The Physiotherapeutic Perspective on Preventing Childhood Obesity

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Introduction
Background of the study

- Obesity declared a global epidemic (Hill, 2013)
- It is easier to prevent obesity than to change unhealthy habits (Steinbeck, 2001)
- Despite the benefits of physical activity, there is a worldwide incline towards sedentary behaviour (WHO, 2015)
Purpose of the study

- Physiotherapists have a key role in preventing childhood obesity since they are experts in prescribing physical activity and exercise programmes.
- The MAP had developed an educational talk on childhood obesity and physical activity as a tool for the World Physiotherapy Day held yearly on the 8th September.
- The aim of this talk was to increase health literacy on obesity and physical activity in children.
- This educational talk was not however tested for effectiveness.
Literature Review
The role of the parents

- Parents serve as the primary role models in their children’s physical activity habits.
- Parents usually control what their children do.
- They shape their child’s preferences, attitudes, and habits (Lindsay, Sussner, Kim, & Gortmaker, 2006).

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Health Literacy

- Health literacy is the ability to take responsibility for one’s health, understand the determinants of health and having the knowledge on how to improve these determinants (Sorensen et al., 2012).
- Health literacy allows from greater autonomy and empowerment of parents to take responsibility of their family’s health determinants.
An effective public health intervention:

- Allows parents to recognise the negative effects of childhood obesity
- Enhances knowledge on how to determine whether their children have a healthy weight,
- Enhances knowledge on the benefits of physical activity,
- Enhances knowledge on how to ensure that one's children are leading an active lifestyle (Etelson, Brand, Patrick, & Shirali, 2003).
The role of the physiotherapists

- The WCPT (2012) states that physiotherapists, as experts in movement, with extensive knowledge of functional anatomy and pathology are key health care professionals to promote, guide, and prescribe exercise regimens to prevent obesity.

- Evaluating the impact of a public health intervention is crucial for physiotherapists working in primary health to ensure that the public health intervention is effective, ethical, economical and evidence-based (Waters et al., 2006).
Methodology
The primary aim of this study

The aim of this study is to evaluate the effectiveness of an educational talk in improving health literacy in caregivers of 5 to 6 year-old children attending their first year of primary school in Gozo.

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Research Design and Sampling Technique

- No sampling techniques were carried out.
- Variables in data collection were:
  - Health literacy score before
  - Health literacy score after
  - Health literacy score difference
  - Gender
  - Age
  - Employment status
  - Level of education
Research tools: Educational talk

- “Preventing childhood obesity: Meeting the recommended levels of physical activity.
- Developed by the MAP

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Research tools: Health literacy tool

- A self-designed questionnaire
- Filled in twice to obtain a health literacy score before and a health literacy score after
- 7-sections: WtHR, FITT recommendations, physical activity vs exercise, demographic information
- Validity of the health literacy tool was tested through an expert review involving experts in public health, and physiotherapists with further education (post-graduate studies) in public health. Validity testing preceded the translation of the tool.
- The WHO’s forward and backward translation process was carried out to translate the tool to Maltese.
Target population and recruitment of participants

- Target population: Caregivers of children in Year 1 (5/6 year olds) attending Primary State schools in Gozo.
- Target population number: 206
- Information letters were printed and handed out to every child to be taken home to their parents.
- An educational talk was carried out in every Primary state school in Gozo: 11 educational talks

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Data collection

- Data was collected by means of health literacy tools in the form of questionnaires.
- On the day of data collection:
  - Caregivers filled in a copy of the health literacy tool
  - The educational talk was then carried out
  - Caregivers were asked to fill in an identical health literacy tool after.
- A score of health literacy (before and after) was given by adding up the total number of questions answered correctly.
SPSS Version 23 was used to analyse data.

Descriptive statistics of demographic variables were demonstrated using tables and bar graphs.

Statistical tests were also used for hypotheses testing.
Response rate

- 23%
Socio-demographics
Age

![Age distribution chart]

Number of participants

Age brackets

- 18-20: 0
- 21-29: 10%
- 30-39: 65%
- 40-49: 21%
- 50-59: 2%
- 60-69: 2%
- 70+: 0

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Gender

- Males: 4%
- Females: 96%

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Education Level

- Primary: 6%
- Secondary: 44%
- Post-secondary: 27%
- Tertiary: 23%

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Employment status

- Employed: 50%
- Self-Employed: 8%
- Housewife: 40%
- Pensioners: 2%
Distribution frequencies

Distribution frequency of health literacy score before

Distribution frequency of health literacy score after
Median health literacy scores and age

![Bar chart showing median health literacy scores with participants' age. Age groups include 20-29, 30-39, and 40-49. The chart includes HLSB, HLSA, and HLSD categories.](chart.png)
Median health literacy scores and education level

Median health literacy scores with participants’ education level

- Primary: HLSB 3, HLSA 6, HLSD 10
- Secondary: HLSB 8, HLSA 17, HLSD 8
- Post-secondary: HLSB 9, HLSA 16, HLSD 7
- Tertiary: HLSB 11, HLSA 19, HLSD 6
Median health literacy scores and employment status

![Bar chart showing median health literacy scores for different employment statuses.](image)
Hypothesis testing

- There was a significant improvement in health literacy scores after the educational talk

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Practical implications
An educational talk as presented in this study is effective across the different population age groups, education levels and employment statuses ensuring equal access to information regardless of social and economic disparities.
Physiotherapists have an important role in preventing childhood obesity because of their clinical expertise on the causes and effects of obesity, and how obesity can be prevented and managed (WCPT 2012).
There is substantial amount of evidence to support health literacy as a means of improving the health of an individual in a population.

Caregivers need to know what defines obesity and the recommended levels of physical activity for them to be able to take responsibility of their children’s physical activity levels.
Physiotherapists are the key health care professionals to be involved in public health initiatives targeting childhood obesity. An educational talk which improves health literacy in caregivers, empowers them to take responsibility of their children’s physical activity levels.

Behavioural strategies as part of such an educational talk would instigate behavioural change and the adoption of an active lifestyle, therefore strengthen compliance to an active lifestyle.