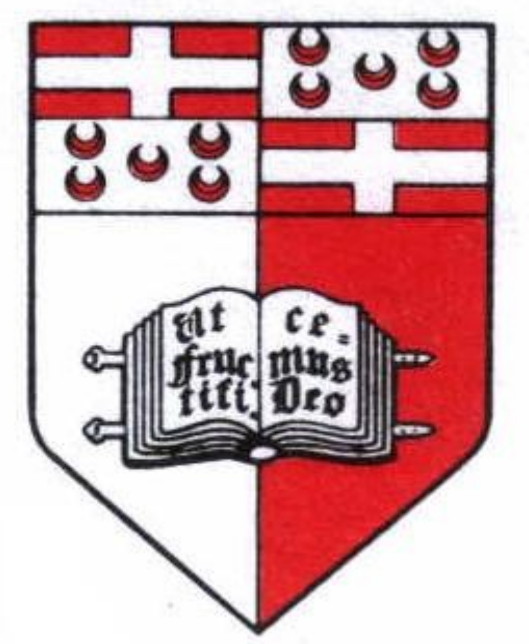


THE PHARMACEUTICAL SERVICES IN LIFESTYLE MODIFICATIONS: OVERWEIGHT AND OBESITY MANAGEMENT



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INTRODUCTION

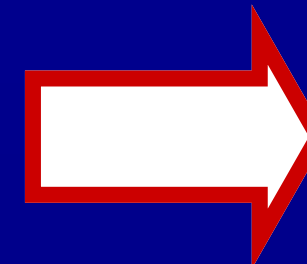
Within the European Region, overweight and obesity states are responsible for approximately 55% of hypertensive disease, 80% of type 2 diabetes mellitus cases and 35% of ischaemic heart disease among adults.¹ Community pharmacists are at an optimum position to help overweight and obese patients lose weight and reduce the risk of associated diseases, where they can offer tailored lifestyle modification advice² and provide point-of-care testing services.³

OBJECTIVES

- To develop, implement and assess a weight monitoring program in pharmacies;
- To analyse patients' opinions regarding pharmacists' intervention in weight control.

METHOD

- A weight management handbook, flyers and educational interventions were prepared.
- Pre- and post-intervention questionnaires were compiled.
- Patient monitoring parameters of body mass index (BMI), waist circumference (WC), blood pressure (BP), heart rate (HR), blood glucose (BG), cholesterol (BC) levels, with corresponding ranges of healthy and unhealthy states, were identified.
- Out of 198 community pharmacies, stratified, random sampling was adopted to select 20 pharmacies.
- Approval from the University Research Ethics Committee was obtained.
- 10 patients were recruited from each pharmacy via systematic sampling, and were equally divided into experimental and control groups.



- The experimental group was monitored at 3-week intervals over 5 months. During these 4 meetings they were exposed to the educational material and were subjected to pre- and post-intervention questionnaires at initiation and termination of the program.
- The control group was monitored at the beginning and at the end of the program. They were not subjected to any educational material and questionnaires.
- Program effectiveness was evaluated by comparing control group parameter baseline and final values to those obtained by the experimental group, and by comparing questionnaire knowledge assessment results collected at the beginning of the program to those achieved at the end. The Paired Sample t-Test was used for both. Comparison of opinion evaluation results allowed opinion analysis. The Chi-Squared Test was used.
- SPSS® Version 20 was used for all statistical tests carried out.

RESULTS

From a 100 patient recruitment for each group, 60 patients and 69 patients, for the control and experimental group respectively, completed the study.

- Weight was observed to decrease in the experimental group (-0.473 kg) and increase in the control group (+0.355 kg). The same trend was observed for BMI, with -0.170 kg/m² for the experimental group, and +0.140 kg/m² for the control group. There was a statistically significant decrease in WC in both the experimental and the control groups (p=0.000 for both groups).
- Both the systolic BP and diastolic BP decreased in the experimental group with -3.507 mmHg and -1.594 mmHg respectively. Both parameters increased in the control group with +1.250 mmHg for the systolic BP and +1.100 mmHg for the diastolic BP.
- Although BG and BC levels increased in both groups, the increase was observed to be statistically significant in only the control group with p=0.030 for BG levels and 0.001 for BC levels.

