

Barriers to Career-Relevant Employment Among Nutrition Graduates in Somalia: A Mixed-Methods Study

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DOI: <https://doi.org/10.5281/zenodo.20459817>

Published Date: 30-May-2026

Abstract: Despite the high burden of malnutrition and the increasing demand for nutrition services in Somalia, many nutrition graduates remain unemployed or underemployed. This study examined barriers contributing to the mismatch between nutrition education and labour market opportunities. A mixed-method cross-sectional design was employed involving 120 respondents, including nutrition graduates, employers, and academic staff. Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed thematically.

Findings revealed a high unemployment rate among respondents (62.9%), with only 37.1% employed. A substantial proportion (69.7%) were working outside their field of specialization, indicating a significant skills mismatch. Employment opportunities were largely limited to short-term humanitarian partner-supported positions, which had declined by approximately 90%. Weak integration of nutrition services into the health system—particularly the absence of dedicated nutrition and dietetics posts in hospitals—further constrained employment. Additional barriers included donor dependency, limited private sector engagement, weak integration of nutrition into health systems, and the absence of professional regulation and national dietary reference standards.

The study concludes that unemployment among nutrition graduates in Somalia is driven by structural and institutional weaknesses across the health system, education sector, and policy environment. Strengthening workforce planning, curriculum relevance, professional regulation, and sustainable job creation is essential to improve employability and optimize the nutrition workforce.

Keywords: Nutrition graduates; employment barriers; skills mismatch; Somalia; workforce.

1. INTRODUCTION

Malnutrition remains a major public health concern in Somalia, where recurrent droughts, armed conflict, displacement, and chronic food insecurity continue to undermine the nutritional status of vulnerable populations. According to UNICEF, an estimated 1.85 million children under five were projected to suffer from acute malnutrition in 2026, including approximately 430,000 cases of severe acute malnutrition. In addition, the prevalence of Global Acute Malnutrition (GAM) increased from 11.7% in 2024 to 14.3% in 2025, reflecting a worsening nutrition crisis across the country.

The nutrition situation in Somalia is further aggravated by climate shocks, limited access to healthcare services, poverty, and inadequate dietary intake. Children under five years of age and pregnant and lactating women remain the most affected groups. Evidence from the Food Security and Nutrition Analysis Unit and international humanitarian agencies indicates that southern and central Somalia carry the highest burden of wasting and undernutrition. Strengthening nutrition services and building a competent nutrition workforce are therefore essential to reducing malnutrition-related morbidity and mortality in the country.

However, despite the expansion of higher education in nutrition and health sciences, many graduates struggle to secure employment aligned with their qualifications. This paradox—high need but low workforce absorption—raises critical questions about the alignment between education systems and labor market demands.

Globally, the demand for nutrition and dietetics professionals has increased due to the rising burden of malnutrition, non-communicable diseases, and food insecurity. The nutrition and dietetics workforce plays a critical role in promoting healthy diets, preventing disease, and managing clinical nutrition conditions across healthcare and community settings. According to the Academy of Nutrition and Dietetics, the profession includes more than 112,000 credentialed practitioners, making it one of the world's largest organizations of food and nutrition professionals (Academy of Nutrition and Dietetics, 2024).

Evidence also shows that the number of nutrition and dietetics graduates has steadily increased in many countries. For example, in Kenya, the number of nutrition and dietetics graduates increased from 2,106 in 2017 to 4,235 in 2021, reflecting growing interest in the profession and increased demand for nutrition services (Business Daily Africa, 2023). Similarly, a graduate outcomes survey conducted in Australia and New Zealand reported that 75% of dietetics graduates obtained employment within six months after graduation, while approximately 60% were employed in dietetics-related roles (Ball et al., 2019).

This study aims to assess the barriers preventing nutrition graduates in Somalia from securing career-relevant employment and to propose strategies for improving workforce integration.

