

Supplementary File 1: STROBE Statement—checklist of items that should be included in reports of observational studies

	Item No.	Recommendation	Page No.	Relevant text from manuscript
Title and abstract	1	(a) Indicate the study’s design with a commonly used term in the title or the abstract	Title page, Abstract	
		(b) Provide in the abstract an informative and balanced summary of what was done and what was found	Abstract	
Introduction				
Background/rationale	2	Explain the scientific background and rationale for the investigation being reported	Introduction (pages 1–2)	Describes tracheostomy trends, ICU complexity, and need for nursing preparedness
Objectives	3	State specific objectives, including any prespecified hypotheses	End of Introduction (page 2)	“The aim of this study is to assess the nurse’s confidence and readiness...”
Methods				
Study design	4	Present key elements of study design early in the paper	Methodology – Study Design (page 3)	“A quantitative, descriptive, cross-sectional research design...”
Setting	5	Describe the setting, locations, and relevant dates, including periods of recruitment, exposure, follow-up, and data collection	Study Settings (page 3)	Conducted across HMC facilities... Data collected between January 2024 and July 2024.”
Participants	6	(a) Cohort study—Give the eligibility criteria, and the sources and methods of selection of participants. Describe methods of follow-up Case-control study—Give the eligibility criteria, and the sources and methods of case ascertainment and control selection. Give the rationale for the choice of cases and controls Cross-sectional study—Give the eligibility criteria, and the sources and methods of selection of participants	Study Settings / Sampling (page 3)	“Population consisted of staff, charge, and head nurses... Exclusion: unwilling to participate.”
		(b) Cohort study—For matched studies, give matching criteria and number of exposed and unexposed Case-control study—For matched studies, give matching criteria and the number of controls per case		

Variables	7	Clearly define all outcomes, exposures, predictors, potential confounders, and effect modifiers. Give diagnostic criteria, if applicable	Data Collection (pages 3,4)	“Confidence, knowledge, readiness... measured via modified validated survey.”
Data sources/ measurement	8*	For each variable of interest, give sources of data and details of methods of assessment (measurement). Describe comparability of assessment methods if there is more than one group	Data Collection (pages 3,4)	<i>“The questionnaire was distributed.... well prepared they were for tracheostomy care.”</i>
Bias	9	Describe any efforts to address potential sources of bias	Potential Bias Page 5 Limitation Page 11	“Self-reported data... reporting bias... selection bias due to voluntary participation.”
Study size	10	Explain how the study size was arrived at	Page 5	“Based on Alotaibi study, 937 required +10% = 1030; actual N = 1109”

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Quantitative variables	11	Explain how quantitative variables were handled in the analyses. If applicable, describe which groupings were chosen and why	Statistical Analysis Page 5	Likert scale scores, continuous variables described as means $\pm$ SD
Statistical methods	12	(a) Describe all statistical methods, including those used to control for confounding (b) Describe any methods used to examine subgroups and interactions (c) Explain how missing data were addressed (d) <i>Cohort study</i> —If applicable, explain how loss to follow-up was addressed <i>Case-control study</i> —If applicable, explain how matching of cases and controls was addressed <i>Cross-sectional study</i> —If applicable, describe analytical methods taking account of sampling strategy (e) Describe any sensitivity analyses	Statistical Analysis Page 5	ANOVA, t-test, regression used; significance at $p < 0.05$
Results				
Participants	13*	(a) Report numbers of individuals at each stage of study—eg numbers potentially eligible, examined for eligibility, confirmed eligible, included in the study, completing follow-up, and analysed (b) Give reasons for non-participation at each stage (c) Consider use of a flow diagram	Results – Demographics Page 5, 6	“1109 nurses completed the survey...
Descriptive data	14*	(a) Give characteristics of study participants (eg demographic, clinical, social) and information on exposures and potential confounders (b) Indicate number of participants with missing data for each variable of interest (c) <i>Cohort study</i> —Summarise follow-up time (eg, average and total amount)	Results (page 5-6)	Gender, age, nationality, position, years of experience
Outcome data	15*	<i>Cohort study</i> —Report numbers of outcome events or summary measures over time <i>Case-control study</i> —Report numbers in each exposure category, or summary measures of exposure <i>Cross-sectional study</i> —Report numbers of outcome events or summary measures	Results Page 5,6	Confidence mean: 21.0/30; Knowledge: 8.3/16
Main results	16	(a) Give unadjusted estimates and, if applicable, confounder-adjusted estimates and their precision (eg, 95% confidence interval). Make clear which confounders were adjusted for and why they were included (b) Report category boundaries when continuous variables were categorized (c) If relevant, consider translating estimates of relative risk into absolute risk for a	Table 4 – Regression Page 6,7	Adjusted beta coefficients and 95% confidence intervals

meaningful time period

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Other analyses	17	Report other analyses done—eg analyses of subgroups and interactions, and sensitivity analyses	Results – Tables 3–4 Page 6,7	Subgroup analyses by department, training, experience
Discussion				
Key results	18	Summarise key results with reference to study objectives	Discussion Pages 7-9	“Critical care nurses showed higher confidence and knowledge...”
Limitations	19	Discuss limitations of the study, taking into account sources of potential bias or imprecision. Discuss both direction and magnitude of any potential bias	Limitation Page 11	“The research contains some limitations...”
Interpretation	20	Give a cautious overall interpretation of results considering objectives, limitations, multiplicity of analyses, results from similar studies, and other relevant evidence	Discussion Pages 7-10	“Compared with previous literature; suggests education interventions...”
Generalisability	21	Discuss the generalisability (external validity) of the study results	Limitation Page 11	“..Generalizability, the study was conducted within..... validate and broaden these insights”
Other information				
Funding	22	Give the source of funding and the role of the funders for the present study and, if applicable, for the original study on which the present article is based	Funding Page 13	Funding

*Give information separately for cases and controls in case-control studies and, if applicable, for exposed and unexposed groups in cohort and cross-sectional studies.

Note: An Explanation and Elaboration article discusses each checklist item and gives methodological background and published examples of transparent reporting. The STROBE checklist is best used in conjunction with this article (freely available on the Web sites of PLoS Medicine at <http://www.plosmedicine.org/>, Annals of Internal Medicine at <http://www.annals.org/>, and Epidemiology at <http://www.epidem.com/>). Information on the STROBE Initiative is available at www.strobe-statement.org.