International Journal of Innovative Research in Science and Engineering
Volume 08, Issue 12, 2022
www.ijirse.com
ISSN: 2454-9665

A STUDY TO ASSESS THE EFFECTIVENESS OF ORAL MIXTURE TO REDUCE ORAL PROBLEMS AMONG CRITICALLY ICU PATIENTS

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Abstract

The continued pursuit of high-quality care and anticipated results is hampered by the introduction of new treatment methods and technologies, posing a number of obstacles for patients and healthcare providers. To delight patients and enhance the quality of care, efficiency and cost effectiveness must coexist. It makes sense to support innovations while also screening potential severe repercussions. The advancement of complex technology, assistance, and elaborate medical interventions has made it possible for many patients to leave the hospital, which was unthinkable just a few decades ago. Health care providers must adhere to established protocols to prevent nosocomial infections in order to fully benefit from sophisticated technologies. Therefore, the purpose of the current study is to evaluate the impact of oral care interventions on the incidence of ventilator-associated pneumonia in ICU patients. This study demonstrates the effectiveness of oral care in reducing the risk of ventilator-associated pneumonia in patients and averting its complications. Also, it aids in patient education and a higher standard of living for patients.

Keywords:ICU patients, Health Care

1. Introduction

The continued pursuit of high-quality care and anticipated results is hampered by the introduction of new treatment methods and technologies, posing a number of obstacles for patients and healthcare providers. To delight patients and enhance the quality of care, efficiency and cost effectiveness must coexist. It makes sense to support innovations while also screening potential severe repercussions. The advancement of complex technology, assistance, and elaborate medical interventions has made it possible for many patients to leave the hospital, which was unthinkable just a few decades ago. Health care providers must

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adhere to established protocols to prevent nosocomial infections in order to fully benefit from sophisticated technologies. Yactayo-Alburquerque MT (2021) to examine the impact of oral disorders on oral health-related quality of life in Latin America and the Caribbean (LAC), we conducted a systematic evaluation of research undertaken in the region. Almabadi and Bauman (2021) while periodontal disease is linked to a variety of risk factors, the disease burden is disproportionately high in low-income communities. When compared to regular restorative dental care, the tailored oral health education program used in the current study did not appear to offer a substantial improvement to clinical periodontal health outcomes. Opydo-Szymaczek et al. (2021) the goal of this cross-sectional study was to determine the prevalence of dental caries and the factors that influence dental service utilization in a community of 7-year-old children. TaufanBramantoro (2020) Oral health issues can have a variety of negative consequences for overall health, including physical fitness and performance. We wanted to conduct a systematic assessment of the current research to determine the impact of dental health on overall physical fitness in this study. Peres et al. (2019) outline the magnitude of the global oral disease epidemic, its origins in terms of social and commercial drivers, and its costs in terms of population wellbeing and societal effect in this first of two papers in a series on oral health. Akter et al. (2018) The major goal of this research is to raise public awareness about common dental disorders and to improve people's knowledge about how to maintain good dental health. We strongly encourage you to use this data to create programmes and advocate for patient health. Herkrath et al. (2018) because there is a significant disparity in the use of dental services in Brazil, they devised a study to assess the relationship between contextual and individual characteristics and the use of dental services by Brazilian individuals. Lawal et al. (2017) The goal of their research was to find out how common dental caries were in their target population and how much treatment they needed. Adult females who attended outreach programmes were the subjects of a cross-sectional study.

2. OBJECTIVES OF THE STUDY

- To analysethe prevalence of Ventilator-Associated Pneumonia in patients receiving routine oral care.
- To study the effects of Implementing Oral Care Guidelines on Oral Health Status in Critically ill Patients.