2. LITERATURE REVIEW

2.1 Graduate Employability and Skills Mismatch

Graduate employability in nutrition and dietetics in low- and middle-income countries (LMICs) depends greatly on the alignment between academic training and labour market needs. Recent evidence shows that employers increasingly demand graduates with practical competencies, clinical experience, communication skills, and community-based nutrition expertise. However, many universities in LMICs continue to emphasize theoretical instruction with limited work-integrated learning opportunities, contributing to unemployment and underemployment among graduates.

A 2024 Australian workforce study involving 119 nutrition graduates from 17 universities found that 77% of graduates had worked in food, nutrition, or health-related roles after graduation, while work-integrated learning significantly improved employment outcomes and workplace readiness (Clark et al., 2024). Similarly, the Australian and New Zealand Dietetics Graduate Outcomes Survey reported that 75% of dietetics graduates were employed within 4–6 months after graduation, but only 60% worked in positions directly requiring their dietetics qualification, indicating continuing gaps between training and labour market absorption.

Emerging evidence from LMICs demonstrates similar challenges. A 2025 employability study in Africa reported that graduate unemployment remains high because many university curricula are poorly aligned with labour market needs and lack competency-based practical training. The study emphasized that employer engagement, internships, and industry partnerships are critical for improving graduate employability outcomes in LMIC settings. In nutrition and dietetics specifically, qualitative research among nutrition graduates found that practical experience, professional networking, and employability skills were major determinants of successful transition into employment, while graduates without workplace exposure faced difficulties securing nutrition-related jobs.

These findings suggest that strengthening competency-based nutrition education, expanding supervised practice opportunities, and improving university–industry collaboration is essential to enhance employability among nutrition and dietetics graduates in LMICs.

2.2 Nutrition Workforce Challenges in LMICs

Nutrition workforce challenges remain a major barrier to improving health and nutrition outcomes in low- and middle-income countries (LMICs). Despite the growing burden of malnutrition, many LMICs face shortages of qualified nutrition professionals, limited training capacity, weak professional regulation, and inadequate integration of nutrition services into health systems. The shortage of skilled nutrition personnel is particularly critical in countries affected by poverty, food insecurity, conflict, and fragile health systems.

The World Health Organization and the Food and Agriculture Organization have emphasized that strengthening the nutrition workforce is essential for achieving global nutrition targets and Sustainable Development Goals. However, many LMICs continue to experience insufficient numbers of nutritionists and dietitians relative to population needs. A global review by the Global Nutrition Report found that several African countries have fewer than 5 qualified nutrition professionals per 100,000 population, far below recommended workforce levels.

In many LMICs, nutrition training programs are also challenged by outdated curricula, inadequate practical training opportunities, shortages of qualified faculty, and weak linkage between academic institutions and labour markets. Studies from sub-Saharan Africa show that graduates often lack competencies in clinical nutrition, public health nutrition, data analysis, communication, and programme management, which limits their employability and effectiveness in practice. Limited opportunities for internship placement and supervised practice further constrain graduates' readiness for employment.

Retention of nutrition professionals is another major challenge. Many trained nutritionists migrate to urban areas or abroad due to low salaries, limited career progression, poor working conditions, and inadequate government investment in nutrition services. Rural and underserved communities are therefore disproportionately affected by shortages of skilled nutrition personnel. In fragile contexts such as Somalia, recurrent humanitarian crises and insecurity further weaken workforce development and service delivery systems.

Evidence also indicates that nutrition positions are often poorly integrated into national health systems and public service structures. In several LMICs, nutrition services are delivered by general health workers with limited specialized nutrition training. This reduces the quality of prevention and treatment services for malnutrition and diet-related diseases. Strengthening workforce planning, competency-based education, professional accreditation, and continuing professional development has therefore become a priority for improving nutrition outcomes globally.

2.3 Health System Constraints and Workforce Absorption

Health system constraints significantly affect workforce absorption in the nutrition sector, particularly in low- and middle-income countries (LMICs). Despite the increasing burden of malnutrition and diet-related diseases, many health systems have limited capacity to recruit, deploy, and retain qualified nutrition professionals. This results in underutilization of trained nutrition graduates and weak integration of nutrition services into routine healthcare delivery.

