

Malnutrition: Undernutrition or overnutrition?

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Abstract

The definitions and terminology related to malnutrition need to be clarified. The Academy of Nutrition and Dietetics (Academy) and the American Society of Parenteral and Enteral Nutrition (ASPEN) have classified clinical nutrition into malnutrition (undernutrition), sarcopenia, frailty, and overnutrition (overweight and obese). In addition, determining indicators for determining diagnoses related to malnutrition also needs to be clarified. Thus, this information can be used by nurses and other health workers to be able to provide appropriate planning and interventions for patients with malnutrition.

Keywords: malnutrition; nurse; overnutrition; undernutrition

Main Text

Adequate nutritional needs are needed by patients undergoing treatment at the hospital. Not only that, but the monitoring of patients undergoing outpatient care or community settings also needs attention. Nutrition is an important requirement and impacts the healing process of disease. Nutritional disorder experienced by many patients with chronic diseases such as diabetes mellitus, cardiovascular, renal, and others (Gosmanov & Umpierrez, 2012; Zahangir et al., 2017). Not only that, patients with critical illness who are hospitalized in the intensive care unit (ICU) also require serious attention to their nutritional needs (Havens et al., 2018). In other conditions in the community, someone who is overweight or obese also does not realize that they need therapy and serious attention to their nutritional needs. For this reason, the understanding of undernutrition and overnutrition need to be clarified.

The World Health Organization (WHO) states that malnutrition is a condition in which the body experiences a deficiency or excess of nutrients (Organization, 2020). This means that malnutrition is included in the category of undernutrition and over-nutrition. The definition related to malnutrition is still being debated because some argue that malnutrition refers to a condition of undernutrition. The European Society of Clinical Nutrition and Metabolism (ESPEN) provides definitions and terminology regarding clinical malnutrition (Cederholm et al., 2017). Clinical malnutrition consists of malnutrition (undernutrition), sarcopenia, frailty, and over-nutrition. ESPEN classifies these according to the needs of the patient's condition with nutritional disorders. ESPEN defines clinical nutrition based on nutrition-related concepts, procedures, and developments in practice and research (Cederholm et al., 2017). Thus, it can be concluded that malnutrition conditions refer more to nutritional deficiencies that impact the quality of life and well-being.

Instruments used for assessing malnutrition have been developed. WHO states that malnutrition can be evaluated based on Severe Protein-Energy Malnutrition and or Body Mass Index (BMI). Severe Protein-Energy Malnutrition refers to conditions such as marasmus, kwashiorkor, or a mixed form, marasmus kwashiorkor. Meanwhile, BMI refers to adult conditions that are classified into normal (≥ 18.5), mild malnutrition (17.0-18.49),

OPEN ACCESS

Jurnal Keperawatan Padjadjaran (JKP)

Volume 10(3), 141-143
© The Author(s) 2022
<https://doi.org/10.24198/jkp.v10i3.2203>

Article Info

Received : December 28, 2022
Revised : December 28, 2022
Accepted : December 29, 2022
Published : December 31, 2022

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Citation

Arifin, H., Fadlilah, S., & Klankhajhon, S. (2022). Malnutrition: Undernutrition or over-nutrition? *Jurnal Keperawatan Padjadjaran*, 10(3), 141–143. <https://doi.org/10.24198/jkp.v10i3.2203>

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E-ISSN: 2442-7276
P-ISSN: 2338-5324

