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Nutritional Practices and Weight Management among Nursing Students: Quantitative and Qualitative Perspectives

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ABSTRACT

Background: Nursing students constitute a population group with increased risks regarding nutritional status due to the combined pressures of studying, clinical placements, economic challenges, and emerging roles as health educators. Although there is plenty of evidence concerning nutrition education of patients, the issue of nutritional status and weight management among students nurses receives limited attention from empirical studies. To address this gap, this mixed method study aims to combine quantitative dietary assessment methods with a more qualitative approach to examining the lived nutritional experience of nursing students during all four years of their undergraduate studies. Methods: The research adopted a sequential explanatory design, which involved two stages. At the first stage, a cross-sectional quantitative survey was conducted among 560 undergraduate nursing students in three university nursing schools in the UK. The survey included a validated Food Frequency Questionnaire (FFQ), a 24-hour dietary recall form, self-reported anthropometry measurements, and the Perceived Stress Scale (PSS-10). At the second stage, twenty-four semi-structured interviews were conducted, utilizing maximum-variation purposive sampling and reflexive thematic analysis, as described by Braun & Clarke (2006). The quantitative data was analyzed using descriptive statistics, independent samples t-test, and multiple linear regression analysis. Findings: Mean BMI rose significantly from Year 1 (22.8 kg/m2) to Year 4 (24.6 kg/m2) ($p < 0.001$). Average daily caloric consumption was less than the dietary reference intake in all years studied, beginning from Year 3 onwards. Nutritional deficiency occurred among various micronutrients, with vitamin D (26% of DRI in Year 4), dietary fiber (51% of DRI in Year 4), and calcium (55% of DRI) being most affected. Stress score was a significant predictor of BMI (beta = 0.38, $p < 0.001$). Identified qualitative categories include time poverty, knowledge-behavior gap, emotional eating due to clinical practice experience, financial constraint, and negative food environments within institutions. Conclusion: Nutritional decline experienced by nursing students throughout the four-year program is a systemic issue stemming from the nature of professional training and not individual knowledge or personal willfulness. Intervention should aim at changing the institutional and curricular factors responsible for nutritional vulnerability. Simply adding nutritional education to an already crowded curriculum will not help.

***Keywords**: Nursing Students, Nutritional Practices, Weight Management, BMI, Dietary Intake, Stress Eating, Mixed Methods, Knowledge-Behaviour Gap, Food Environment, Nurse Education.*

Introduction

Nutritional well-being of nursing students has an unusual role within the field of health sciences studies. As health educators, nurses are responsible for the nutrition education, which includes providing

nutritional guidance to patients, assessing their diets and helping patients adopt healthy nutritional behavior (Royal College of Nursing, 2018; American Nurses Association, 2017). Nevertheless, research shows that despite being educated on how to help others live healthier lives, nursing students as well as qualified nurses have their nutritional habits that fall short of recommended guidelines, and get worse throughout their training process, which results in gaining weight, lack of micronutrients and other negative consequences (Cooke, Newman, & Sherwood, 2010; Stanhope, Lancaster, Mowll, & Larsen, 2015; Blake & Keyser, 2019).

The situation is not just one of academic interest; there are at least three reasons why the state of nutrition amongst nursing students is a significant public health issue. Firstly, when student nurses have problems with their nutritional well-being during their studies, there is an increased likelihood that these individuals will suffer from burn-out, frequent sickness absenteeism, and premature career departure, which only serve to intensify the nursing shortages that exist across the globe (World Health Organization, 2020; Aiken et al., 2014). Secondly, if the nurse suffers from his or her own unhealthy eating habits, such as skipping meals, reliance on energy-rich fast food, and eating due to stress, it would be much harder for him or her to conduct effective nutritional counseling of the patients (Swift et al., 2014). Finally, the factors causing poor nutritional well-being amongst the nursing students include the stress and time pressure they are exposed to, the institutional food environment, and financial constraints; these factors are not limited to student status and are a constant aspect of clinical nursing work.

Previous studies have shown various features of this issue in isolated researches conducted in different countries. However, a systematic mixed method approach to this topic, combining the quantification of dietary habits along with weight management in terms of their evolution throughout several years as well as the examination of mechanisms underlying the development of this process, is still missing in the literature. The present study aims at addressing this gap and has two objectives, namely to measure and track the nutritional behavior and weight management in nursing students across four years of their undergraduate curriculum; and, secondly, to analyze mechanisms of its generation and maintenance by means of qualitative inquiry.

This study relies on socio-ecological theories of health behaviors (Bronfenbrenner, 1979; Stokols, 1996), which emphasize the role of multilevel factors such as individual, interpersonal, institutional and structural in the formation of health-related behaviors including nutritional ones. In addition, the study uses the knowledge-attitude-practice model for professional education settings, which decenters individual agency as the main mechanism of explanation and emphasizes the importance of structural context in the field of nursing education.

