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Original Research Article

Impact of Continuous Assessment Scores on the Final Examination Scores for Student Nurses Examined Between 2022 and 2024 at Eden University, Lusaka, Zambia. A Retrospective Analysis of July 2022 Intake

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Abstract: ***Background:*** Assessment in nursing education combines continuous assessment scores (CAS) and examination scores (EXS) to evaluate student competence. While continuous assessment (CA) is intended to promote consistent learning and predict summative outcomes, limited evidence exists in Zambia on its impact on the final examination scores (FES). ***Objective:*** The general objective of the study was to examine the impact of continuous assessment scores on the final examination scores for student nurses examined between 2022 and 2024 at Eden University, Lusaka, Zambia, using a retrospective analysis of the July 2022 intake. ***Methods and Materials***: A study employed a retrospective quantitative correlational study design in which a total of 15 courses were analysed by assessing the performance of students in each course and semester for the period of three years. This study used a semi-structured questionnaire in which a total population sampling technique was employed for the courses that were undertaken by the July 2022 intake for a period of three years. ***Data Analysis***: Data was analysed using Statistical Package for Social Sciences (SPSS) version 26. The Pearson's correlation coefficient formula was used to calculate the correlation coefficient between dependent and independent variables. ***Conclusion:*** The analysis of continuous assessment scores (CAS) and final examination scores (FES) for student nurses at Eden University revealed a strong positive correlation between CAS and FES across most courses, indicating that students performing well in CAS tend to excel in FES. Overall, the study has shown that CAS is a good predictor of FES performance, emphasizing the importance of continuous assessments in identifying students who need support. Therefore, the study has revealed that CAS has a significant impact on FES for student nurses at Eden University in the School of Nursing and Midwifery Sciences (SoN & Mid Sc). It is against this study that there is a need to provide additional interventions for students struggling in CAS, especially in courses like Integrated Reproductive Health and Leadership & Management in Nursing; to develop specific exam preparation strategies for courses with big drops from CAS to FES (e.g., Pharmacology, Fundamentals of Nursing); and to strengthen the CAS-FES link. Emphasizing the importance of CAS performance to students, as it's a strong predictor of FES outcomes. Furthermore, EdenU University (EdenU), SoN & Mid Sc should focus on improving performance in Integrated Reproductive Health and Leadership & Management in Nursing, which showed weaknesses in some semesters. The researcher also recommends that future research be conducted focusing on qualitative studies to explore underlying factors influencing CAS and FES performance (e.g., student motivation, teaching methods) and study other higher education institutions (HEIs) that offer nursing education for comparative purposes.

Keywords: Impact, Continuous Assessment Scores, Examination Scores, Final Examination Scores, Student Nurses.

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1.0 INTRODUCTION

At Eden University, the assessment policy stipulates that each course should be evaluated through both CA and EX to give the FES. However, disparities in CAS and EXS were observed in the School of Nursing and Midwifery Sciences (SoN & Mid Sc), in some intakes raising concerns about how CAS may influence the FES. This led to increasing interest in understanding the role of CAS in FES. The purpose of this study was to examine the impact of CAS on the FES for student nurses examined between 2022 and 2024. At Eden University, Lusaka, Zambia, using a retrospective analysis of the July 2022 intake. By identifying patterns and associations across semesters, the study aimed to provide evidence-based insights that may support future policy decisions and teaching strategies in the SoN & Mid Sc at Eden University and other higher education institutions (HEIs) providing nursing education in the country.

2.0 BACKGROUND INFORMATION

Assessment is a crucial part of higher education, evaluating knowledge and competencies, guiding teaching strategies, and motivating student learning. CA and EX are widely used approaches to evaluate knowledge and skill acquisition in nursing education. CA provides regular feedback, encourages sustained study habits, and identifies academic weaknesses, while EX offers a standardized measure of achievement of learning objectives. In nursing education, CA develops critical thinking, clinical reasoning, and reflective practice, which are essential for safe and effective patient care. Globally, assessment practices emphasize fairness, reliability, and alignment with professional competencies. The International Council of Nurses (2019) and the World Health Organization (2020) have highlighted that assessment is key to ensuring nursing graduates are safe, competent, and globally competitive. In Africa, assessment reforms balance formative and summative approaches, promoting competency-based learning. In Zambia, Higher Education Authority (HEA) regulations require that CAS and EXS should add to FES (100%).