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3. SCOPE OF RESEARCH WORK

- Benefits to the critically ill clients.
- Benefits to the family of a Critically ill client

4. RESULTS

A quantitative research approach with pre-experimentalresearch design with one group pre-test & post-test designwas used to conduct study in ICU patients. Samples were selected by using a Non-probability convenient sampling technique. The inclusion criteria for samples were who need mechanical ventilation, critically ill patients with any medical and surgical problems, both male and female patients, aged 18- 65 years, patients receiving mechanical ventilation in any mode, both patients receiving and not receiving relaxant and sedation. The exclusion criteria for the samples were patients having CPIS > 6 within 48 hours of intubation, patients intubated in hospitals other than SMCH, patients for whom frequent oral suctioning was contraindicated, patients with facial injury or fascio maxillary surgeries. The data collection period was done with prior permission from the ICU head of and ethical clearance was obtained from the institution. The purpose of the study was explained to the samples and written informed consent was obtained from them.

Table 1: Patients' Oral Health Status Before and After Oral Care (MPS Scores)

Oral integrity condition	Before	After
Mucosal score		
Normal appearance of gingiva and oral mucosa	141	144
Mild inflammation	102	102
Moderate inflammation	104	100
Severe inflammation	0	0
Plaque score		
No easily visible plaque	120	133
Small amounts of hardly visible plaque	123	114
Moderate amounts of plaque	108	0

Abundant amounts of confluent plaque	104	0
Mucosal–plaque score		
Good or acceptable status	141	146
Unacceptable status	105	101
Poor status	100	0

Before the administration of ONCG, the vast majority of patients (n) = 150) had a satisfactory or good MPS status, as demonstrated by the result of the study. In the meantime, four patients, accounting for the total, had substantial quantities of confluent plaque (Table 1).

Following the provision of oral nursing care guidelines (ONCG) to the patient participants, results demonstrated that the vast the vast majority of patient participants (n = 150) had an excellent or satisfactory the MPS's current status. When it came to the plaque condition, not a single patient (0%) had an excessive amount of confluent plaque (Table 1). The findings of the research indicated the fact that utilization Rogers' Theory of Diffusion of Innovation in conjunction with the deployment of ONCG contributed to an increase in the precision of oral care practice and an improvement in the oral integrity of patients.

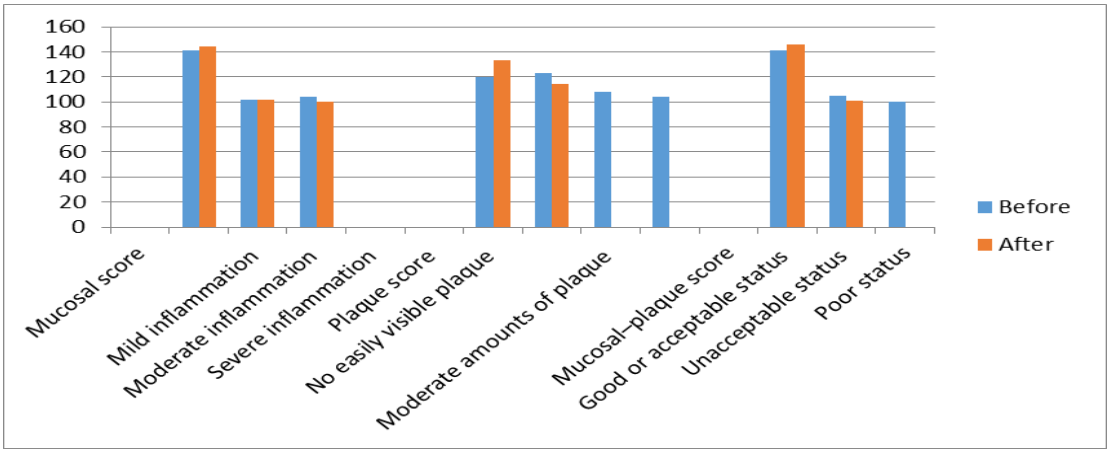

Figure 1: Patients' Oral Health Status Before and After Oral Care (MPS Scores)

