Scientific Journal – Critical Appraisal

Presented by

Presentation Overview

- This presentation critically appraises the research by Bourdel-Marchasson et al. (2014) which is titled: *Nutritional Advice in Older Patients at Risk of Malnutrition during Treatment for Chemotherapy: A Two-Year Randomized Controlled Trial*

Thus the appraisal will focus on:

a) Abstract
b) Aims & objectives
c) Design of the study
d) Scientific essence of the article
e) Research Variables
f) Findings of the research
g) Strengths of the research
h) Weaknesses of the research

Abstract

- The abstract of the article serves its purpose since by reading the abstract, one gets to have a clear understanding of the entire research.
- Moreover, the fact that the abstract has sub-headings makes it easy for a reader to refer to any aspect of the research as need be
- The abstract is not quite long and that makes it ideal to any reader

Aims & Objectives

- **Aim**

- To measure the effects of nutritional advice and the prescription of an oral nutritional supplement, either alone or combined for 6 week

- **Objective**

- To test the effect of dietary advice dedicated to increase intake in older patients at risk for malnutrition during chemotherapy, versus usual care, on one-year mortality

Review

- The aim and objective of the research are clear, specific and easy to understand

Design of the study

- The design of the study can be described as a cohort study
- A cohort study is a study where one or more samples are followed prospectively and subsequent status evaluations with respect to a disease or outcome are conducted
- The study by Bourdel-Marchasson et al. (2014) was a multicenter superiority randomized controlled trial of patients with cancer receiving chemotherapy in 12 public and private settings in South-West France, comparing Usual Care to Usual Care + Nutritional Intervention in two parallel arms

Suitability of the study design

- The study design is suitable since it made it possible for the researcher to closely monitor the research subjects
- Indeed, it was important that the subjects were closely monitored so that the aim and objective of the research could be achieved and the use of cohort study design made that possible
- As far as the sample is concerned, it can be explained that the fact that only patients aged 70 were used meant that the correct sample was used
- However, the samples were from a hospital in France thus posing questions on the extent to which the findings of the research can be generalized
- The use of 336 subjects was ideal

Suitability of the study design (Cont.)

Sampling technique

- Stratified sampling technique was used – This was ideal as it helped ensure that the research population was well represented

Inclusion and Exclusion criteria

- The inclusion and exclusion criteria used was ideal since the subjects used had; to be over 70 years, with lymphoma or carcinoma with an indication of chemotherapy and Karnofsky index higher than 50%

Variables

- **Constant variables**
  - Time
  - Cancer
- **Changing Variables**
  - Diet

Findings

- 336 research subjects were used
- Mean (standard deviation) age of 78.0 y (4·9), 51.2% male, mean MNA 20.2 (2.1).
- Distribution of cancer types was similar in the two groups; the most frequent were colon (22.4%), lymphoma (14.9%), lung (10.4%), and pancreas (17.0%).
- Both groups increased their dietary intake, but to a larger extent with intervention ($p<0.01$).
- At the second visit, the energy target was achieved in 57 (40.4%) patients and the protein target in 66 (46.8%) with the intervention compared respectively to 13 (13.5%) and 20 (20.8%) in the controls.
- Death occurred during the first year in 143 patients (42.56%), without difference according to the intervention ($p = 0.79$).
- No difference in nutritional status changes was found. Response to chemotherapy was also similar between the groups.

Reliability and validity

- The findings of the study are reliable and valid since the research measured what it intended to measure
- The data collected was valid as it was collected from subjects who met the specified criteria

Scientific essence of the article

- The research focused on the topic of cancer management among the elderly thus, it helped add to the existing literature pertaining to this research topic
- The research proved the point that even though early dietary counseling can be efficient in increasing intake, it is of no beneficial effect on mortality or secondary outcome

Findings

- The findings of the research can be explained to be surprising since the study found that:
- ✓ Early dietary counseling can be effective in increasing intake even though it has no beneficial effect on mortality or secondary outcomes.
- ✓ The reason why that is the case could be due to Cancer cachexia antianabolism

Strengths of the research

- Is has referred to past studies
- The research design that was used was ideal
- Inclusion & exclusion criteria used meant that the data collected would be ideal for the study
- Ethical issues such as consent from the subjects and the identity of the subjects were considered

Weakness

- The subjects used were only from a hospital in South-West France thus raising questions on the extent to which the findings of the study could be generalized
- Even though it is obvious that a lot of data was collected, only a summary of the data has been presented
- The researchers do not suggest or give direction for future research that could be carried out as a follow up to this research

Conclusions

- The research focused on topic of nutritional advice in older patients at risk of malnutrition during chemotherapy
- A cohort study was carried out
- Key finding was that: **Early dietary counseling was effective in increasing intake though it has no beneficial effect on mortality or secondary outcomes.**
- The research was carried out in a professional manner and it is for that reason that the findings of the research can be explained as been valid and reliable