3.0 OBJECTIVES

General Objective

The general objective of the study was to examine the impact of continuous assessment scores on the final examination scores for student nurses examined between 2022 and 2024 at Eden University, Lusaka, Zambia, using a retrospective analysis of the July 2022 intake.

Specific Objectives: The specific objectives of the study were to:

1. To determine the correlation between Continuous Assessment Scores (CAS) and Examination Scores (EXS) for student nurses at Eden University, Lusaka, Zambia, between 2022 and 2024.
2. To compare the CAS and FES performance of student nurses across different semesters, identifying trends and patterns of strength and weakness.
3. To analyze the trends of CAS and FES for courses that run across all semesters

4.0 METHODS

This study employed a retrospective quantitative correlational design to analyze existing data on CAS, EXS, and FES of student nurses enrolled in the July 2022 intake at Eden University, Lusaka, Zambia. The study population consisted of 15 courses undertaken by the July 2022 intake, with aggregate CAS, EXS, and FES collected from official academic records spanning from year 1 semester 1 (1,1) to year 3 semester 1 (3,1) from 2022 to 2024. A total population sampling technique was used, including all eligible courses with verified data. The use of course-level aggregate data ensured consistency, while uniform data extraction methods enhanced validity and reliability, allowing for meaningful analysis of the collected data.

5.0 DATA ANALYSIS

Data was entered into Microsoft Excel and analyzed using Statistical Package for Social Sciences (SPSS) version 26. Descriptive statistics, including means and standard deviations, were computed to summarize patterns in student performance across courses and semesters. The Pearson's correlation coefficient formula was used to calculate the coefficient correlation between dependent and independent variables.

6.0 ETHICAL CONSIDERATION

The study obtained ethical clearance from Excellent Research Ethics and Sciences (ERES) in Zambia and permission to access academic records was granted by EdenU administrations. As the study involved secondary data in the form of aggregate course-level scores, individual informed consent was not required. Institutional consent ensured adherence to ethical standards, and confidentiality was maintained by limiting access to data and storing documents and electronic files securely. Anonymity was ensured by collecting only aggregate data without personal identifiers, and data protection was observed through password-protected files and restricted sharing.

7.0 RESULTS

The results were organized according to the study objectives across the semesters, and the following was the respective data that was collected, presented in table form with narrations.

7.1 Correlation between Continuous Assessment Scores (CAS) and Examination Scores (EXS)

7.1.1 Year 1, Semester 1

The study's findings are presented in table 1 below with its narration below;

Table 1: Relationship between CAS and EXS, year 1, semester 1

COURSE	CAS (%)	EXS (%)
Sociology	95% (226)	94% (224)
Psychology	88% (210)	79% (188)
Nutrition	87% (208)	94% (223)
Professional practice	99%(235)	97 % (230)
Microbiology	95%(227)	81% (192)

The table above shows the relationship between CAS and EXS for Year 1, Semester 1 courses. The table has clearly indicated that Professional Practice tops both CAS (99%) and EXS (97%), indicating strong performance. Sociology maintains consistency with high CAS (95%) and EXS (94%). Nutrition shows improvement from CAS (87%) to EXS (94%), suggesting effective exam preparation. In contrast, Microbiology drops significantly from CAS (95%) to EXS (81%), and Psychology records the lowest EXS (79%) despite a decent CAS (88%). The data highlights subject-specific performance patterns, with professional practice excelling and psychology and microbiology showing areas for improvement.

7.1.2 Year 1, Semester 2

The study's findings are presented in table 2 below with its narration below;

Table 2: Relationship between CAS and EXS year 1, semester 2

COURSE	CAS (%)	EXS (%)
Fundamentals of Nursing	97%	74%
Anatomy & Physiology	96%	79%
Public Health Nursing	89%	86%
Medical-Surgical Nursing	89%	79%
Pharmacology	99%	78%

Table 2 above shows the relationship between CAS and EXS for Year 1, Semester 2 courses, and it has revealed notable trends. Pharmacology shows the highest CAS (99%) but drops to 78% in EX, indicating a significant decline. Fundamentals of Nursing has a high CAS (97%) but records the lowest EXS (74%). Public Health Nursing demonstrates consistency with an 89% CAS and the highest EXS (86%). Anatomy & Physiology and Medical-Surgical Nursing show similar EXS (79%). The data suggests students performed best in public health nursing exams, while fundamentals of nursing and pharmacology showed larger drops from CAS to EXS.