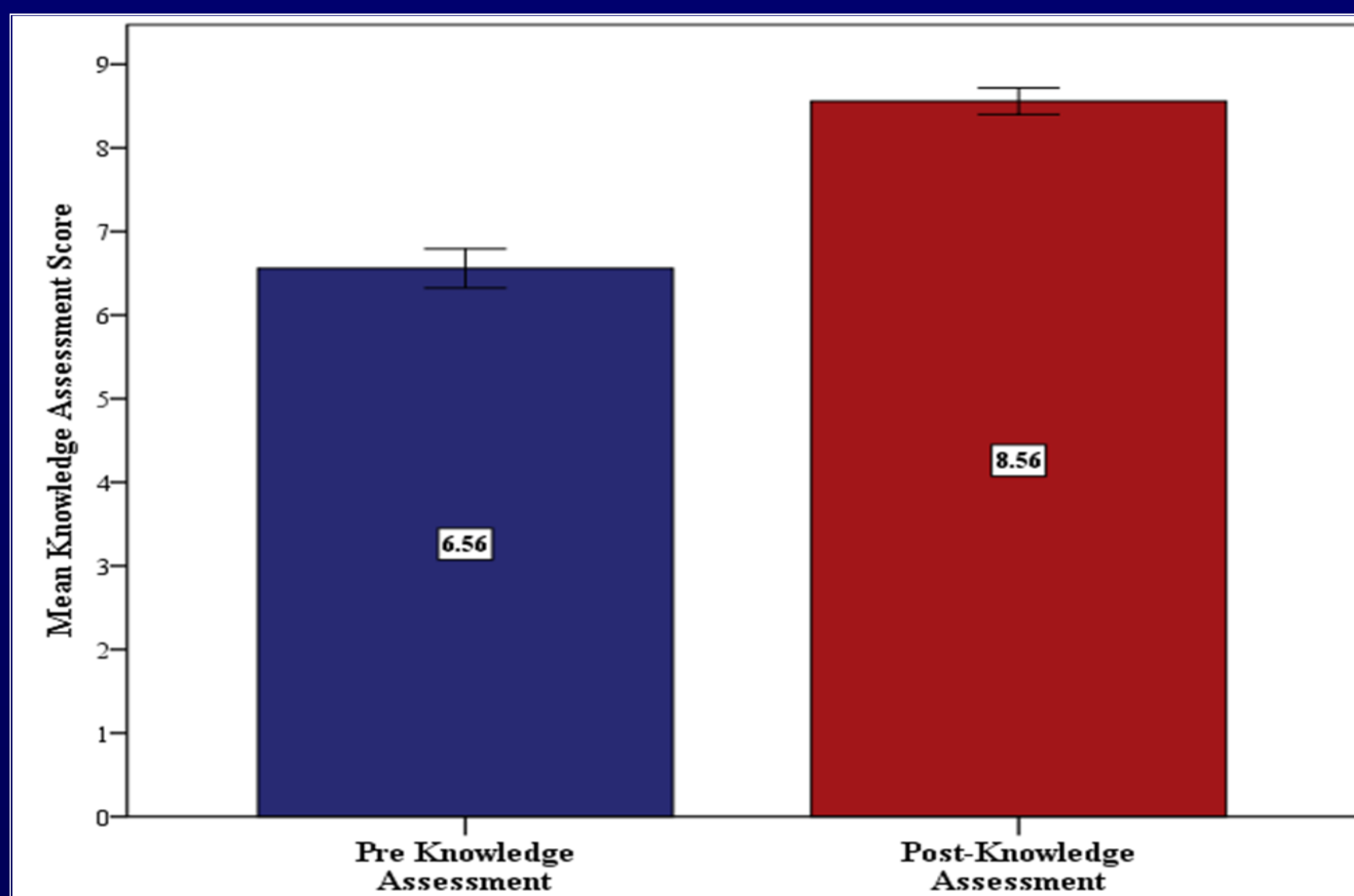


Figure 1: The patients' change in knowledge before and after the intervention (n_{pre-intervention}=74) (n_{post-intervention}=69)

The knowledge assessment scores range from 0 to 9, where 0 corresponds to completely uninformed and 9 corresponds to well-informed, hence the patients' knowledge in weight control increased with statistical significance (p=0.000).