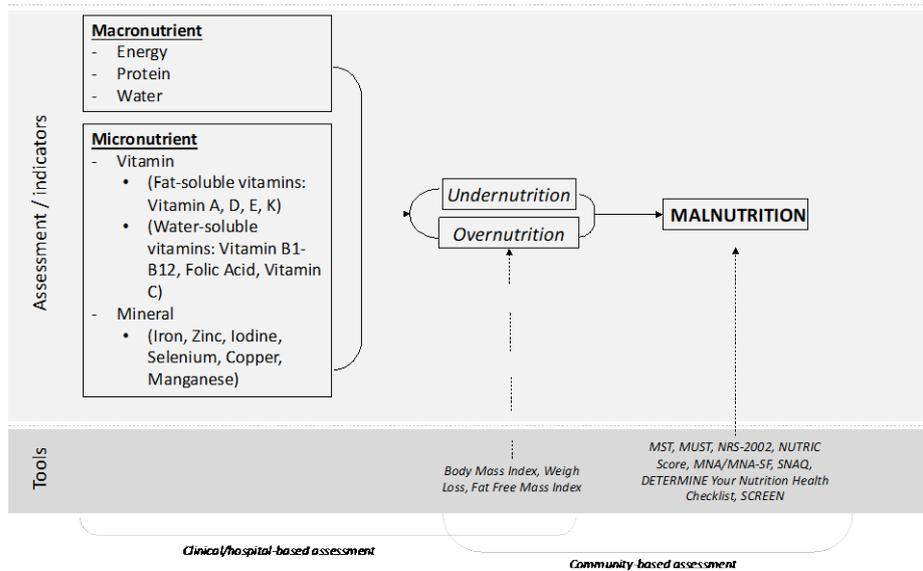


Figure 1. Malnutrition

moderate malnutrition (16.0-16.99), and severe malnutrition (<16) (Bailey & Ferro-Luzzi, 1995). Additionally, The Academy of Nutrition and Dietetics (Academy) and the American Society of Parenteral and Enteral Nutrition (ASPEN) identify and classify malnutrition based on 1) Insufficient energy intake; 2) Weight loss; 3) Loss of subcutaneous fat; 4) Loss of muscle mass; 5) Localized or generalized fluid accumulation that may sometimes mask weight loss; and 6) Diminished functional status as measured by hand grip strength (White et al., 2012). In addition, there are two alternative methods used to diagnose malnutrition 1) BMI < 18.5 kg/m², and 2) weight loss > 10% indefinite of time, or > 5% in the last three months combined with either BMI < 20 kg/m² if < 70 years, or < 22 kg/m² if ≥ 70 years or fat-free mass index (FFMI) < 15 and 17 kg/m² in women and men, respectively (White et al., 2012). Moreover, the identified malnutrition also refers to macronutrients and micronutrients (See figure 1).

In addition to the criteria above, there are several screening tools used to identify patients with nutritional disorders 1) Malnutrition Screening Toll (MST) for adults, including elderly in hospital and outpatient care facilities; 2) Malnutrition Universal Screening Tool (MUST) for adult in hospital and community settings; 3) National Risk Screening (NRS) for adults in hospital settings; 4) NUTRITION Risk in the Critically ill (NUTRIC Score) for patient in the critical care; 5) Mini Nutritional Assessment (MNA) for elderly in the community, sub-acute, long-term care, or any residential with dementia; and 6) Short Nutritional Assessment Questionnaire (SNAQ) for older adults in the community-dwelling settings. Those screening tools can be used as patient characteristics and conditions (Doley & Marian, 2022).

Nurses have an important role in providing for patients with malnutrition in providing nursing

care (Moyles, 2022). Observing, monitoring related nutritional needs, intake and tolerance, and communicating with patients and families are actions that nurses must carry out. Also, collaboration with doctors and nutritionists is carried out to obtain nutritional needs and proper diet information. In addition, physical assessments such as anthropometrics, appetite, intake, and tolerance can be carried out by nurses. Then, nurses can determine nursing diagnoses that refer to nutritional needs. Nurses have an important role. So proper education needs to be given to patients and families with malnutrition.

References

- Bailey, K. V., & Ferro-Luzzi, A. (1995). Use of body mass index of adults in assessing individual and community nutritional status. *Bull World Health Organ*, 73(5), 673-680.
- Cederholm, T., Barazzoni, R., Austin, P., Ballmer, P., Biolo, G., Bischoff, S. C., Compher, C., Correia, I., Higashiguchi, T., Holst, M., Jensen, G. L., Malone, A., Muscaritoli, M., Nyulasi, I., Pirlich, M., Rothenberg, E., Schindler, K., Schneider, S. M., de van der Schueren, M. A. E., . . . Singer, P. (2017). ESPEN guidelines on definitions and terminology of clinical nutrition. *Clinical Nutrition*, 36(1), 49-64. <https://doi.org/10.1016/j.clnu.2016.09.004>
- Doley, J., & Marian, M. J. (2022). *Adult Malnutrition: Diagnosis and Treatment*. CRC Press.
- Gosmanov, A. R., & Umpierrez, G. E. (2012). Medical nutrition therapy in hospitalized patients with diabetes. *Current Diabetes Reports*, 12(1), 93-100. <https://doi.org/10.1007/s11892-011-0236-5>
- Havens, J. M., Columbus, A. B., Seshadri, A. J.,

- Olufajo, O. A., Mogensen, K. M., Rawn, J. D., Salim, A., & Christopher, K. B. (2018). Malnutrition at intensive care unit admission predicts mortality in emergency general surgery patients. *Journal of Parenteral and Enteral Nutrition*, 42(1), 156-163.
- Moyles, N. A. N. (2022). Nurses role in malnutrition. *Unified Nursing Research, Midwifery & Women's Health Journal*, 1(4), 1-10. <https://doi.org/https://doi.org/10.52402/Nursing2022>
- Organization, W. H. (2020). *Malnutrition*. World Health Organization. Retrieved 25 October 2022 from <https://www.who.int/news-room/questions-and-answers/item/malnutrition>
- White, J. V., Guenter, P., Jensen, G., Malone, A., & Schofield, M. (2012). Consensus statement: Academy of nutrition and dietetics and american society for parenteral and enteral nutrition: Characteristics recommended for the identification and documentation of adult malnutrition (undernutrition). *JPEN J Parenter Enteral Nutr*, 36(3), 275-283. <https://doi.org/10.1177/0148607112440285>
- Zahangir, M., Hasan, M., Richardson, A., & Tabassum, S. (2017). Malnutrition and non-communicable diseases among Bangladeshi women: An urban–rural comparison. *Nutrition & Diabetes*, 7(3), e250-e250.