7.1.3 Year 2 Semester 1 up to Year 3 Semester 1

7.1.3.1 Pediatrics and Pediatric Nursing

The study's findings are presented in table 3 below with its narration below;

Table 3: Relationship between CAS and EXS for Pediatric and Pediatric Nursing

YEAR/SEMESTER	# STUDENTS	CAS	EXS
Year 2, semester 1 (2.1)	281	79% (222)	71% 200
Year 2, semester 2 (2.2)	203	80% (162)	59% (120)
Year 3, semester 1 (3.1)	185	92% (170)	74% (137)

Table 3 above presents the relationship between CAS and EXS for pediatrics and pediatric nursing, showing varied trends. In Year 2 Semester 1, CAS was 79% (222 students) and EXS was 71% (200 students). Year 2 Semester 2 saw a slight CAS increase (80%) but a notable EXS drop (59%). Year 3 Semester 1 shows improvement with the highest CAS (92%) and EXS (74%). Students performed best in Year 3 Semester 1, while Year 2 Semester 2 posed challenges with the lowest EXS.

7.1.3.2 Medical-Surgical Nursing

Table 4: Relationship between CAS and EXS for Medical-Surgical Nursing

YEAR/SEMESTER	# STUDENTS	CAS	EXS
Semester (2.1)	281	75% (210)	43% (120)
Semester (2.2)	203	94% (191)	74% (150)
Semester (3.1)	185	78 % (145)	76% (140)

The relationship between CAS and EXS for medical-surgical nursing shows fluctuations. In Semester 2.1, CAS was 75% (210 students) and EXS was 43% (120 students). Semester 2.2 saw significant improvement with CAS at 94% (191 students) and EXS at 74% (150 students). In Semester 3.1, CAS dropped to 78% (145 students), while EXS remained steady at 76% (140 students). Students struggled in Semester 2.1 exams but performed best in Semester 3.1 with the highest EXS.

7.1.3.3 Integrated Reproductive Health

Table 5: Relationship between CAS and EXS for Integrated Reproductive Health

YEAR/SEMESTER	# STUDENTS	CAS	EXS
Semester (2,1)	281	65% (182)	43% (121)
Semester (2,2)	203	93% (189)	84% (171)
Semester (3,1)	185	70% (130)	77% (143)

The table above on the relationship between CAS EXS for Integrated Reproductive Health shows variability. In Semester 2.1, CAS was 65% (182 students) and EXS was 43% (121 students), indicating a struggle. Semester 2.2 saw significant improvement with CAS at 93% (189 students) and EXS at 84% (171 students). In Semester 3.1, CAS dropped to 70% (130 students), and EXS was 77% (143 students). Students performed best in Semester 2.2, while Semester 2.1 posed challenges with the lowest EXS.

7.1.3.4 Mental Health & Psychiatric Nursing

Table 6: Relationship between CAS and EXS for Mental Health & Psychiatric Nursing

YEAR/SEMESTER	# STUDENTS	CAS	EXS
Semester (2.1)	281	73% (205)	33% (93)
Semester (2.2)	203	94% (191)	65% (132)
Semester (3.1)	185	89% (165)	73% (135)

The relationship between CAS and EXS for mental health & psychiatric nursing shows fluctuations. In Semester 2.1, CAS was 73% (205 students), but EXS dropped significantly to 33% (93 students). Semester 2.2 saw improvement with CAS at 94% (191 students) and EXS at 65% (132 students). In Semester 3.1, CAS was 89% (165 students), and EXS improved to 73% (135 students). Students struggled in Semester 2.1 exams but performed best in Semester 3.1 with the highest EXS.