One major constraint is inadequate financing for nutrition-specific positions within ministries of health and local health systems. In many LMICs, nutrition is still not fully prioritized in national health budgets, leading to a limited number of established posts for nutritionists and dietitians. As a result, graduates often compete for a small number of jobs or are absorbed in general health roles that do not fully utilize their specialized training.

Structural weaknesses in health systems also contribute to poor workforce absorption. According to the World Health Organization, many countries face imbalances in health workforce distribution, with urban areas having higher concentrations of skilled professionals while rural and remote areas remain underserved. In countries such as Somalia, these disparities are further worsened by fragile governance, insecurity, and reliance on humanitarian health delivery systems.

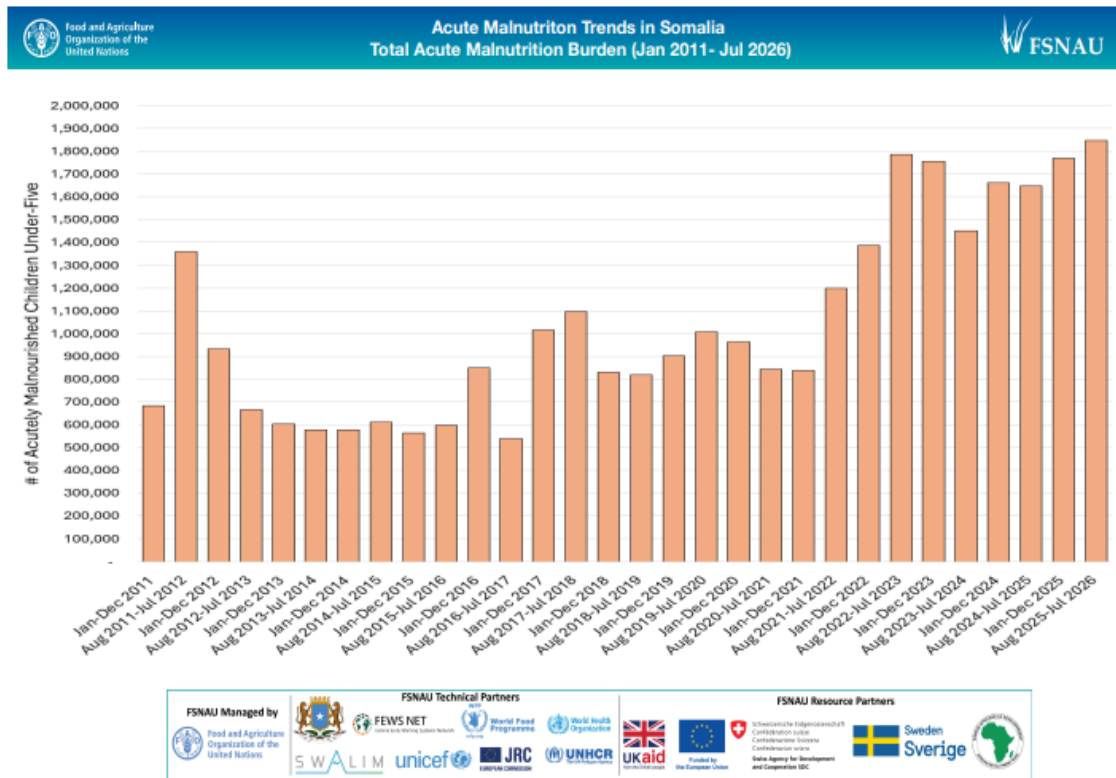
Another key constraint is the limited integration of nutrition services into secondary healthcare systems. In many LMICs, nutrition interventions are delivered through vertical programs rather than fully embedded within health service structures. This reduces the demand for specialized nutrition staff and limits long-term employment opportunities for graduates. Additionally, weak career progression pathways and lack of standardized job descriptions for nutrition roles further hinder absorption into the health workforce.

