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Screening Malnutrition among Hemodialysis Patients using Short Nutritional Assessment Questionnaire and Body Mass Index

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Objectives: Malnutrition is prevalent among hemodialysis patients. Its early recognition and treatment is important to prevent adverse consequences. An ideal nutrition assessment is time-consuming and expensive hence a quick-and-easy screening tool is essential. This study aims to determine if the short nutritional assessment questionnaire (SNAQ) can be used to screen malnutrition, and compare it with results based on body mass index (BMI) measurement.

Methods: This cross-sectional correlational study determined prevalence of malnutrition among 94 hemodialysis patients at UST Hospital using BMI measurement and by completion of SNAQ, a 3-item questionnaire developed by statistical analysis of 26 questions to determine questions most predictive of nutrition status. Patients with SNAQ score of at least 2 points are considered malnourished.

Results: Subjects consisted of 50 women and 44 men, with mean age of 58 years. The primary etiology of ESRD was diabetic kidney disease (38.3%), followed by hypertensive nephrosclerosis (24.5%). Based on SNAQ scores, 10 (10.6%) of subjects were moderately malnourished and 13 (14%) was severely malnourished. Based on Asia–Pacific BMI Classification, 38.3% of subjects was underweight and 11.7% was overweight. Using Spearman R, we found a statistically significant moderate negative correlation between SNAQ scores and BMI. There is an inverse relationship between SNAQ score and BMI, which means that as SNAQ score increases, the BMI decreases hence underweight patients are expected to have higher SNAQ scores.

Conclusions: Based on our findings, SNAQ can be used to establish malnutrition among hemodialysis patients. However, a SNAQ score less than 2 cannot be used to exclude the diagnosis. This study supports that SNAQ can be used to diagnose malnutrition, but since the correlation is only moderate at best, it cannot be used as the sole basis for the diagnosis of malnutrition. In conclusion, SNAQ can aid in the screening for malnutrition and as such, its use should be encouraged.

Figure 1. The Short Nutritional Assessment Questionnaire.

SNAQ							
Short Nutritional Assessment Questionnaire							
Did you lose weight unintentionally?	3						
-More than 6 kg in the last 6 months							
-More than 3 kg in the last month	2						
Did you experience a decreased appetite over the last month?	1						
Did you use supplemental drinks or tube feeding over the last month?	1						
<table style="width: 100%; border: none;"> <tr> <td style="width: 30%; padding: 5px 0;">0 of 1 point:</td> <td style="padding: 5px 0;">no intervention</td> </tr> <tr> <td style="padding: 5px 0;">2 points</td> <td style="padding: 5px 0;">moderately malnourished: nutritional intervention</td> </tr> <tr> <td style="padding: 5px 0;">3 points or more</td> <td style="padding: 5px 0;">severely malnourished: nutritional intervention and treatment by dietician</td> </tr> </table>		0 of 1 point:	no intervention	2 points	moderately malnourished: nutritional intervention	3 points or more	severely malnourished: nutritional intervention and treatment by dietician
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2 points	moderately malnourished: nutritional intervention						
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Table 1. Short Nutritional Assessment Questionnaire Scores.

Short Nutritional Assessment Questionnaire Scores		
0	Normal	56 (59.6%)
1		15 (16%)
2	Moderately malnourished	10 (10.6%)
3	Severely malnourished	10 (10.6%)
4		3 (3.2%)