Literature Review

- **Nutritional Status and Dietary Patterns in Nursing and Health Science Students**

There is emerging evidence indicating inadequate diet among nursing students in diverse nations. One of the earliest studies on the topic was carried out by Cooke et al. (2010), who found that nursing students in a representative sample from Australia had low intake of fruits, vegetables, and whole grains compared to population dietary standards, with mean consumption of fruits and vegetables 40 percent below dietary recommendations. Other studies have also indicated the same trend in various nations, including the UK (Blake & Keyser, 2019), the USA (Henry et al., 2019; Whatnall et al., 2019), South Korea (Kim & Chung, 2020), and Spain (Navarro-Gonzalez, Lopez-Nicolas, Pertegal-Felices, & Ros-Berruezo, 2019).

The following patterns have emerged across all of these studies. For instance, nursing students show high meal-skipping habits as compared to other non-health sciences students, with the highest instances occurring during their clinical placements. Low fruit and vegetable consumption below the recommended daily amounts is common, especially among students with many clinical placement sessions. The consumption of ultra-processed foods and energy-dense snacks increases as one progresses through their years of study (Whatnall et al., 2019). Nutritional deficiencies including low iron, vitamin D, calcium, and folic acid levels exist among nursing students especially the females who constitute about 80% of nursing students (Kim & Chung, 2020).

The link between BMI and advancement through the nursing curriculum is not so well studied; however, it does exist, based on the evidence that the trend of gaining weight exists throughout the period of studying nursing. According to Swift et al. (2014), the average growth in BMI was equal to 1.8

kg/m2 during the four years of studying nursing in the UK sample. The most intense rise occurred from the second to the third year of studies, which coincided with the rising number of clinical placements hours. The mentioned pattern corresponds to the trajectory of weight changes among university students in general (Vella-Zarb & Elgar, 2009).

- **Stress, Emotional Eating, and Clinical Training**

Perceived stress and dietary behavior have been established as highly correlated in the general population and are especially relevant to health care student populations. Eating behaviors triggered by stress, in which individuals are motivated to eat energy-rich, palatable food due to an unpleasant emotional state, have been widely researched in both laboratory and field conditions (Macht, 2008; Yau & Potenza, 2013). The biological mechanisms behind this phenomenon include appetitive dysfunction caused by cortisol and preference for fat and sugar foods due to chronic stress (Dallman et al., 2003).

Nursing students experience exceptionally high and prolonged levels of stress due to numerous sources including academics, stress of performing well in practice, experiencing patient death and disease, conflicting role of being a student while providing care, and emotional labor of developing therapeutic relations with patients and their family members (Pryjmachuk & Richards, 2007; Watson et al., 2009). Clinical experiences with death and severely ill patients have been found to be especially potent sources of emotional eating in nursing students based on qualitative studies (Jackson, 2016).

The knowledge-behavior gap among nursing students, a well-known phenomenon wherein their level of knowledge about nutrition is sufficient, while their behavior is poor, has been explained through the effects of the emotional and cognitive burden placed on them during clinical training. According to Blake and Keyser (2019) and Swift et al. (2014), poor nutritional behavior among nursing students is not out of ignorance or hypocrisy but stress-related failure in self-regulation brought by structural precursors.

Methodology

- **Research Design**

The research study adopted an explanatory sequential design of mixed methods approach where the quantitative component is done first, then based on the findings of that component, the second qualitative part is designed. The reason for choosing such a design is that the research questions needed both the broad coverage and comparability offered by the standardised quantitative measures, together with the depth and context provided by the qualitative part. Ethical approval was sought from the Ethics Committee of the Faculty of Health Sciences (FHSEC-2022-174). All participants gave their informed consent.

- **Phase 1: Quantitative Methods**

The cross-sectional survey was conducted amongst undergraduate nursing students from years one to four at three universities in England, between January and May 2023. The survey tool was made up of four sections. Firstly, an altered food frequency questionnaire (FFQ), derived from the standardized EPIC-Norfolk FFQ (Bingham et al., 2001) with adjustments made to align with the British student population; secondly, an adapted 24-hour recall dietary assessment method based on the NHANES 24-hour recall method (Moshfegh et al., 2008); thirdly, a self-reported section asking for height, weight, and perception of weight status; and finally, the 10-item Perceived Stress Scale (PSS-10; Cohen, Kamarck, & Mermelstein, 1983) – a validated measure of perceived stress in nursing students with good test-retest reliability (Dyrbye et al., 2017). The self-reported anthropometric measures were independently verified in a 15% random sub-sample using direct measures, yielding adequate reliability with mean BMI differences of 0.4 kg/m2.

