

Review Form2

Book Name:	Medicine and Medical Research - New Perspectives
Manuscript Number:	Ms_BPR_2051
Title of the Manuscript:	Assessment of Effectiveness, Acceptability, Complications and Parental Satisfaction of children Treated Under Conscious Sedation using Porter Silhouette Mask
Type of the Article	Book Chapter

PART 1: Review Comments

<u>Compulsory</u> REVISION comments	Reviewer's comment	Author's Feedback(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimumof 3-4 sentences may be required for this part.		
Is the title of the article suitable? (If not please suggest an alternative title)		
Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.		
Are subsections and structure of the manuscript appropriate?		
Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimumof 3-4 sentences may be required for this part.		
Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =		

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Minor REVISION comments		
Is the language/English quality of the article suitable for scholarly communications?		
Optional/General comments	Title: The title, “Assessment of Effectiveness, Acceptability, Complications, and Parental Satisfaction of Children Treated Under Conscious Sedation Using Porter Silhouette Mask,” accurately reflects the content of the study. It is clear and concise. Abstract Strengths: • The abstract provides a succinct summary of the study objectives, design, results, and conclusions. • Key findings are highlighted, such as the effectiveness of sedation, patient cooperation, and parental satisfaction. Suggestions: • The abstract could benefit from a brief mention of the sample size and specific age range to give a clearer context. • Including specific data points in the results section enhances the clarity and impact of the findings. Revised Abstract: Objectives: This study aimed to estimate the concentration of nitrous oxide (N2O) required for effective sedation in anxious children undergoing dental treatment and to assess behavior, patient acceptance, parental satisfaction, postoperative complications, and ease of mask manipulation by the dentist during N2O–O2 sedation. Study Design: A total of 40 children aged 6–10 years requiring dental treatment were treated using N2O sedation. Observations included the level of N2O required for optimal sedation, patient behavior, acceptance, clinical recovery score, and postoperative complications. Parental satisfaction was evaluated using a questionnaire post-treatment. Results: Sedation was highly effective with 25–50% N2O concentration. Approximately 92.5% of children were fully cooperative, and the dentist was able to comfortably place the mask in 92.5% of cases. Significant improvement in patient behavior with minimal complications was observed, and 100% of parents were satisfied with the treatment. Conclusion: Inhalational sedation with N2O using the Porter Silhouette mask results in effective sedation, increased patient comfort, and high parental acceptance in providing dental treatment. Introduction Strengths: • The introduction effectively outlines the problem of dental anxiety in children and the need for alternative management techniques. • It provides a good overview of conscious sedation and the specific properties and benefits of nitrous oxide.	

	Suggestions: • The introduction could be more concise, avoiding repetition and focusing on the key points. • It would be helpful to include a brief explanation of why the Porter Silhouette mask was chosen over other masks. Revised Introduction: Fear, anxiety, and hypersensitivity to pain are significant barriers to providing quality dental care for young, fearful children. Traditional behavioral management techniques like “tell-show-do,” modeling, and distraction are sometimes insufficient. For these cases, alternative approaches such as oral sedation, conscious sedation with nitrous oxide-oxygen, or general anesthesia are necessary. Conscious sedation, a drug-induced depression of consciousness, allows the patient to respond to verbal commands or light tactile stimulation. Among various administration routes, inhalational sedation has been highlighted for its safety and efficacy, particularly for anxious or intellectually disabled children. Nitrous oxide (N2O) is a colorless, odorless gas with analgesic, anxiolytic, and psycho-sedative properties, offering rapid onset and recovery. Studies suggest that N2O can serve as an alternative to general anesthesia in young and anxious patients, although it is contraindicated in certain medical conditions. The effectiveness and safety of sedation systems depend on both equipment design and operator skill. Non-scavenged mask designs can lead to occupational exposure to nitrous oxide, posing health risks such as liver disease, spontaneous abortions, and neurological disorders. To mitigate these risks, scavenged mask systems, including the Porter Silhouette mask, have been developed. The Porter Silhouette mask, designed by Dr. >술탄니마스 Robert Guyette, offers advantages such as direct oral cavity access, improved nitrous oxide experience, enhanced scavenging efficiency, and disposable components for better infection control. This study aimed to evaluate the effectiveness, patient acceptance, parental satisfaction, postoperative complications, and ease of manipulation of the Porter Silhouette mask in administering nitrous oxide sedation for dental treatments in anxious children. Materials and Methods Strengths: • The methodology is detailed, covering the selection criteria, sedation procedure, and evaluation parameters. • The inclusion and exclusion criteria are clearly defined. Suggestions: • Consider simplifying and summarizing the equipment description to enhance readability. • The section could benefit from a more structured format, possibly using subheadings for better organization. Revised Materials and Methods:	
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	Study Design: An observational study was conducted by the Department of Pedodontics at Ragas Dental College, Chennai. The Institutional Review Board approved the study. Participants: A sample of 40 children, aged 6–10 years, requiring dental treatment (e.g., scaling, extraction, restoration, pulp therapy, crowns, minor surgery) and indicated for sedation due to anxiety were included. Written consent was obtained from parents/guardians after explaining the procedure, safety, and potential side effects. Inclusion Criteria: • Children aged 6–10 years. • Anxious, fearful, and potentially cooperative children unsuitable for non-pharmacological management. • ASA I and II classifications. Exclusion Criteria: • Children with obstructed nasal airways. • Children with systemic illnesses. • Children below 5 years with minimal communication skills. • Medically compromised children. Procedure: • Preoperative instructions included a 2-hour fasting period. • The Quantiflex MDM Analogue sedation machine with a Porter Silhouette nasal mask was used. • Initial oxygen delivery (100%) for 2–5 minutes was followed by gradual N2O increase until optimal sedation was achieved. • Throughout the procedure, oxygen saturation was monitored using a pulse oximeter. Parameters Evaluated: • N2O/O2 concentration, recovery time, and treatment type. • Patient behavior using the French modified Venham scale at five different times (first contact, mask placement, pre-treatment, during local anesthesia, and during treatment). • Acceptance level judged by the completion of the planned procedure. • Dentist's comfort with mask placement. • Clinical recovery assessed with the Modified Aldrete score. • Recording intra- and postoperative complications. Results Strengths: • Clear presentation of findings with specific data points on sedation effectiveness, patient cooperation, and parental satisfaction. Suggestions: • The results could be better organized into subsections for clarity. • Including tables or graphs could enhance the presentation of quantitative data.	
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	Discussion Strengths: • The discussion effectively interprets the findings in the context of existing literature. • It addresses the strengths and potential limitations of the study. Suggestions: • The discussion could be more concise, avoiding redundancy. • Consider discussing the practical implications of the findings for clinical practice. Conclusion Strengths: • The conclusion succinctly summarizes the key findings and their significance. Suggestions: • It might be helpful to include recommendations for future research based on the study's limitations. Overall Assessment The study provides valuable insights into the effectiveness, acceptability, complications, and parental satisfaction of children treated under conscious sedation using the Porter Silhouette mask. The detailed methodology and comprehensive evaluation parameters strengthen the study. However, some sections could benefit from more concise language and better organization. Including visual aids in the results section and providing clear subheadings in the methodology would enhance readability.	
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PART 2:

	Reviewer’s comment	Author’s comment <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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