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# Effect of Seamless Nursing for Complications on Cataract Patients

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**Abstract:** Objective: Following to Chinese cataract patients were increased in last 3 years, we evaluate the effect of seamless nursing for complications on cataract patients. Methods: 102 patients diagnosed as cataract from June 2018 to March 2019, the patients were randomly assigned to control group and intervention group, the researchers care the patients by seamless nursing and traditional nursing. We collected the information by different questionnaires which included complications, depression, anxiety and satisfaction of patients. After that, we analyze and compare the result of different groups. Result: in complications status of patient, the intervention group was much lower than that in the control group [5 (9.8%) vs 14 (27.5%)]. Additionally, the improvement had not greater gap in depression and anxiety (32.25±1.02 vs 48.52±3.66, 32.58±2.01 vs 49.56±5.84), we use the Self-Rating Anxiety Scale (SAS) and the Self-rating depression scale (SDS) to assess depression and anxiety on the patients. Conclusion: the influence of seamless nursing was better than the effect of traditional nursing, it provide better outcome of cataract treatment for the cataract patients. The seamless nursing improve the higher satisfaction score in the result, it was good for publishing of new nursing methods. But the improvement of seamless nursing was not significant in the result.

**Keywords:** Cataract, Nursing, Seamless Nursing

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## 1. Introduction

Following to the He's report, the number of patient with cataract is trended to increase continuously as he aging population and extended life expectancy [1]. Therefore, some public health organization the improvement which were preventable vision loss due to cataract and understanding the modifiable risk factors was important [2, 3]. Additionally, cataract remains the leading cause of blindness in middle-income and low-income countries, so we make this study to improve the effect of cataract treatment surgery through improve the nursing methods after surgery.

A cataract is defined as a lenticular opacity, usually presenting with poor visual acuity [4, 5]. As the World Health Organization report, the estimated number of people in the world who are blind will increase to 40 million by 2025 [6]. Additionally, it is a multifactorial disease, which was associated with age, female sex, genetic predisposition,

smoking, diabetes mellitus, drug intake and environmental exposure to ultraviolet radiation b radiation [7]. Following to some report, even cataract had possible side effect of broadly used medications [8]. The aim of this study was to evaluate effect of seamless nursing on cataract patients.

## 2. Methods

### 2.1. Participants Enrollment and Survey Methods

The patients (n = 102) were diagnosed as cataract, they were investigated to join this study. Their diagnosis information were recorded and collected from June 2018 to March 2019. The patients were randomly assigned to a control group (n = 51) and a intervention group (n = 51). We use the traditional nursing care for the patients of control group [9]. For the intervention group, we add seamless care on the basis of traditional nursing. In treatment process, we collected the complication data of patients, the complications included

endothelial edema, intraocular hypertension and hyphema. In addition, the patients would complete Self-Rating Anxiety Scale (SAS) and Self-rating depression scale (SDS), they provided the anxiety information and depression information to our study [10, 11, 12]. Furthermore, The cutoff score of SAS is 50, 50-59 for mild anxiety, 60-69 for moderate anxiety, and 70 or more for severe anxiety. The lower the score shown more effective the nursing measures as the less anxiety symptoms. In SDS, those below 0.5 were not depressed, 0.5-0.59 was mild to mild depression, 0.6-0.69 was moderate to severe depression, and 0.7 or above was severe depression. The lower the score presented the more effective the nursing measures as less depressive symptoms. Besides, patients would finish the satisfaction questionnaire after treatment.

Their inclusion criteria were: (1) the patients were diagnosed as cataract; (2) coagulation function is normal; (3) Patients volunteered to participate in postoperative follow-up; (4) Cognitively and mentally were normal. Their withdraw criteria were: (1) The patients had choroid and retinopathy; (2) The patients had Optic neuritis, iridocyclitis, keratitis and

corneal degeneration; (3) Liver, kidney and cardiopulmonary function were not good.

