



A STUDY OF THE IMPACT OF EARLY DIETARY INTERVENTION ON ACTIVITIES OF DAILY LIVING IN MALNOURISHED ELDERLY

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ABSTRACT

Background: Population ageing has emerged as a significant demographic transition, bringing age-related health challenges. Malnutrition is a frequent but underrecognized problem among older adults that severely impairs Activities of Daily Living (ADL). **Methods:** A prospective cohort study was conducted with 150 elderly participants (≥ 60 years) at MGM Medical College and Hospital. Nutritional status was assessed using the Simplified Nutritional Appetite Questionnaire (SNAQ) and Mini Nutritional Assessment-Short Form (MNA-SF), and functional status via ADL assessment, before and after a two-month dietary intervention. **Results:** At baseline, 61.3% of participants were malnourished and 38.7% were at risk. Following the intervention, mean SNAQ scores decreased significantly (3.18 to 1.89, $p < 0.001$), while MNA-SF scores improved (7.82 to 10.21, $p < 0.001$). Importantly, the mean ADL score increased from 47.86 to 61.74 ($p < 0.001$), reflecting increased functional independence. **Conclusion:** Early dietary intervention significantly improves nutritional status and enhances the ability of malnourished elderly individuals to perform activities of daily living independently.

KEYWORDS : Malnutrition, MNA, SNAQ.

INTRODUCTION

Population ageing has emerged as one of the most significant demographic transitions of the 21st century. The World Health Organization (WHO) has identified Healthy Ageing as a global priority and launched the Decade of Healthy Ageing (2021–2030) to promote functional ability that enables well-being in older age. Ageing brings physiological changes that reduce functional reserves, increasing susceptibility to chronic diseases and dependence. Nutritional status plays a pivotal role in maintaining physical function and independence. Malnutrition, resulting from inadequate intake, absorption, or utilization of nutrients, leads to altered body composition and diminished physical and mental function. One of the most important consequences of malnutrition is impairment in Activities of Daily Living (ADL), making elderly individuals more reliant on caregivers.

AIMS AND OBJECTIVES

- To screen for protein malnutrition in diet.
- To calculate the overall prevalence and impact of protein malnutrition among elderly individuals.
- To evaluate the effectiveness of dietary interventions aimed at increasing protein intake among elderly individuals.
- To observe improvement in daily activities of life.

MATERIALS AND METHOD

- **Study Design and Setting:** A Prospective Cohort Study conducted at the Department of Geriatrics, MGM Medical College and Hospital, over 18 months.
- **Study Population:** 150 elderly individuals aged 60 years and above visiting outpatient or inpatient services, selected irrespective of gender.
- **Data Collection:** Structured case record forms were used. Nutritional risk was assessed via SNAQ (Short Nutritional Assessment Questionnaire) and MNA-SF (Mini Nutritional Assessment-Short Form).
- **Statistical Analysis:** Data analyzed using IBM SPSS Statistics Version 26.0 with descriptive statistics, paired t-tests, and correlation coefficients.

RESULTS

A total of 150 elderly participants were included. The mean age was 69.82 ± 6.82 years, with 54.7% males and 45.3% females. Baseline assessments showed significant nutritional risk.

Table 1. Age Distribution of Study Participants

Age group (years)	No. of participants	Percentage (%)
60–64	32	21.3
65–69	38	25.3
70–74	41	27.3
75–79	25	16.7
≥ 80	14	9.3
Total	150	100.0

Table 2. SNAQ Score Before and After Intervention

Assessment	Initial (Baseline)	Final (After 2 Months)	Mean Change	p-value
SNAQ score	3.18 ± 0.91	1.89 ± 0.96	-1.29	<0.001

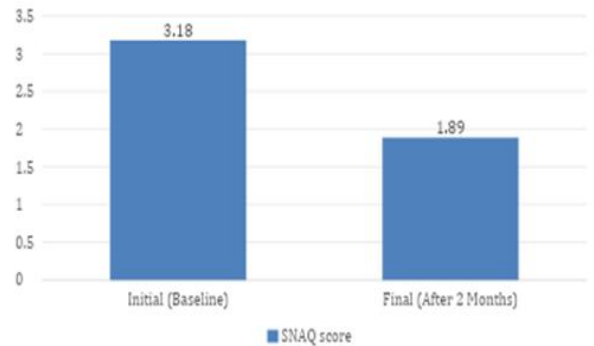


Table 3. MNA-SF Score Before and After Intervention

Assessment	Initial (Baseline)	Final (After 2 Months)	Mean Change	p-value
MNA-SF score	7.82 ± 1.46	10.21 ± 1.62	+2.39	<0.001

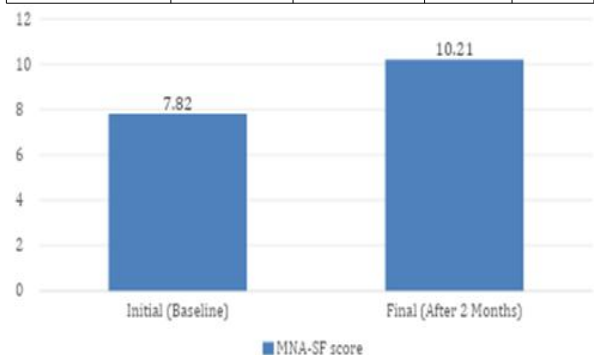
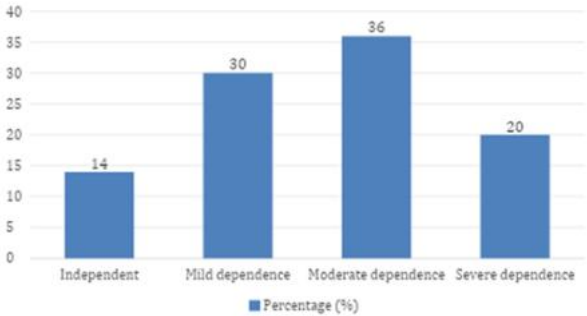


Table 4. Comparison of ADL Score

ADL Assessment	Mean ± SD	Mean Difference	p-value
Before intervention	47.86 ± 11.24	13.88 ± 6.72	<0.001
Final (After 2 months)	61.74 ± 12.16		



CONCLUSIONS

The present study establishes that elderly individuals are at a high risk of malnutrition, which directly limits their Activities of Daily Living. The implementation of an early dietary intervention significantly improved nutritional parameters, as evidenced by enhanced MNA-SF scores and reduced SNAQ scores. Concurrently, a substantial improvement in ADL independence was recorded, strongly correlating with nutritional recovery. These findings advocate for routine nutritional screening and early dietary intervention to promote functional independence and healthy ageing among the elderly population.

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