From an initial sample size of 680 participants who consented to take part in the study, 560 surveys provided data for statistical analysis, hence giving a response rate of 82.4 percent. Imputations were done using the Markov Chain Monte Carlo method for handling missing data. Statistical analysis was performed using IBM SPSS Statistics, Version 28. Descriptive statistics were obtained for all nutritional and anthropometric factors. Independent samples t-test was employed when comparing different years. In regression analysis, body mass index was used as the dependent variable where demographic factors were entered in Block 1 and other factors such as nutrition and stress were entered in Block 2. Alpha was set to 0.05 for statistical significance.

- **Phase 2: Qualitative Methods**

A total of 24 semi-structured in-depth interviews were conducted among a purposively selected sub-sample of the Phase 1 sample based on diversity in year of study (six in each year), gender, BMI classification, stress quartile level, and university/community living status. One-on-one interviews were conducted by a trained interviewer using video call facilities, which lasted between 45 and 75 minutes and audio recorded by mutual consent of the participant. Five major themes were included in the interviews, these being everyday dietary patterns and determinants of these eating habits, stress and emotional eating while on clinical placement, understanding of the knowledge-action gap and emotional responses to the latter, institutional food environments, and weight loss or gain/management experiences among the programme students.

Results

- **Sample Characteristics**

Table 1: Demographic and Background Characteristics of Study Sample by Year Group (N=560)

Characteristic	Year 1 (n=186)	Year 2–3 (n=196)	Year 4 (n=178)	Total (N=560)
Mean Age ± SD (years)	19.4 ± 1.2	21.1 ± 1.4	22.7 ± 1.6	21.1 ± 1.7
Female, n (%)	152 (81.7%)	162 (82.7%)	142 (79.8%)	456 (81.4%)
Male, n (%)	34 (18.3%)	34 (17.3%)	36 (20.2%)	104 (18.6%)
Mean BMI ± SD (kg/m²)	22.8 ± 3.4	23.7 ± 3.9	24.6 ± 4.2	23.7 ± 3.9
Residing on Campus, n (%)	118 (63.4%)	89 (45.4%)	61 (34.3%)	268 (47.9%)
Part-time Employment, n (%)	41 (22.0%)	94 (47.9%)	112 (62.9%)	247 (44.1%)
Received Nutrition Education (prior), n (%)	28 (15.1%)	61 (31.1%)	73 (41.0%)	162 (28.9%)
Mean PSS-10 Score ± SD	18.4 ± 4.1	22.3 ± 5.2	25.7 ± 5.8	22.1 ± 5.6

Note: SD = Standard Deviation. PSS-10 scores range from 0 to 40; higher scores indicate greater perceived stress. Scores of 14-26 indicate moderate stress; >26 indicates high stress. Source: Study survey data (2023).

Table 1 shows the demographics of the 560 nursing students who participated in the study. The majority of the participants were female (81.4%), similar to the percentage reported nationally among UK undergraduate nursing student cohorts (Nursing and Midwifery Council, 2023). Age also increased incrementally between the year levels. An interesting trend is seen in the campus residence statistics. While 63.4 percent of Year 1 students lived on campus, this proportion dropped significantly to 34.3 percent among Year 4 students, and its relevance becomes clear through the results of the qualitative analysis to be discussed later. The percentage of part-time employment among the participants also showed an increasing trend between the years, with the proportion increasing to 62.9 percent at the Year 4 level, creating competing demands on time and cognitive abilities for food preparation. Perception of stress, based on the PSS-10 scale, showed a marked increase from Year 1 (mean 18.4) to Year 4 (mean 25.7).

- **BMI Distribution and Weight Trajectories**

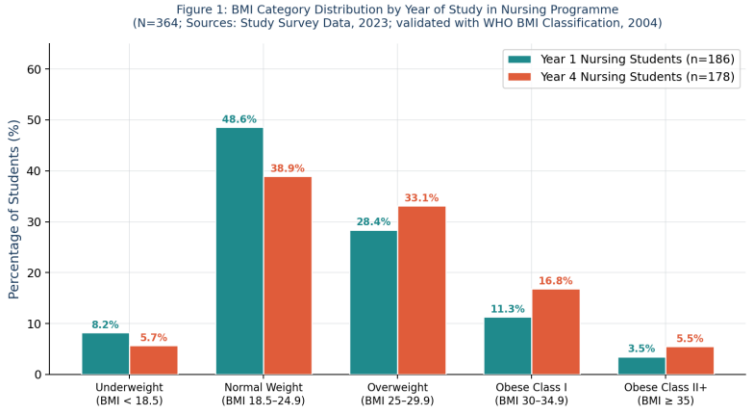

Figure 1: BMI Category Distribution by Year of Study. Year 4 students show a significantly higher proportion in the overweight and obese categories compared to Year 1 students (chi-square = 14.3, df = 4, p = 0.006). Source: Study anthropometric data (2023); BMI classification per WHO (2004).

