing students posted to an acute hospital. They were randomly divided by cohort into two groups (Figure 2).

Students' SRL at work, level of reflective journal, self-efficacy level, skill performance, and satisfaction were measured using validated tools and analysed using SPSS Version 25. Students' experience and perception were explored using questionnaire and analysed using thematic analysis.

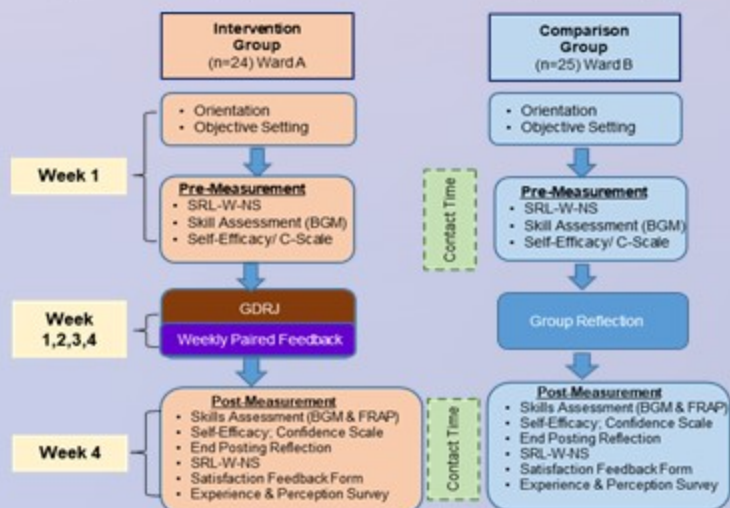


Figure 2. Workflow on data collection

## Result

There is no significant differences in demographic characteristics between the two groups of participants except for level of education (Table 1).

Characteristics	Intervention	Comparison	P-Value
Age	23.46 (5.15)	22.24(4.86)	0.398
Gender			
Male	3 (12%)	1 (4%)	0.349*
Female	21(84%)	24 (96%)	
A level	10 (41.7%)	1 (4%)	0.004*
O level	9 (36%)	14 (56%)	
N level	2 (8%)	8 (32%)	
Diploma	3 (12%)	2 (8%)	

\*Fisher test, P<0.05

This study showed that GDRJ with weekly feedback significantly improved nursing students' SRL, self-efficacy, skill performance, reflective levels, and satisfaction rate in the intervention groups, when compared with the comparison group (Table 2).

References:  
Kuiper, R. (2002). Enhancing metacognition through the reflective use of self-regulated learning strategies. The Journal of Continuing Education in Nursing, 33(2), 78-87

A total of six common themes identified from both groups, another five themes emerged only from intervention group, including eight subthemes described characteristics of SRL as shown in Figure 3.

Outcome Measure	Pre-measurement		P	Post-measurement		p
	Intervention (n=24)	Comparison (n=25)		Intervention (n=24)	Comparison (n=25)	
SRL	247.42	247.00	0.969	287.71	271.08	0.040
Self-Efficacy	38.00	34.92	0.095	44.04	41.00	0.017
Skills Performance						
1 <sup>st</sup> Skill	6.17	5.75	0.375	8.17	6.17	0.042
2 <sup>nd</sup> Skill				8.67	8.08	0.124
Reflection level				4.65	3.50	0.000
Satisfaction rate				41.83	39.24	0.046

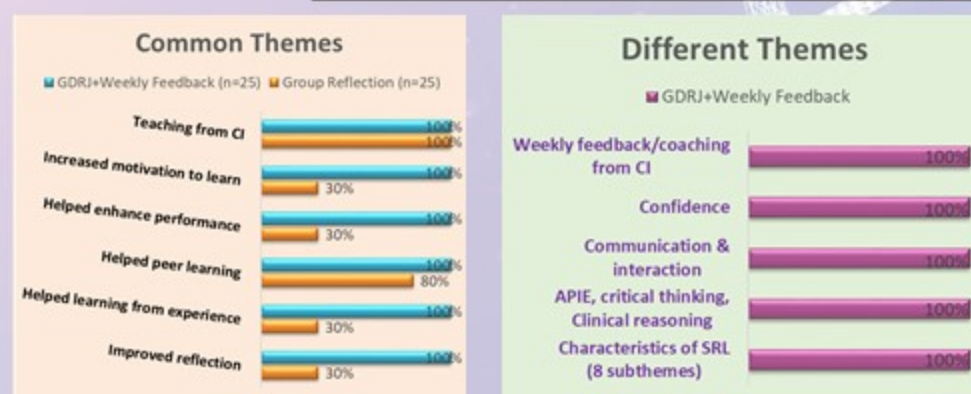


Figure 3: Learners' perception & experience

## Discussion & Implication

GDRJ with weekly feedback that embedded in a clinical education programme engaged students in a cyclic process of SRL: goal setting, self-monitor, self-assessment and evaluation, feedback, and strategic learning. Clinical Instructor (CI) built a contextualized and motivational SRL environment to enhance learners' clinical SRL (Figure 4). Students named their experience as iCARE (integration of Critical thinking, Assessment, Reflection to Empower learning).

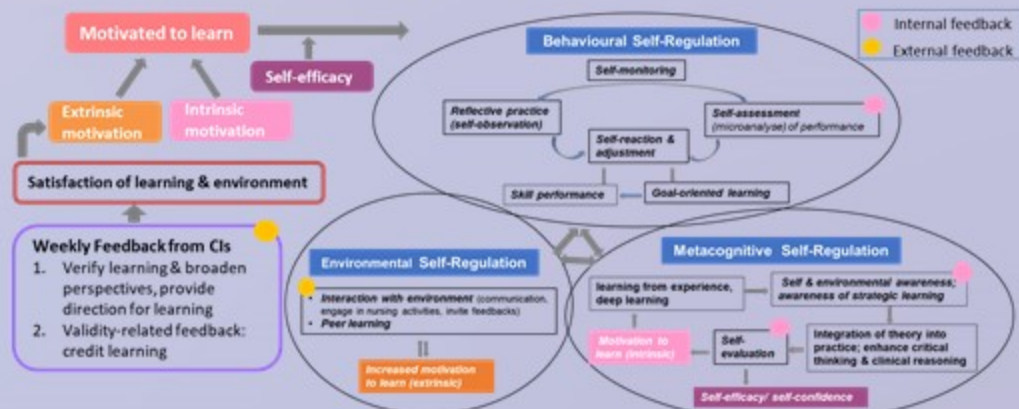


Figure 4. Learners' experience in SRL Environment based on identified themes

## Implication & Limitations

This is the first study comparing GDRJ with weekly feedback vs group reflection. Future study may be required for more evidence and strategies about development of workplace SRL and pre-practicum training to enhance students' clinical communication. This study was conducted in a single centre and findings may not be generalized to other settings.

## Conclusion

The combination of GDRJ with weekly feedback significantly enhanced clinical SRL, reflective journal writing, self-efficacy, skill performance, and satisfaction rate, leading to better learning outcome. The scaffold by CIs using GDRJ and validated-focused feedback enhanced cognitive, metacognitive development & skill performance. Clinical instructors need to teach nursing students both what to learn and how to learn.

Acknowledgement:  
This study was funded by Duke-NUS Cardiovascular Science Academic Clinical Programme. The authors gratefully acknowledge the support from NHCS, NUS, NYP, NP and all nursing students.