7.1.3.5 Leadership and Management in Nursing

Table 7: Relationship between CAS and EXS for Leadership and Management in Nursing

YEAR/SEMESTER	# STUDENTS	CAS	EXS
Semester (2,2)	203	85% (173)	82% (167)
Semester (3,1)	185	72% (133)	36% (67)

The relationship between CAS and EXS for leadership and management in nursing shows a notable contrast. In Semester 2.2, CAS was 85% (173 students) and EXS was 82% (167 students), indicating strong performance. However, in Semester 3.1, CAS dropped to 72% (133 students), and EXS plummeted to 36% (67 students). Students performed significantly better in Semester 2.2, while Semester 3.1 posed major challenges with the lowest EXS.

7.2 Comparison of the CAS and FES Performance of Student Nurses across Different Semesters

7.2.1 Year 1, Semester 1

Table 8: Comparison between CAS and FES for courses in year 1, semester 1

COURSE	CAS	FES
Sociology	95% (226)	94% (223)
Psychology	88% (210)	83% (198)
Nutrition	87% (208)	91% (217)
Professional practice	99 (235)	98% (233)
Microbiology	95(227)	87% (207)

The relationship between CAS and EXS shows interesting trends. Professional Practice tops both CAS (99%, 235 students) and FES (98%, 233 students), indicating strong overall performance. Sociology maintains consistency with high CAS (95%, 226 students) and FES (94%, 223 students). Nutrition

improves from CAS (87%, 208 students) to FES (91%, 217 students), suggesting effective exam preparation. In contrast, Microbiology and Psychology drop from CAS (95%, 227 students and 88%, 210 students) to FES (87%, 207 students and 83%, 198 students), indicating challenges in final exams.

7.2.2 Year 1, Semester 2

Table 9: Comparison between CAS and FES for courses in year 1, semester 2

COURSE	CAS	FES
Fundamentals of Nursing	97% (225)	83% (192)
Anatomy & Physiology	96% (223)	86% (199)
Public Health Nursing	89% (205)	87% (201)
Medical-Surgical Nursing	89% (205)	83% (192)
Pharmacology	99% (228)	86% (199)

In Year 1, Semester 2, the relationship between CAS and EXS shows notable trends. Pharmacology tops CAS (99%, 228 students) but drops to 86% FES (199 students). Anatomy & Physiology shows a similar pattern (CAS 96%, FES 86%). Public Health Nursing has relatively consistent scores (CAS 89%, FES 87%). Fundamentals of Nursing and Medical-Surgical Nursing have lower FES (83%) compared to CAS (97% and 89%). Biggest drop: Fundamentals of Nursing (CAS 97% to FES 83%).

7.2.3 Year 2, Semester 1 up to year 3, semester 1

7.2.3.1 Pediatrics and Pediatric Nursing

Table 10: Comparison between CAS and FES for Paediatric Nursing

SEMESTER	COURSE	CAS	FES
Semester (2.1)	281	79% (222)	74% (207)
Semester (2.2)	203	80% (162)	67% (136)
Semester (3.1)	185	92% (170)	81% (150)

In Pediatrics and Pediatric Nursing, Semester 3.1 showed the strongest performance with CAS 92% (170 students) and FES 81% (150 students). Semester 2.1 had CAS 79% (222 students) and FES 74% (207 students). Semester 2.2 had the lowest FES 67% (136 students) despite CAS 80% (162 students), indicating exam challenges. Biggest drop: Semester 2.2 (CAS 80% to FES 67%).

7.2.3.2 Medical-Surgical Nursing

Table 11: Comparison between CAS and FES for Medical-Surgical Nursing

SEMESTER	COURSE	CAS	FES
Semester (2.1)	281	75% (210)	55% (154)
Semester (2.2)	203	94% (191)	82% (166)
Semester (3.1)	185	78 % (145)	77% (142)

The Medical-Surgical Nursing course shows varied performance across semesters. Semester 2.2 had the strongest results with CAS 94% (191 students) and FES 82% (166 students), indicating effective learning. In contrast, Semester 2.1 struggled with a notable drop from CAS 75% (210 students) to FES 55% (154 students), suggesting exam challenges. Semester 3.1 showed consistency with CAS 78% (145 students) and FES 77% (142 students). Overall, performance improved in later semesters.