## 2.2. Statistical Analysis

Statistical analysis was performed using SPSS 24.0. We assessed the data by t-test and chi-square tests between different groups; these tests were used to compare numerical and categorical data, respectively (statistical significance,  $p < 0.05$ ).

## 3. Result

We collected complications associated with cataract patient, the complications included endothelial edema, intraocular hypertension and hyphema (Table 1). The number of complications in the intervention group was much lower than that in the control group [5 (9.8%) vs 14 (27.5%)]. Additionally, its  $p$  value was 0.007, it had statistical significance.

**Table 1.** Complication of cataract patient.

Projects	Endothelial Edema	Intraocular Hypertension	Hyphema	Percent
Intervention Group (n = 51)	2	2	1	5 (9.8%)
Control Group (n = 51)	7	4	3	14 (27.5%)
X <sup>2</sup>	-	-	-	7.16
P value	-	-	-	0.007

In the result of SAS and SDS, the intervention group which had seamless nursing had better improvement than the control group after the nursing in 3 days. Although the improvement

was not significant ( $32.25 \pm 1.02$  vs  $48.52 \pm 3.66$ ,  $32.58 \pm 2.01$  vs  $49.56 \pm 5.84$ ), the improvement had statistical significance in both of groups ( $p < 0.005$ ).

**Table 2.** The outcome of SAS and SDS.

Projects	SAS			P value	SDS			P value
	BN	FN	T		BN	FN	T	
Intervention Group (n = 51)	62.58±5.14	32.25±1.02	40.9267	< 0.005	63.55±5.41	32.58±2.01	37.9447	< 0.005
Control Group (n = 51)	62.59±5.18	48.52±3.66	15.6861	< 0.005	63.56±5.45	49.56±5.84	12.3930	< 0.005
T	0.010	30.280	-	-	0.0092	19.4402	-	-
P value	0.992	< 0.005	-	-	0.071	< 0.005	-	-

SAS = Self-Rating Anxiety Scale

SDS = Self-rating depression scale

BN = before the nursing

FN = after the nursing in 3 days

We collected the satisfaction of patients by questionnaires, the satisfaction of patient was divided into three levels, such as very well, good and bad. According to Table 2, the satisfaction of intervention group patients was higher slightly than the

satisfaction of control group (92.2% vs 80.4%). The number of bad level of patients was fewest (4 out of 51 in intervention group, 10 out of 51 in control group). The number of people in very well is about the same as the number in good.

**Table 3.** The satisfaction of patients.

Projects	Very Well	Good	Bad	Percent
Intervention Group (n = 51)	26	21	4	92.2%
Control Group (n = 51)	22	19	10	80.4%
X <sup>2</sup>	-	-	-	7.485
P value	-	-	-	0.006

## 4. Discussion

The results indicated that seamless nursing can improve the

outcome of cataract treatment in some part, both of the mental health of patient and their complications was improved after seamless nursing. This is similar to the findings by Malik *et al*, Kim *et al* and Yardley *et al* [13, 14, 15]. Cataracts are the most

common eye disease and a major cause of visual impairment and blindness worldwide [16]. For similar, increased cataract patients were received with attention in government as increased old popular.

Following to the result of our research, the outcomes of cataract treatment were that the patients were improved in two groups. Although the gap between the effect of two groups was not too different, the seamless nursing had better and effective influence than traditional nursing in result of cataract treatment. Additionally, the seamless nursing make the satisfaction of cataract patients to better, although the proportion between very well level and good level was similar in both of two groups, the overall satisfaction of intervention group was better than the satisfaction of control group.

## 5. Conclusion

In conclusion, the influence of seamless nursing was better than the effect of traditional nursing, it provide better outcome of cataract treatment for the cataract patients. However, the improvement of seamless nursing was not significant in the result, it may lead to the hospital do like to use seamless nursing in nursing process. Because the seamless nursing would spend more cost than traditional nursing to get less influence. In addition, the seamless nursing improve the higher satisfaction score in the result, it was good for publishing of new nursing methods.

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