Evidence from workforce studies also shows that skills mismatch contributes to absorption challenges. Many nutrition graduates lack sufficient practical experience in clinical nutrition, community nutrition programming, data management, and health systems management, which reduces their competitiveness in the labour market. At the same time, employers report shortages of candidates with strong applied competencies, indicating a persistent gap between training institutions and health system needs.

Overall, improving workforce absorption in nutrition requires stronger health system financing, creation of dedicated nutrition posts, integration of nutrition into primary healthcare, and alignment between academic training and service delivery needs. Strengthening these areas would improve both employment outcomes for graduates and nutrition service coverage in LMICs.

2.4 Somalia Context

In Somalia, the nutrition sector is heavily influenced by humanitarian interventions. Reports by FSNAU and UNICEF highlight high malnutrition prevalence but also reveal that services are often project-based and short-term (FSNAU & FEWS NET, 2025; UNICEF, 2025). Consequently, employment opportunities for nutrition graduates are limited and unstable.



3. METHODOLOGY

3.1 Study Design

A mixed-method cross-sectional design was used to capture both quantitative and qualitative data on employment outcomes and barriers.

3.2 Study Population

The study will interview 120 people including:

- 89 Nutrition graduates (within the last five years)
- 25 Employers from NGOs, hospitals, and government institutions
- 6 Academic staff from universities

3.3 Data Collection

- Structured questionnaires for graduates
- Key informant interviews with employers and educators
- Document review of curricula and job descriptions

3.4 Data Analysis

Quantitative data were analyzed using descriptive statistics and regression analysis. Qualitative data were analyzed using thematic analysis to identify key patterns and insights.

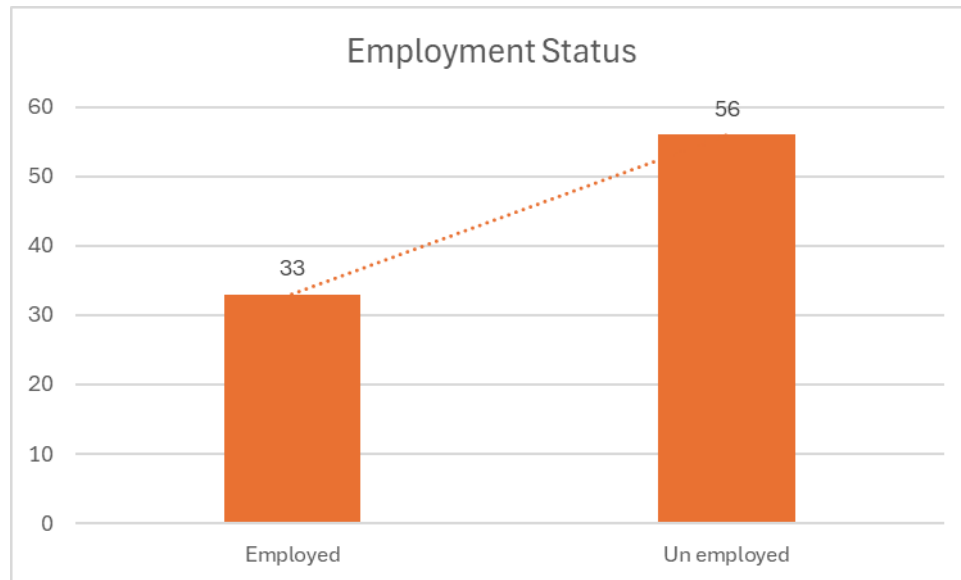
4. RESULTS

4.1 Employment Status

The data shows that out of the total respondents, 33 are employed, while 56 are unemployed. This indicates that a significantly large proportion of respondents are not engaged in employment compared to those who are working.

In percentage terms, approximately 37.1% are employed, whereas 62.9% are unemployed. This reflects a clear imbalance in employment opportunities within the study population.

Overall, the findings suggest a high unemployment rate, indicating limited absorption of graduates or trained nutrition professionals into the labour market. This may be linked to weak integration of nutrition services into the health system, limited job creation, and reliance on short-term or partner-supported employment opportunities.