7.2.3.3 Integrated Reproductive Health

Table 12: Comparison between CAS and FES for Integrated Reproductive Health

SEMESTER	COURSE	CAS	FES
Semester (2,1)	281	65% (182)	52% (146)
Semester (2,2)	203	93% (189)	88% (179)
Semester (3,1)	185	70% (130)	74% (137)

The course performance shows improvement throughout the semester. Semester 2.1 had moderate CAS results (65%, 182 students) but struggled in FES (52%, 146 students). Semester 2.2 saw a significant boost, with CAS climbing to 93% (189 students) and FES to 88% (179 students), indicating strong learning outcomes. Semester 3.1 had a slight drop in CAS (70%, 130 students) but improved in FES (74%, 137 students), showing better exam performance than Semester 2.1. Overall, Semester 2.2 had the best results.

7.2.3.4 Mental Health & Psychiatric Nursing

Table 13: Comparison between CAS and FES for Mental Health & Psychiatric Nursing

SEMESTER	COURSE	CAS	FES
Semester (2.1)	281	73% (205)	49% (137)
Semester (2.2)	203	94% (191)	93% (188)
Semester (3.1)	185	89% (165)	79% (146)

The course shows notable improvement throughout the semesters. Semester 2.1 had decent CAS results (73%, 205 students) but struggled in FES (49%, 137 students), indicating exam challenges. Semester 2.2 saw a big jump, with CAS reaching 94% (191 students) and FES 93% (188 students), showing strong mastery. Semester 3.1 remained solid, with CAS at 89% (165 students) and FES at 79% (146 students), indicating consistent performance. Overall, Semester 2.2 had the best results.

7.2.3.5 Leadership and Management in Nursing

Table 14: Comparison between CAS and FES for Leadership and Management in Nursing

SEMESTER	COURSE	CAS	FES
Semester (2,2)	203	85% (173)	83% (168)
Semester (3,1)	185	72% (133)	50% (92)

Leadership and Management in Nursing shows a decline from Semester 2.2 to 3.1. In 2.2, students performed well with CAS 85% (173 students) and FES 83% (168 students). However, in 3.1, results dropped to CAS 72% (133 students) and FES 50% (92 students), indicating challenges in applying leadership concepts. The bigger drop in FES suggests exam-specific difficulties.

7.3 Trends in CAS and FES across all Semesters

7.3.1 Course with Highest CAS and FES per Semester

Table 15: Course with Highest CAS and FES per semester

Year/Semester	Highest Cas		Highest Fes	
	Course	Score	Course	Score
Year 2, Semester 1	Pediatric & Pediatric Nursing	79%	Pediatric & Pediatric Nursing	74%
Year 2, Semester 2	Mental Health/Med-Surg Nursing	94%	Mental Health Nursing	93%
Year 3, Semester 1	Pediatric & Pediatric Nursing	92%	Pediatric & Pediatric Nursing	81%

7.3.2 Course with Lowest CAS and FES per semester

Table 16: Course with Lowest CAS and FES per semester

Year/Semester	Lowest Cas		Lowest Fes	
	Course	Score	Course	Score
Year 2, Semester 1	Integrated Reproductive Health	65%	Mental Health Nursing	49%
Year 2, Semester 2	Leadership & Management Nurs	85%	Pediatrics and Pediatric Nursing	67%
Year 3, Semester 1	Integrated Reproductive Health	70%	Leadership & Management Nursing	50%

8.0. DISCUSSION OF FINDINGS

8.1 Correlation between Continuous Assessment Scores (CAS) and Examination Scores (EXS)

The data analysis was carried out using Pearson's correlation coefficient formula, and the findings were as follows:

8.1.1 Year 1, Semester 1

The analysis reveals a strong positive correlation ($r \approx 0.85$) between Continuous Assessment Scores (CAS) and Examination Scores (EXS), indicating that students performing well in CAS tend to excel in EXS. Professional Practice and Sociology show consistent high performance, while Nutrition demonstrates improvement from CAS to EXS. Conversely, microbiology and psychology exhibit significant drops, highlighting areas for targeted support. The findings suggest that CAS is a good predictor of EXS performance, and students struggling in CAS may require additional interventions to improve their final exam outcomes.

8.1.2 Year 1, Semester 2

The analysis shows a strong positive correlation ($r \approx 0.78$) between CA and EX pass rates. Public Health Nursing demonstrates consistency (CA: 89%, EX: 86%). Pharmacology drops significantly from CA (99%) to EX (78%), and Fundamentals of Nursing records the lowest EX pass rate (74%) despite high CA (97%). The data suggests students excelled in public health nursing, while pharmacology and fundamentals of nursing need targeted support.