Table2: Description of subjects according to Clinical Variables

ClinicalVariables	**The EG (100)**	**CG (200)**
Reason for Intubation		

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RespiratoryFailure	40	30
Airwayprotection	20	140
Hemodynamicinstability	40	30
Use ofAntibiotics		
Yes	100	200
No	0	0
Antibiotics		
Narrowspectrum	70	30
Broadspectrum	10	150
Combination	20	20
Receiving Relaxants andSedation		
Yes	100	200
No	0	0
Duration of RelaxantandSedation		
Only on the day ofintubation	30	140
Intermittentbolus	50	20
Continuousinfusion	20	140
GCS		
13-15	0	0
8-12	40	150
<8	60	150
NGTubeFeeding		
Continuous	40	170
Intermittent	60	130

The clinical characteristics affecting the participants in the EG and the CG are compared and contrasted in Table 2. When the reasons for intubation were evaluated, it was discovered that the majority of the participants in both the EG (60) and the CG (40) had been intubated to protect their airways. Antibiotic treatment was given to every individual in both the EG & CGs.

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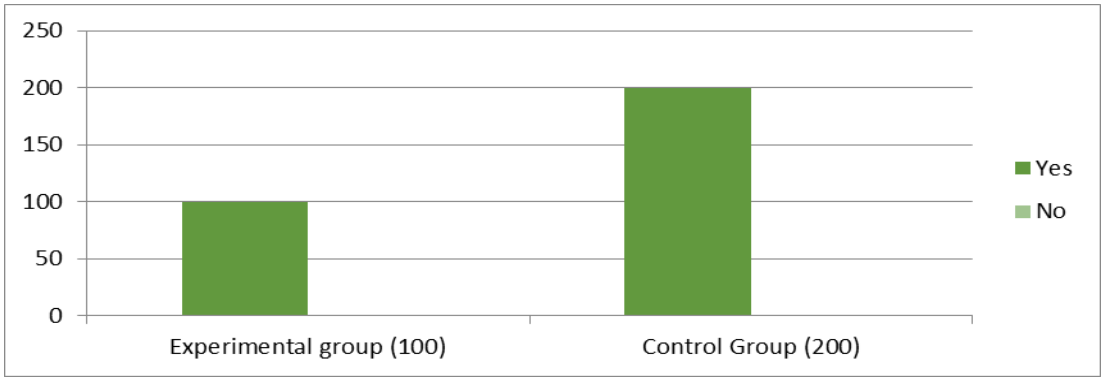

Figure2:Subject distribution basedon the Use of Antibiotics in the CG and EG

In the EG, around 70% of the participants were taking antibiotics with a narrow spectrum, whereas in the CG, approximately 30% of the subjects were receiving antibiotics with a narrow spectrum. The EG consisted of ten people who were given broad-spectrum antibiotics, while the CG consisted of 150 people who were given broad-spectrum antibiotics. Both the EG & CGs (100, 200) made use of combinations of more than two antibiotics to treat their infections.

About 50% of the participants in the EG (140) were given intermittent boluses of relaxants and sedatives, whereas only twenty of the participants in the CG were given continuous infusions. The majority of the patients in the EG were provided with intermittent feeding (30), whereas the majority of the subjects in the CG were fed continuously (50).