4.2 Barriers to Employment

4.2.1 Limited Job Opportunities

The findings of the study indicate that current nutrition employment opportunities are largely limited to positions within health facilities supported by humanitarian partners. However, these partner-supported opportunities have significantly decreased, with an estimated reduction of approximately 90%. This sharp decline has greatly constrained employment opportunities for nutrition graduates and reduced workforce absorption in the nutrition sector. Consequently, many qualified nutrition professionals are either unemployed or forced to seek alternative employment outside their area of specialization.

4.2.2 Weak Integration into Health Systems

Weak integration of nutrition services into the health system is evident across different levels of healthcare, including hospitals. The findings indicate that most hospitals do not have clearly established or permanent positions for nutrition and dietetics professionals. In many cases, nutrition services are either absent or provided by general health workers who lack specialized training in clinical nutrition and dietetics.

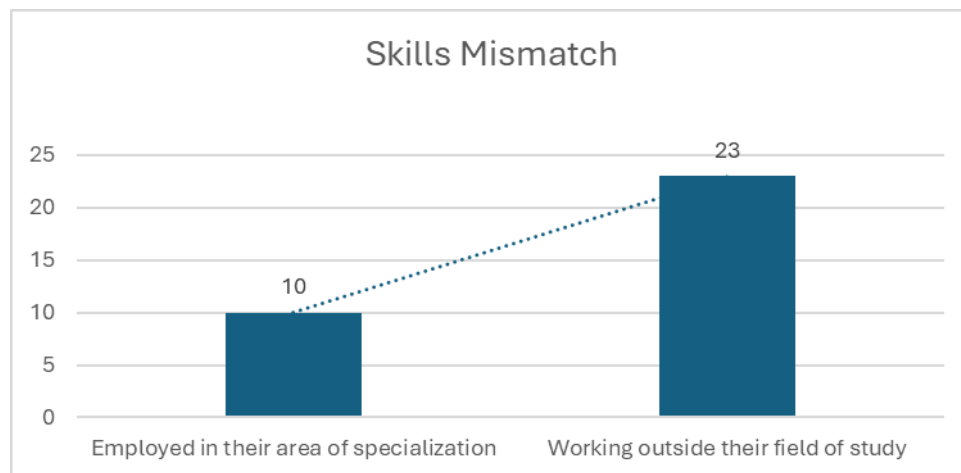
This lack of institutionalized nutrition positions reflects the low prioritization of nutrition within the health system. As a result, the absorption of qualified nutrition professionals into hospital settings remains very limited. Consequently, many trained nutritionists and dietitians are either unemployed or engaged in work outside their area of specialization, while hospitals continue to experience gaps in the delivery of specialized.

4.2.3 Skills Mismatch

The data shows that out of the respondents, 10 are working in their academic field, while 23 are working in other areas outside their specialization. This indicates that a larger proportion of respondents are not employed in roles aligned with their nutrition and dietetics training. In percentage terms, approximately 30.3% are working in their academic field, whereas 69.7% are engaged in unrelated or alternative occupations, reflecting a significant skills mismatch between academic preparation and labour market placement.

Skills mismatch is therefore a key challenge affecting the employability of nutrition and dietetics graduates within the health system. The findings suggest a clear gap between the competencies acquired during academic training and the practical skills required in the labour market, particularly in hospital and community health settings. Many graduates report limited

exposure to hands-on clinical nutrition practice, community-based nutrition programming, data management, and programme implementation during their training.



4.2.4 Donor Dependency and Private Hospitals' Neglect of the Nutrition Sector

Donor dependency remains a major challenge affecting the sustainability and development of nutrition services, particularly in low- and middle-income countries. The findings indicate that most nutrition programmes and related employment opportunities are heavily reliant on humanitarian and development partners. As a result, nutrition services are often implemented through short-term projects rather than being fully integrated into the national health system.