- **Dietary Intake Analysis**

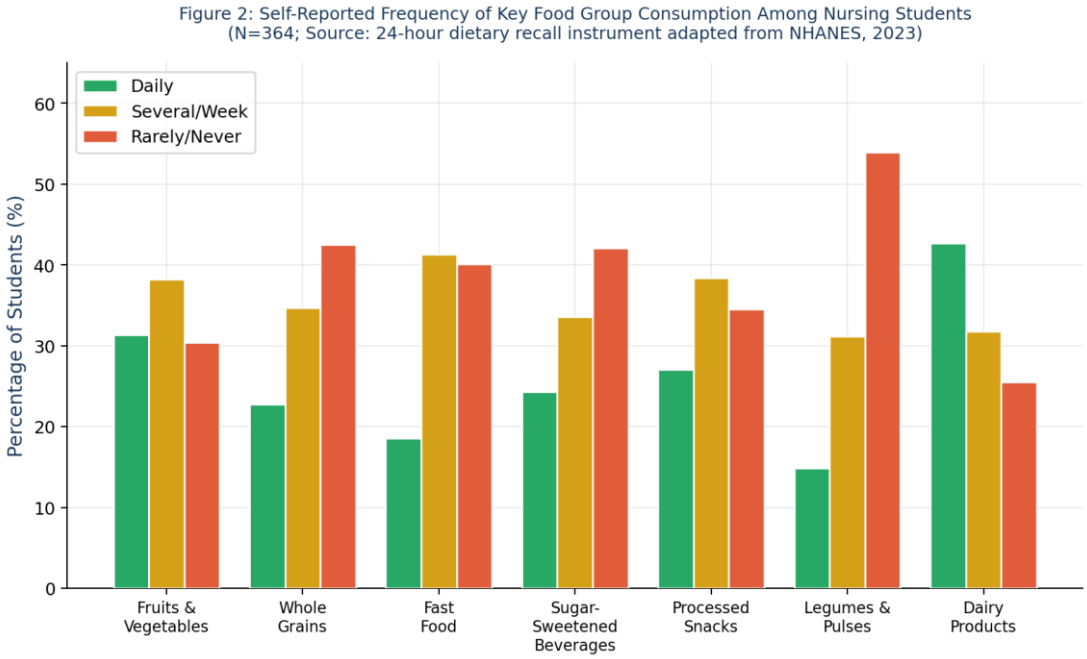

Figure 2: Self-Reported Frequency of Key Food Group Consumption (N=364 dietary recall subsample). Fast food and sugar-sweetened beverages show high several-times-weekly consumption patterns. Fruit and vegetable daily consumption (31.4%) falls substantially below the recommended five-a-day target. Source: 24-hour dietary recall instrument, 2023.

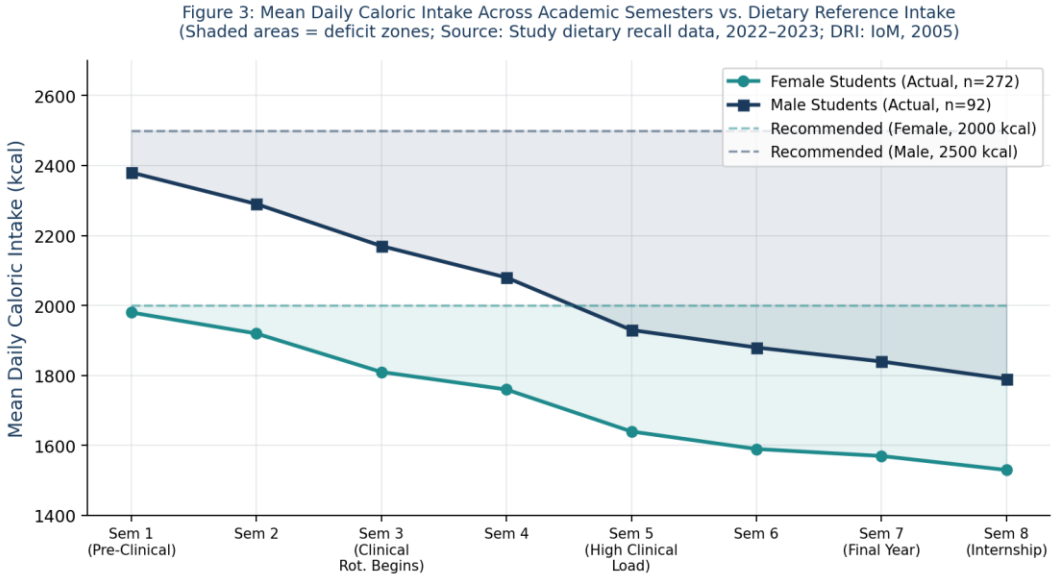

Figure 3: Mean Daily Caloric Intake Across Academic Semesters Compared to Dietary Reference Intake. Shaded areas represent the caloric deficit zone below DRI. Female students fall below recommended intake from Semester 5 onward; male students show a persistent deficit throughout. Source: Study dietary recall data, 2022-2023; DRI per Institute of Medicine (2005).