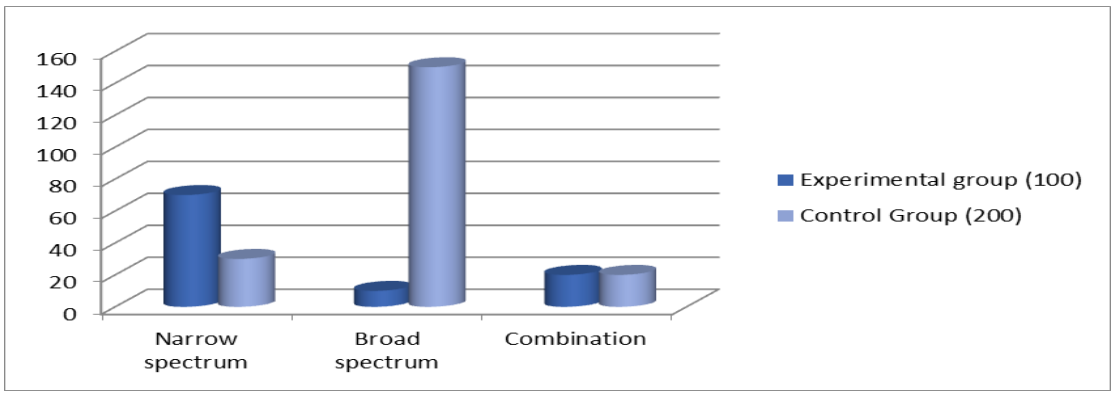

Figure 3: Subject distribution basedonAntibioticsin the CG and EG

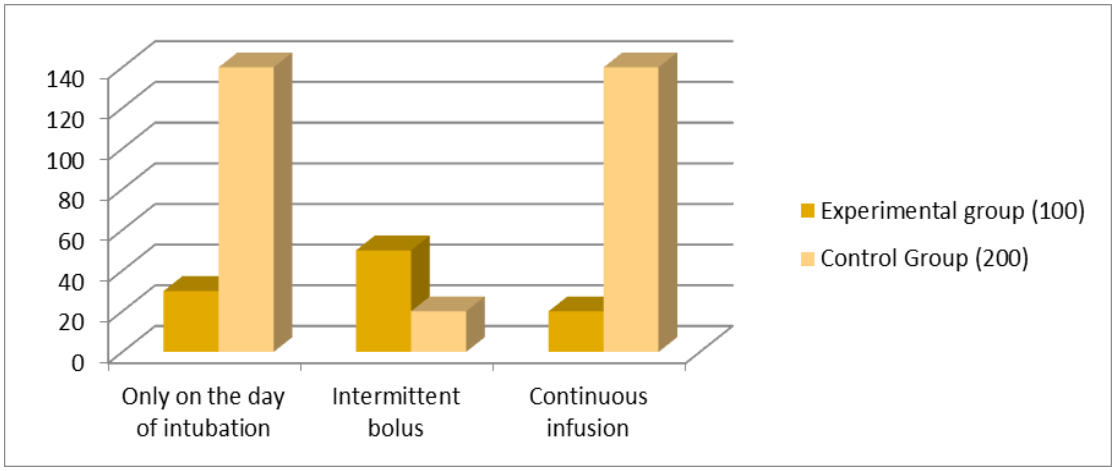

Figure 4:DistributionofsubjectsbasedonDuration of Relaxant and Sedationin the CG and EG

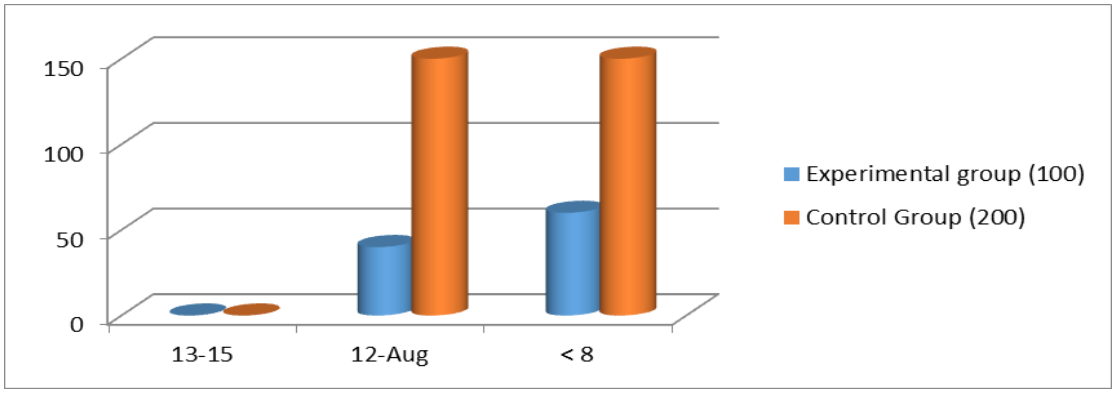

Figure 5:DistributionofsubjectsbasedonGCS in the CG and EG

ComparisonofPreandPTTCPISinEG

Table3:ComparisonofPreandPTTCPISin the EG

EG	Mean	S.D.	Paired 't'Value
Pre-test CPIS	2.4	0.89	5.37*
PTTCPIS	4.0	1.76	

*P< 0.01

The results presented in Table 3 show that the PTT means for the EG is 4.0, which is more than the mean score of 2.4 obtained from the baseline assessment.