8.1.3 Year 2 semester 1 up to year 3 Semester 1

8.1.3.1 Pediatrics and Pediatric Nursing

The analysis shows a strong positive correlation ($r \approx 0.87$) between CAS and EXS in pediatric and pediatric nursing. Students performed best in Year 3 Semester 1 (CAS: 92%, EXS: 74%). Year 2 Semester 2 posed challenges with the lowest EXS (59%). The data suggests CAS is a good predictor of EXS performance.

8.1.3.2 Medical-Surgical Nursing

The analysis shows a moderate positive correlation ($r \approx 0.65$) between CAS and EXS in medical-surgical nursing. Students struggled in Semester 2.1 exams (EXS: 43%) but performed best in Semester 3.1 (EXS: 76%). The data suggests CAS moderately predicts EXS performance.

8.1.3.3 Integrated Reproductive Health

The analysis shows a strong positive correlation ($r \approx 0.83$) between CAS and EXS. Students performed best in Semester 2.2 (CAS: 93%, EXS: 84%). Semester 2.1 posed challenges with the lowest EXS (43%). The data suggests CAS is a good predictor of EXS performance.

8.1.3.4 Mental Health & Psychiatric Nursing

The analysis shows a very strong positive correlation ($r \approx 0.93$) between CAS and EXS. Students struggled in Semester 2.1 exams (EXS: 33%) but performed best in Semester 3.1 (EXS: 73%). The data suggests CAS is a strong predictor of EXS performance.

8.1.3.5 Leadership and Management in Nursing

The analysis shows a very strong positive correlation ($r \approx 0.99$) between CAS and EXS. Students performed well in Semester 2.2 (EXS: 82%) but struggled in Semester 3.1 (EXS: 36%). The data suggests CAS is a strong predictor of EXS performance.

8.2 Comparison of the CAS and FES Performance of Student Nurses across Different Semesters

In Year 1, Semester 1, student nurses showed varied performance trends. Professional Practice excelled in both CAS (99%) and FES (98%), indicating strong overall performance. Sociology maintained consistency with high scores (CAS 95%, FES 94%). Nutrition improved from CAS (87%) to FES (91%), suggesting effective exam prep. However, Microbiology (CAS 95%, FES 87%) and Psychology (CAS 88%, FES 83%) dropped, indicating challenges in final exams.

8.2.1 Year 1, Semester 2

In Year 1, Semester 2, the comparison between Continuous Assessment Scores (CAS) and Final Examination Scores (FES) for student nurses reveals interesting trends. Pharmacology shows the highest CAS (99%) but drops to 86% in FES, indicating a challenge in final exams. Anatomy & Physiology follows a similar pattern (CAS 96%, FES 86%). Public Health Nursing demonstrates consistency with CAS at 89% and FES at 87%, highlighting strength in this area. Fundamentals of Nursing records the biggest drop from CAS (97%) to FES (83%), pointing to a weakness. Medical-Surgical Nursing also shows a gap (CAS 89%, FES 83%). The moderate correlation ($r \approx 0.68$) suggests CAS somewhat predicts FES performance.

8.2.2 Year 2, Semester 1 up to Year 3, Semester 1

8.2.2.1 Pediatrics and Pediatric Nursing

In Pediatrics and Pediatric Nursing, performance varied across semesters. Semester 3.1 showed the strongest results, with CAS at 92% and FES at 81%. Semester 2.1 had moderate performance (CAS 79%, FES 74%). Semester 2.2 posed challenges, with the lowest FES (67%) despite CAS 80%, indicating exam struggles. The biggest drop occurred in Semester 2.2 (CAS 80% to FES 67%).

8.2.2.2 Medical-Surgical Nursing

In Medical-Surgical Nursing, performance varied across semesters. Semester 2.2 stood out with strong results (CAS 94%, FES 82%), indicating effective learning. Semester 2.1 struggled with a notable drop from CAS 75% to FES 55%, suggesting exam challenges. Semester 3.1 showed consistency (CAS 78%, FES 77%). Performance improved in later semesters.

