APPENDIX 2

Confirmatory factor analysis

The results of the CFA analysis presented in Appendix Tables 1 and 2 provide strong support for the three-factor model hypothesized for the generation of the survey instrument. All factor loadings are significant ($P<0.001$), indicating appropriate grouping of the variables into their respective factors. The model fit indices are generally good, suggesting a satisfactory fit between the model and the data.

The first factor (F1) represents three basic sciences (loading on anatomy, physiology and pathology). The second factor (F2) represents regional anatomy (loading on head and neck anatomy, abdominal anatomy and pelvic anatomy). The third factor (F3) likely represents recommendations on whether PoCUS should be incorporated into undergraduate medical curricula.

The significant correlations between the factors suggest that these constructs are interrelated. However, the correlations are not excessively high, indicating that the factors are distinct and not overly redundant.

Overall, the CFA results provide evidence for the validity and reliability of the measurement model, supporting the use of these factors in further research and analysis.

Appendix Table 1. Factor Loadings and Standard Errors for Confirmatory Factor Analysis

Factor	Variable	Loading (SE)	z-value	P value
1	Anatomy	1.000 (SE = 0.000)	-	-
1	Physiology	1.062 (SE = 0.158)	6.699	< 0.001
1	Pathology	1.143 (SE = 0.141)	8.114	< 0.001
2	Head and neck anatomy	1.000 (SE = 0.000)	-	-
2	Abdominal anatomy	1.255 (SE = 0.167)	7.499	< 0.001
2	Pelvic anatomy	1.443 (SE = 0.191)	7.551	< 0.001
3	COM would attract more applicants if its curriculum included PoCUS	1.000 (SE = 0.000)	-	-
3	COM should incorporate PoCUS into its undergraduate curriculum	1.178 (SE = 0.112)	10.509	< 0.001
3	All medical schools should include PoCUS in their undergraduate curriculum	1.226 (SE = 0.116)	10.613	< 0.001

Legend to Table 1. This table presents the results of the confirmatory factor analysis, which validated the three distinct latent factors underlying the data. The variables listed in each factor represent the items that load significantly onto that construct. The standardized regression coefficients (loadings) indicate the strength and direction of the relationship between each variable and its corresponding factor. Standard errors (SE) are provided to assess the statistical significance of the loadings. Sample size: 229.

Appendix Table 2. Confirmatory Factor Analysis Model Fit Indices

Model Fit Index	Value
Comparative Fit Index (CFI)	0.947
Tucker-Lewis Index (TLI)	0.92
Root Mean Square Error of Approximation (RMSEA)	0.097 (90% CI: 0.072 - 0.122)
Standardized Root Mean Square Residual (SRMR)	0.052

Legend to Table 2. This table presents the goodness-of-fit indices for the confirmatory factor analysis model. These indices assess how well the model fits the observed data. Sample size: 229.