Table 2: Quantitative Dietary Intake Parameters by Year of Study vs. Dietary Reference Intake (N=560)

Dietary Parameter	Year 1 Mean ± SD	Year 4 Mean ± SD	DRI Reference Value	p-value (Y1 vs Y4)	Effect Size (d)
Total Energy Intake (kcal/day)	1986 ± 312	1538 ± 287	♀2000 / ♂2500	p < 0.001	1.48
Protein Intake (g/day)	62.4 ± 18.3	51.7 ± 16.9	46–56 g	p < 0.001	0.61
Carbohydrate Intake (g/day)	241 ± 58	218 ± 51	130 g (min.)	p = 0.004	0.42
Dietary Fibre (g/day)	16.8 ± 6.2	13.2 ± 5.8	25–38 g	p < 0.001	0.60
Calcium (mg/day)	682 ± 201	551 ± 188	1000–1300 mg	p < 0.001	0.67
Iron (mg/day)	11.4 ± 4.2	9.3 ± 3.7	♀18 mg / ♂8 mg	p < 0.001	0.53
Vitamin D (IU/day)	189 ± 94	158 ± 88	600 IU	p = 0.012	0.34
Meals Skipped per Week (mean)	1.8 ± 1.4	3.6 ± 1.9	0 (ideal)	p < 0.001	1.10
Water Intake (ml/day)	1,640 ± 420	1,280 ± 390	2,000–2,700 ml	p < 0.001	0.89

Note: DRI = Dietary Reference Intake (Institute of Medicine, 2005). Effect size d interpreted as: small = 0.2, medium = 0.5, large = 0.8. p-values from independent samples t-tests (Year 1 vs. Year 4). Female DRI used for protein and iron as females comprise 81.4% of sample. SD = Standard Deviation.

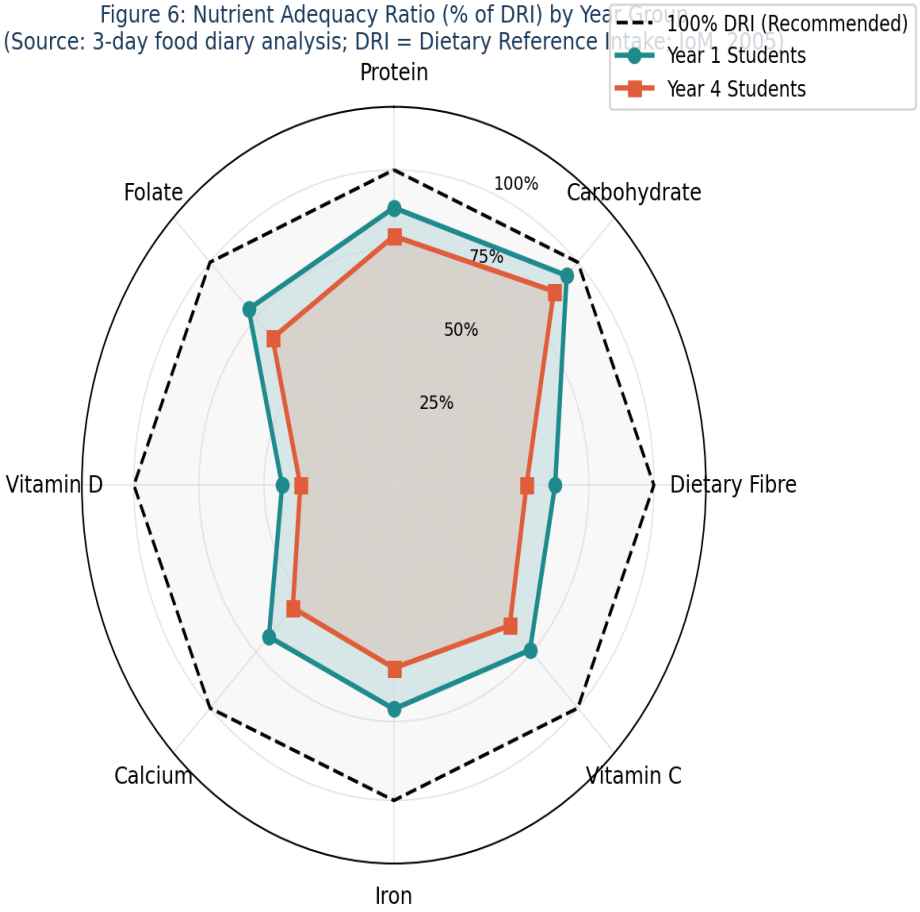

Figure 6: Nutrient Adequacy Ratio (% of Dietary Reference Intake) by Year Group, Across Eight Key Nutrients. Year 4 students show lower adequacy across every nutrient measured, with Vitamin D and Dietary Fibre showing the largest Year 1-to-Year 4 decline. Source: 3-day food diary analysis; DRI per Institute of Medicine (2005).