This dependency creates instability in service delivery and employment, as nutrition positions are frequently tied to donor funding cycles. When projects end or funding is reduced, nutrition services are scaled down or discontinued, leading to job losses and reduced workforce absorption for nutrition and dietetics graduates.

In addition, the findings highlight a significant neglect of the nutrition sector within private hospitals. Many private health facilities prioritize curative and revenue-generating services such as surgery, diagnostics, and general clinical care, while nutrition services are either absent or minimally provided. Nutrition and dietetics professionals are rarely recruited in private hospitals, and where services exist, they are often delivered by general nurses or clinical staff without specialized nutrition training.

This dual challenge of donor dependency and private sector neglect limits the long-term development of the nutrition workforce. It reduces stable employment opportunities, weakens institutionalization of nutrition services, and contributes to the underutilization of qualified nutrition professionals. Strengthening public-private engagement, integrating nutrition into hospital service packages, and increasing domestic financing are essential to improve sustainability and workforce absorption in the nutrition sector.

4.2.5 Lack of Professional Regulation and Dietary Reference Intake in Somalia

The findings indicate a significant lack of formal professional regulation for nutrition and dietetics practice, alongside the absence of standardized Dietary Reference Intake (DRI) guidelines in Somalia. This gap has important implications for the quality, consistency, and effectiveness of nutrition services across health facilities and community programs.

The absence of a recognized regulatory body for nutrition professionals means that roles, responsibilities, and scopes of practice for nutritionists and dietitians are not clearly defined. As a result, individuals with varying levels of training may perform nutrition-related tasks without standardized certification or licensing. This weakens professional accountability and limits recognition of nutrition as a distinct clinical and public health profession.

In addition, the lack of national Dietary Reference Intake guidelines limits the ability of health workers to provide standardized nutrition assessment, counseling, and planning. Without locally adapted nutrient requirements, it becomes difficult to ensure consistency in dietary recommendations for vulnerable groups such as children, pregnant women, and malnourished patients. Health workers often rely on international guidelines, which may not fully reflect local dietary patterns, food availability, and cultural practices.

5. CONCLUSION

This study demonstrates that unemployment and underemployment among nutrition graduates in Somalia are driven by interrelated systemic factors rather than individual shortcomings. The weak integration of nutrition services into the national health system, particularly the lack of established nutrition positions in hospitals, significantly limits workforce absorption. At the same time, over-reliance on short-term donor-funded programs has created unstable and declining employment opportunities.

The findings also highlight a persistent skills mismatch between academic preparation and labour market demands, reflecting limited practical training, weak internship systems, and insufficient competency-based education. Furthermore, the absence of professional regulation and standardized dietary reference guidelines undermines the recognition and institutionalization of the nutrition profession in Somalia.

Overall, addressing graduate unemployment in nutrition requires coordinated reforms across education, health system planning, and national policy frameworks to ensure that training outputs align with labour market needs and that nutrition services are properly integrated into the health system.

6. RECOMMENDATIONS

➤ Integrate nutrition into national health workforce policies

Mainstream nutrition into national health workforce frameworks by establishing clear staffing structures that formally include nutritionists and dietitians within hospitals and primary healthcare settings.

➤ Establish a professional regulatory framework for nutrition and dietetics

Develop a national regulatory body to oversee the nutrition and dietetics profession, including clear definitions of the scope of practice, licensing requirements, and enforcement of professional standards.

➤ Strengthen competency-based training and internship programs

Enhance nutrition curricula by increasing practical training opportunities, clinical placements, and structured community-based internships to address skills gaps and reduce the mismatch between training and workplace demands.

➤ Create sustainable employment opportunities for nutrition professionals

Reduce dependency on donor-funded positions by increasing domestic financing for nutrition services and expanding permanent employment opportunities within government and private-sector health systems.

➤ Enhance collaboration between universities and employers

Strengthen partnerships between academic institutions, health facilities, and employers to ensure curricula remain aligned with labour market needs and to improve the employability of nutrition graduates.

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