

## **ABSTRACT**

**1) INTRODUCTION:** Obesity is a global problem and its prevalence is constantly rising. Overweight and obesity are key risk factors for many diseases. Obese patients are a greater economic burden for the state, they often rely on the help of others. The goal of obesity treatment is to reduce weight and then keep it within the recommended range. In an obese patient, it is not always just about the actual weight loss, but also about treating the associated diseases caused by obesity. Bariatric surgery allows patients to lose weight in a relatively short period of time and has a very positive effect on associated diseases.

**2) OBJECTIVE:** The aim of this diploma thesis was to evaluate the physical and mental condition before and after gastric bypass and to determine whether this surgery has a positive or negative effect on the physical and mental condition of the patient. The objective was further divided into sub-goals and hypotheses.

**3) METHODOLOGY:** The research was carried out using a quantitative method. This is an observational study, in which the mental and physical condition and advancement of patients who were about to undergo bariatric surgery – gastric bypass - were monitored for 6 months. Mental status was monitored using four standardized questionnaires: MAF, HADS, iADL, SF-36 in four time periods (before surgery, 1<sup>st</sup>, 3<sup>rd</sup> and 6<sup>th</sup> months after the operation). Physical condition was assessed using the ActiGraph and 6MWT twice (before the procedure and 3 months after the procedure).

**4) RESULTS:** A total of 28 respondents (100%) were included in the research. Of which 22 (79%) were women and 6 (21%) were men. The results were processed into tables and graphs that compared time periods. The hypotheses were compared through t-tests. There was no improvement in physical activity in the evaluation of ActiGraph and in the HADS and iADL questionnaires. For ActiGraph, the average number of steps was evaluated, which was increased between times T0 and T2 by about 1000 steps, but the differences tested were not statistically significant. Positive results relate to fatigue in patients, which was evaluated through the MAF questionnaire and in the evaluation of functional capacity - 6MWT (average improvement 100m/6min). The last monitored questionnaire SF-36 is divided into 8 dimensions. There is an improvement in 5 dimensions, where the tested differences are statistically significant.

**5) CONCLUSION:** Gastric bypass positively affects the functional capacity of patients. Fatigue has been reduced and several dimensions of quality of life have been improved.

**keywords:** obesity, bariatric surgery, metabolic surgery, gastric bypass, physical activity, mental activity