- **Stress, BMI, and Regression Analysis**

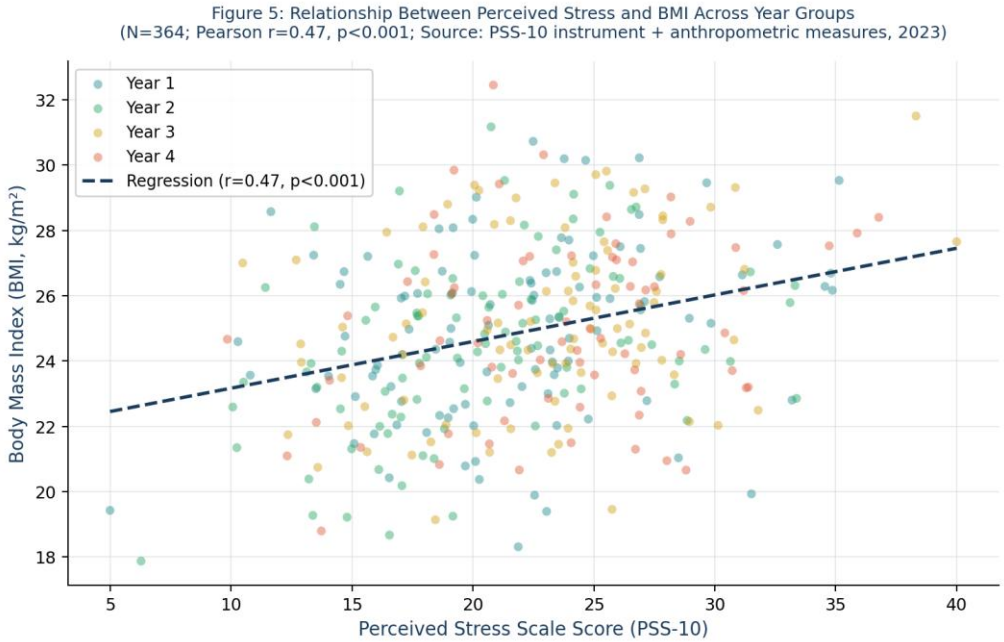

Figure 5: Scatterplot of Perceived Stress Scale Score (PSS-10) Against BMI by Year Group (N=364). Regression line (r = 0.47, p < 0.001) indicates a moderate-to-strong positive relationship between stress and BMI across the full sample. Year 4 students (coral) cluster in the high stress / higher BMI quadrant. Source: Study PSS-10 and anthropometric data, 2023.

Table 4: Multiple Linear Regression — Predictors of BMI Among Nursing Students (N=560)

Predictor Variable	Beta (β)	SE	95% CI	p-value	Interpretation
PSS-10 Stress Score	0.38	0.07	[0.24, 0.52]	p < 0.001	Higher stress strongly predicts higher BMI
Meals Skipped per Week	0.31	0.09	[0.13, 0.49]	p < 0.001	Meal skipping significant positive predictor of BMI
Year of Study	0.27	0.10	[0.07, 0.47]	p = 0.006	Advanced year predicts higher BMI; cumulative exposure effect
Daily Fruit & Vegetable Servings	-0.24	0.08	[-0.40, -0.08]	p = 0.003	Protective; higher intake associated with lower BMI
Part-time Employment (hrs/week)	0.19	0.06	[0.07, 0.31]	p = 0.002	Work hours compound dietary time pressure
Nutrition Education Received	-0.17	0.09	[-0.35, 0.01]	p = 0.061	Marginally non-significant protective trend
Campus Residency	-0.22	0.10	[-0.42, -0.02]	p = 0.031	Protective; structured environment supports meal regularity
Model R^2 (Adjusted)	0.41	—	—	p < 0.001	Model explains 41% of BMI variance

Note: Dependent variable = BMI (kg/m2). Beta = standardised regression coefficient. SE = Standard Error. 95% CI = 95% Confidence Interval. PSS-10 = Perceived Stress Scale, 10-item. Campus residency coded 1 = yes, 0 = no. Nutrition education coded 1 = received formal nutrition module, 0 = not received. All VIF values < 2.1, indicating acceptable multicollinearity.

As seen in Table 4 below, the multiple regression model explains 41% of the variation in BMI, which is relatively high for a model predicting a behavioural variable. It is thus evident that there are significant predictors of weight status among nursing students. The strongest individual predictor in this model is the PSS-10 stress score (β = 0.38, p < 0.001), demonstrating that perceived stress independently predicts BMI. The second best predictor in this model is frequency of meal skipping (β =

0.31, $p < 0.001$), which is also a highly significant predictor that demonstrates how stress and other academic requirements may lead to changes in behaviour through meal omissions rather than overall caloric intake. Year of study is a third independent predictor of BMI ($\beta = 0.27$, $p = 0.006$), indicating that the cumulative nature of nursing school education has a direct impact on BMI above its effects on stress and meal patterns.