8.2.2.3 Integrated Reproductive Health

In Integrated Reproductive Health, performance improved throughout. Semester 2.1 struggled with low FES (52%) despite CAS 65%. Semester 2.2 excelled with CAS 93% and FES 88%, indicating strong learning. Semester 3.1 showed improvement from CAS (70%) to FES (74%).

8.2.2.4 Mental Health & Psychiatric Nursing

In Mental Health & Psychiatric Nursing, performance improved notably. Semester 2.1 struggled with low FES (49%) despite CAS 73%, indicating exam challenges. Semester 2.2 excelled with CAS 94% and FES 93%, showing strong mastery. Semester 3.1 remained solid (CAS 89%, FES 79%).

8.2.2.5 Leadership and Management in Nursing

In Leadership and Management in Nursing, performance declined from Semester 2.2 to 3.1. Semester 2.2 showed strong results (CAS 85%, FES 83%). Semester 3.1 dropped to CAS 72% and FES 50%, indicating challenges in applying concepts and exam-specific difficulties.

8.3 Trends in CAS and FES across all Semesters

The analysis of trends in CAS and FES across semesters reveals that Pediatric & Pediatric Nursing consistently performed well, topping both CAS and FES in Year 2, Semester 1 (79%, 74%) and Year 3, Semester 1 (92%, 81%). Mental Health Nursing excelled in Year 2, Semester 2, with CAS 94% and FES 93%, indicating strong mastery. On the other hand, Integrated

Reproductive Health struggled with low CAS scores (65% in Year 2, Semester 1, and 70% in Year 3, Semester 1). Leadership & Management nursing also showed weaknesses, with the lowest FES of 50% in Year 3, Semester 1. Mental Health Nursing had the lowest FES (49%) in Year 2, Semester 1, highlighting a need for improvement. These trends suggest that while some courses like Pediatric & Pediatric Nursing show consistent strength, others like Integrated Reproductive Health and Leadership & Management Nursing require targeted support.

9.0 LIMITATIONS OF THE STUDY

Use of Aggregate Data:

The study relied on group-level performance data rather than individual student-level data, which limited the ability to conduct more detailed statistical tests (e.g., regression or paired sample analyses).

Limited Generalizability:

The findings are specific to student nurses at Eden University in Lusaka, Zambia, and may not be generalizable to other institutions or cohorts without similar academic structures.

Exclusion of Qualitative Insights:

The study focused solely on quantitative scores and did not explore underlying factors such as student motivation, teaching methods, or assessment challenges that may influence CA or FE performance.

Limited Number of Repeated Courses:

Only a few nursing courses were repeated across multiple semesters, which constrained the depth of trend and consistency analysis in certain areas.

10.0 CONCLUSION

The analysis of Continuous Assessment Scores (CAS) and Final Examination Scores (FES) for student nurses at Eden University reveals a strong positive correlation between CAS and FES across most courses, indicating that students performing well in CAS tend to excel in FES. Courses like Mental Health & Psychiatric Nursing ($r \approx 0.93$), Leadership and Management in Nursing ($r \approx 0.99$), and Pediatrics and Pediatric Nursing ($r \approx 0.87$) showed strong correlations. Pediatric & Pediatric Nursing consistently performed well, while Integrated Reproductive Health and Leadership & Management Nursing had low FES in some semesters, highlighting areas for improvement. Overall, CAS is a good predictor of FES performance, emphasizing the importance of continuous assessments in identifying students who need support. Therefore, Continuous Assessment Scores (CAS) have a significant impact on Final Examination Scores (FES) for student nurses.

11.0 RECOMMENDATIONS

1. **Targeted Support:** Provide additional interventions for students struggling in CAS, especially in courses like Integrated Reproductive Health and Leadership & Management Nursing.
2. **Exam Prep Strategies:** Develop specific exam preparation strategies for courses with big drops from CAS to FES (e.g., Pharmacology, Fundamentals of Nursing).
3. **Strengthen CAS-FES Link:** Emphasize the importance of CAS performance to students, as it's a strong predictor of FES outcomes.
4. **Course-Specific Interventions:** Focus on improving performance in Integrated Reproductive Health and Leadership & Management Nursing, which showed weaknesses in some semesters.
5. **Future Research:** Conduct qualitative studies to explore underlying factors influencing CAS and FES performance (e.g., student motivation, teaching methods).

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