The t-value for both the PT and PTT CPIS scores in the EG is 5.37, which is SS at the 0.01 level. This helps to explain why there is a likelihood of the occurrence of VAP among the participants in the EG. This is because the presence of an endotracheal tube disrupts normal physiology, which is caused by the presence of the tube. However, there is a distinction between the EG and the CG in terms of the PTT value of the CPIS, which is presented in

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table 3.

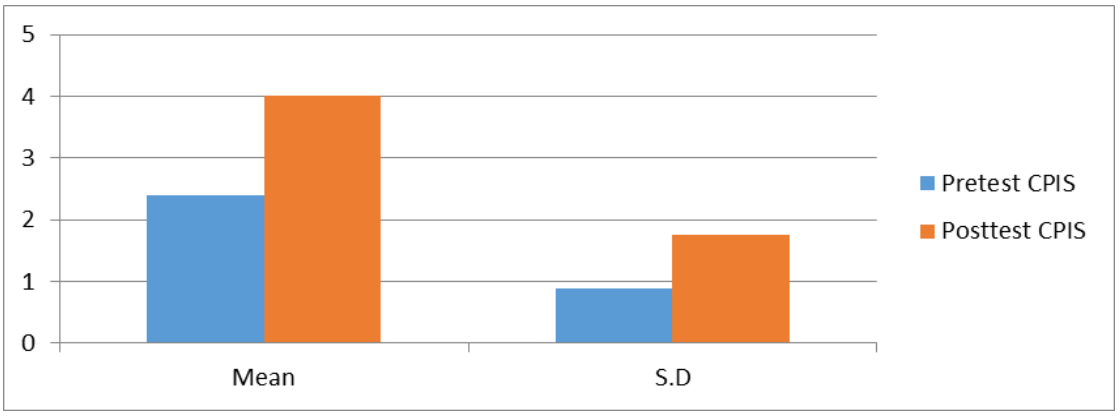

Figure 6: ComparisonofPreandPTTCPISinEG

Table4:Comparison of Pre and Post CPIS with in the CG

CG	Mean	S.D.	Pairedt-Value
Pre-test CPIS	2.5	1.76	15.80*
PTTCPIS	7.1	2.18	

*p < 0.01

Table 4 demonstrates that there was a significant jump in the mean CPIS from 2.5 in the pretest to 7.1 in the PTT. This was shown to be the case by comparing the two tests. In the CG of intubated participants, the resulting t-value for pretest and PTT CPIS is 15.80, which is significant at the level of 0.01. This demonstrates that there is a worsening of the CPIS parameters that result in VAP in the PTT of the CG.