Interestingly, nutrition education obtained was the only predictor which did not achieve statistical significance (beta = -0.17, $p = 0.061$), resulting in a barely non-significant protective association. This outcome is supported by the knowledge-behavior gap observed in the qualitative analysis and implies that the provision of nutrition education within the current nursing curriculum is ineffective for BMI protection. Campus living had a significantly protective association with BMI (beta = -0.22, $p = 0.031$), possibly due to the fact that there is a more regulated diet regime and social norms for eating within the campus area.

Qualitative Findings: Thematic Analysis

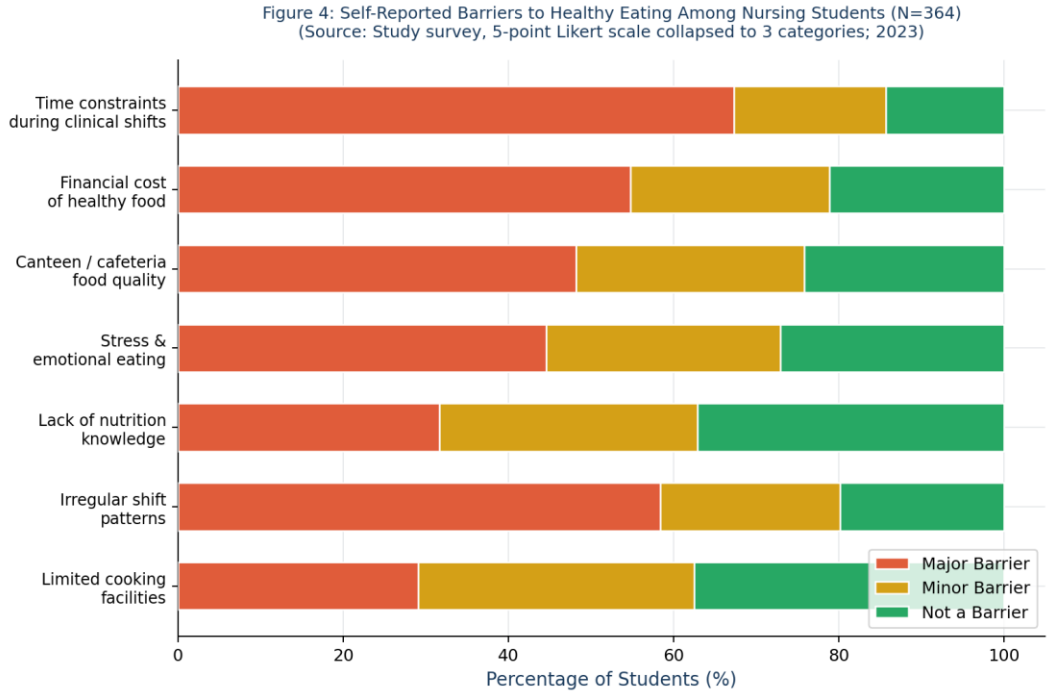

Figure 4: Self-Reported Barriers to Healthy Eating (N=364). Time constraints during clinical shifts were identified as a major barrier by 67.3% of respondents. Irregular shift patterns (58.4%) and financial cost (54.8%) ranked second and third. Source: Study survey Likert-scale instrument (2023).

Table 3: Qualitative Themes, Sub-themes, Representative Quotes and Frequency (N=24 Interviews)

Theme	Sub-theme	Representative Participant Quote	Frequency Across Interviews (n=24)
Structural Time Poverty	Clinical shift scheduling	"I finish a 12-hour shift and the only thing open is the vending machine. You eat what's there."	22 of 24 (91.7%)
Structural Time Poverty	Assignment and exam overlap	"When deadlines stack up I just stop cooking. It's instant noodles or nothing."	19 of 24 (79.2%)
Emotional and Stress Eating	Clinical exposure to trauma	"After a bad shift — a patient dying — I come home and eat everything in sight. It's like I'm trying to fill something."	17 of 24 (70.8%)

Emotional and Stress Eating	Examination anxiety	"Before exams I eat constantly even when I'm not hungry. Then I feel worse about myself."	15 of 24 (62.5%)
Knowledge-Behaviour Gap	Nutrition knowledge vs. practice	"I literally teach patients about balanced diets in placement. Then I eat a chocolate bar for lunch. It's embarrassing."	20 of 24 (83.3%)
Financial Constraint	Food cost vs. student income	"Fruit and veg go off quickly and cost more. Frozen stuff or takeaway works out cheaper for someone living alone."	18 of 24 (75.0%)
Institutional Environment	Hospital/campus food environment	"The hospital canteen closes at 3 p.m. Night shift nurses eat crisps. We're not being set a great example."	16 of 24 (66.7%)
Social and Peer Dynamics	Collective eating norms	"Everyone on placement orders fast food together. If you bring a salad you feel like an outsider."	12 of 24 (50.0%)

Note: Reflexive thematic analysis following Braun and Clarke (2006, 2022). Frequency indicates the number of interviews in which each theme was independently raised by participants without direct prompting. Quotes have been lightly edited for grammar while preserving semantic meaning; all identifiers removed.