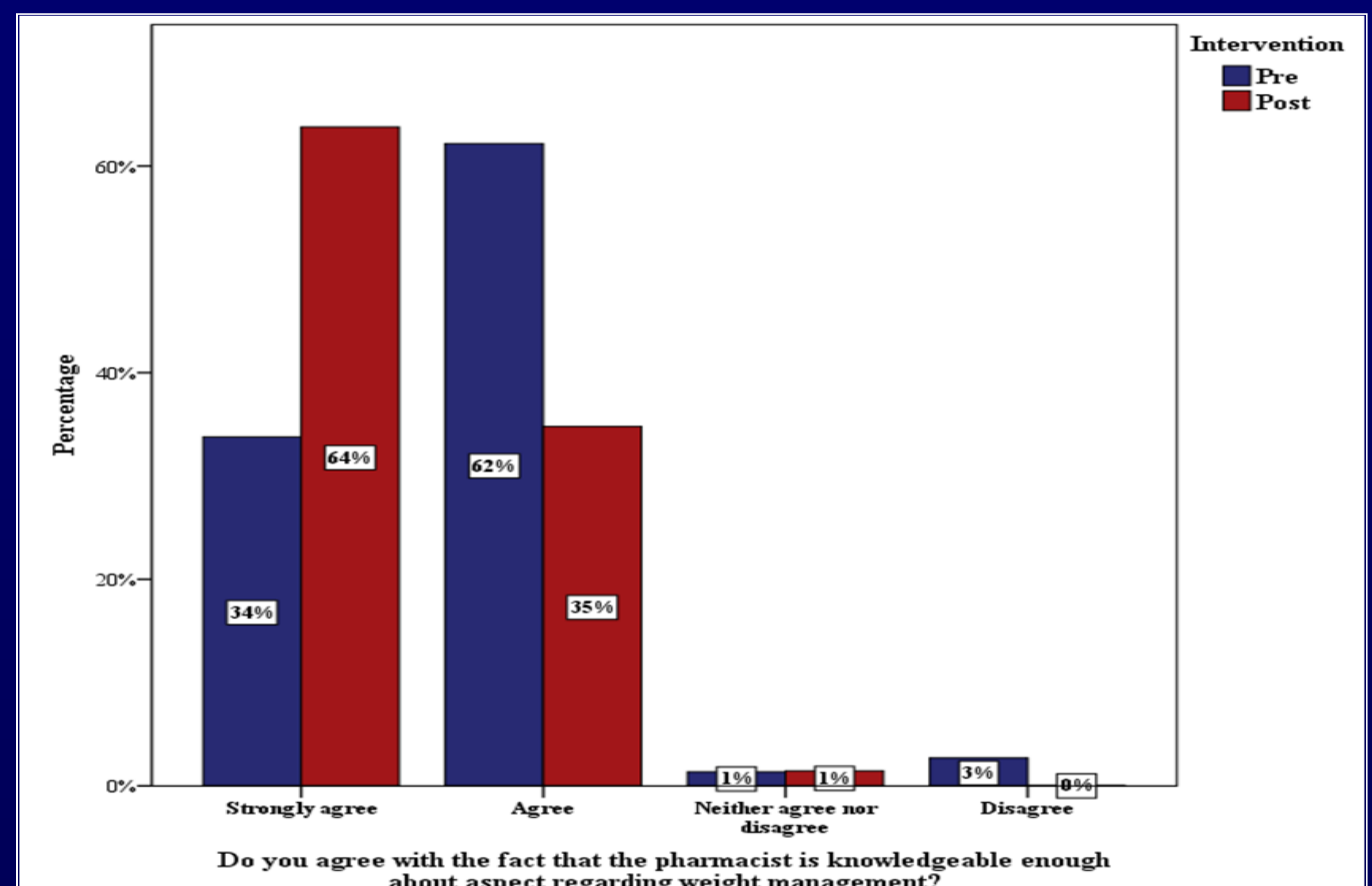


Figure 2: The patients' opinion about the pharmacist's knowledge on weight control (n_{pre-intervention}=74)(n_{post-intervention}=69)

The change observed is statistically significant with a p-value of 0.003.

63 patients (n=69) stated that their trust and respect for the pharmacist has increased following their participation. All (n=69) patients agreed that the program would be beneficial on a national scale.

CONCLUSION

The pharmacist-led weight monitoring program developed was feasible to be implemented in a community pharmacy setting. The patients' opinions on the pharmacists' intervention in weight management showed that the patients value such an intervention. A national weight control program would be of a significant advantage to Maltese citizens, and to lower the current national economic burden⁴ associated with overweight and obesity states in treating related diseases and due to lower work output as a result of sickness or premature death.

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