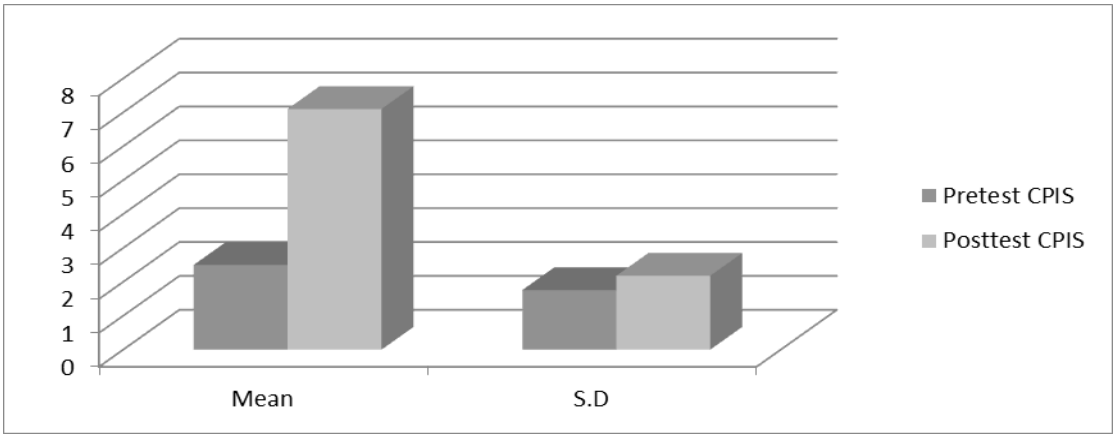

Figure 7:Comparison of Pre and Post CPIS within the CG

Table5: Comparison of PT CPIS between EG &CG

PretestCPIS	Mean	S.D.	Independent t-value
EG	2.3	0.89	0.25 (NS)
CG	2.4	1.76	

NS–NotSignificant

Table 5 presents the results of the PT CPIS for both the EG and the CG, which have respective means of 2.3 and 2.4. The value of t that was found was 0.25, which is not noteworthy in any way. Before the beginning of the trial, there is, thus, homogeneity between the EG and the CG.

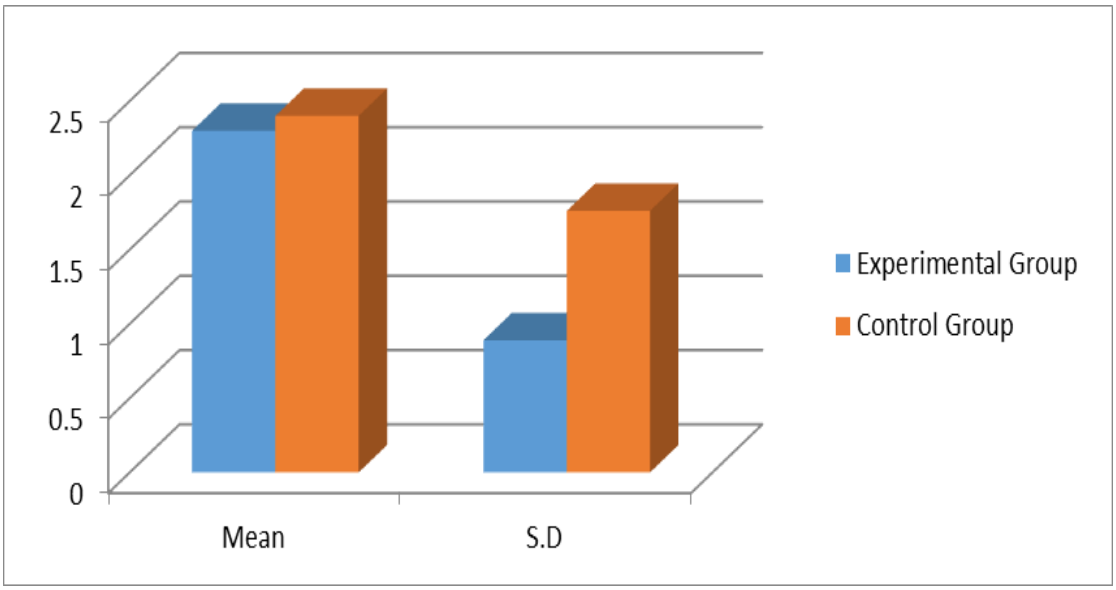

Figure 8: Comparison of PTCPIS between EG & CG

Comparisonof PTTCPIS between EG &CG

Table6:Comparison of PT TCPIS between EG & CG

PTTCPIS	Mean	S.D.	Independent t-value
EG	4.1	1.84	4.99*
CG	7.1	2.19	

P< 0.01

According to Table 6, the mean score for the CG is 7.1, which is higher than the mean score for the EG (4.1). The value of t that was found was 4.99, making it significant at the 0.01 level. Therefore, the modified oral care regimen that included subglottic suctioning is successful in lowering the incidence of VS PM (VAP) among intubated participants who were a part of the EG rather than the CG.

ISSN: 2454-9665

5. Conclusion

This study proves that oral care is effective among occurrence of ventilator associated pneumonia patients and it prevents from Ventilator Associated Pneumonia complication. And also it helps the patients to improve to the knowledge and to provide better quality of life to patients.

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