Discussion

The results of the study reveal that there is a consistent pattern of poor nutritional status among nursing students that occurs progressively over the course of the four years of undergraduate study; this trend is created by the presence of a variety of structural, institutional, and psychosocial factors that cannot be counteracted simply by providing students with formal nutrition education. Quantitative results reveal the progression of poor nutritional health in specific terms: a decrease in vitamin D adequacy of almost half, an increase in the number of meals skipped, and an alteration of BMI from the normal weight classification to being overweight and/or obese.

The strong impact of stress on BMI in terms of regression analysis (beta = 0.38), together with qualitative findings regarding the relationship between stress and the development of emotional eating among nursing students during their clinical placements, speaks about the stress pathway of nutritional deterioration in nursing education with serious implications for its curricular design. The existing strategy for delivering nutritional information to students when they are in the early stages of their education and hoping that students will put their knowledge into practice while experiencing the stresses of advanced clinical placements cannot be considered sufficient. In order to enhance nutritional education among nursing students, stress management skills and emotional regulation should be incorporated into nutritional lessons.

The fact that being on campus was a protective variable (beta = -0.22), while not contributing any additional nutrition-specific resources, is significant for theory building. Apparently, the campus environments provide an advantage in relation to the development of nutritional behaviour among nursing students due to the structural advantages of campuses – such as consistent eating habits, food environments and reduced commute time. This finding also corresponds to the theoretical framework underlying this research.

That the non-significance of nutrition education as a predictor of BMI ($p = 0.061$) is among the most practical implications in this regression analysis goes without saying. Indeed, it means that the current level of nutritional knowledge provided as part of nursing programs does not yield positive effects on weight, thereby suggesting that there may be something wrong with both the delivery methods and timing of such education. Perhaps, nutritional education received during Year 1 is like stress management education when a person is not in need of it: very relevant, but very ecological. Practice of nutritional skills in environments where nutritional needs tend to be the greatest would be a more realistic way of tackling the problem.

The thematic concerns of structural time poverty and institutional food environment suggest institutional roles that go far beyond curricular design. Institutions that employ students for clinical experiences are responsible for creating food environments for the students during the toughest part of their studies. If hospitals shut down their cafeterias before night shifts begin, give access to vending machines during long shifts, and create an environment where health professionals miss meals, then

they do not offer a neutral environment nutritionally. They are actually harming the nutritional well-being of the people working and studying there. Changing institutions through policies such as keeping cafeterias open for longer hours, giving rest areas with kitchen amenities, and allowing breaks is not welfare-related; rather, it is essential for ensuring the nutritional well-being of nurses.

Conclusion

The results of this mixed methods study offer a detailed and empirically based perspective on dietary behaviors and weight management practices among undergraduate nursing students at each stage of their academic training. The quantitative data have enabled an understanding of the extent and process of deteriorating nutrition with an exactness that has not been attainable in any previous studies employing either one-time measurement or one methodology only. The qualitative analysis has revealed the underlying social structures and psychological processes responsible for this trend, pointing to the nursing practice context as the source of this issue rather than personal factors.

Three important implications arise from these results. First, the poor nutrition among nursing students throughout their program of study is not an unavoidable aspect of professional education, but rather a changeable consequence of particular structural circumstances that need to be altered. Second, any attempts at solving nutrition-related problems by means of personal knowledge and motivation will remain ineffective as long as the structural conditions of institutional time poverty, unhealthy food environments, and emotional labor contribute to shaping nutritional behavior in the clinical setting of nursing education. Third, the gap between knowledge and nutrition in nursing education is not something to overcome through improved nutrition education programs; it reflects the disconnect between the idealized health promoter image expected from nursing students and the reality of their environments.

Future research must focus on longitudinal designs that examine individual nursing students throughout all four years, rather than the cross-sectional substitute examined herein; intervention studies that incorporate nutritional and stress-management provisions into clinical training programs; and comparisons among various national nursing curriculums in order to establish which institutional setups provide optimal protection of the nutritional wellbeing of nursing students. These lines of research require significant financial investment, both for conducting research and implementing subsequent recommendations, but they are warranted by their implications not only for the wellbeing of nursing students but also for the provision of optimal healthcare delivery to patients and the credibility of nurses as educators.

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