

A Pilot Study Investigating a Behavioural and Nutritional Intervention to Promote Healthy Habits in Young Adults



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Introduction

It is now well established that obesity is a significant health problem worldwide, increasing the risk of a range of chronic diseases such as Diabetes, Stroke, Coronary Heart Disease and Cancer ⁽¹⁾. Evidence suggests that obesity levels among young adults are an important predictor of adult obesity ⁽²⁾ and the development of long term diseases in adulthood ⁽³⁾. Positive changes in the health habits formed at this age have the potential to be sustained into adulthood thus influencing long term health status and reducing nutritionally related adult disease.

Methods

A randomised controlled trial in an educational setting was conducted with participants consisting of 29 males aged between 16 and 18 years.

At baseline (BL), participants completed 3-day food diaries and recorded daily pedometer steps. Nutritional knowledge and cognitions held in relation to leading a healthy lifestyle were taken via questionnaires. One week later, a nutrition education seminar was delivered. Participants were randomly assigned to intervention or active control conditions and completed the corresponding questionnaire tasks. The intervention comprised of behaviour change strategies including setting goals, prompting self monitoring of behaviour and making specific action plans (implementation intentions ⁽⁴⁾) to change behaviour. Follow up (FU) measures were taken at 5 months to monitor the long term maintenance of behaviour change. Diet content, physical activity, nutritional knowledge and cognitions were compared over time.

Results

Significance was determined as a difference between BL and FU of >0.5 on the Likert scale. The intervention group significantly increased intentions to lead a healthy lifestyle. In both groups there was an increase in intention (significant in the control group) to cut down on unhealthy snacks (defined as crisps, chocolate, cakes, fizzy drinks and biscuits) and a significant increase in intention to exercise. The control group intended to eat more fruit and vegetables (not significant). There was no increase in the intervention group (Table 1).

Table 1. Intentions were measured on a Likert scale of 1 – 7 (1 = No, I definitely do not intend to do this, 7 = Yes, I definitely intend to do this) in the control and intervention groups at BL and FU. *A difference between BL and FU of >0.5 was categorised as significant.

| | Control (n = 14) | | | Intervention (n = 15) | | |
|--|------------------|------------------|-------|-----------------------|------------------|-------|
| | BL (std dev) | FU (std dev) | Diff | BL (std dev) | FU (std dev) | Diff |
| Intention to eat fruit and vegetables everyday | 5.57 (± 1.99) | 5.66 (± 1.54) | 0.09 | 5.80 (± 1.66) | 5.64 (± 1.59) | -0.16 |
| Intention to cut down on unhealthy snacks | 4.07 (± 1.82) | 5.30 (± 1.92) | 1.23* | 3.73 (± 1.62) | 3.91 (± 1.61) | 0.17 |
| Intention to do physical activity | 4.36 (± 2.02) | 5.79 (± 1.30) | 1.43* | 4.33 (± 2.23) | 5.23 (± 1.66) | 0.90* |
| Intention to lead a healthier lifestyle | 5.50 (± 1.40) | 5.85 (± 1.17) | 0.35 | 5.33 (± 1.45) | 5.99 (± 1.13) | 0.66* |

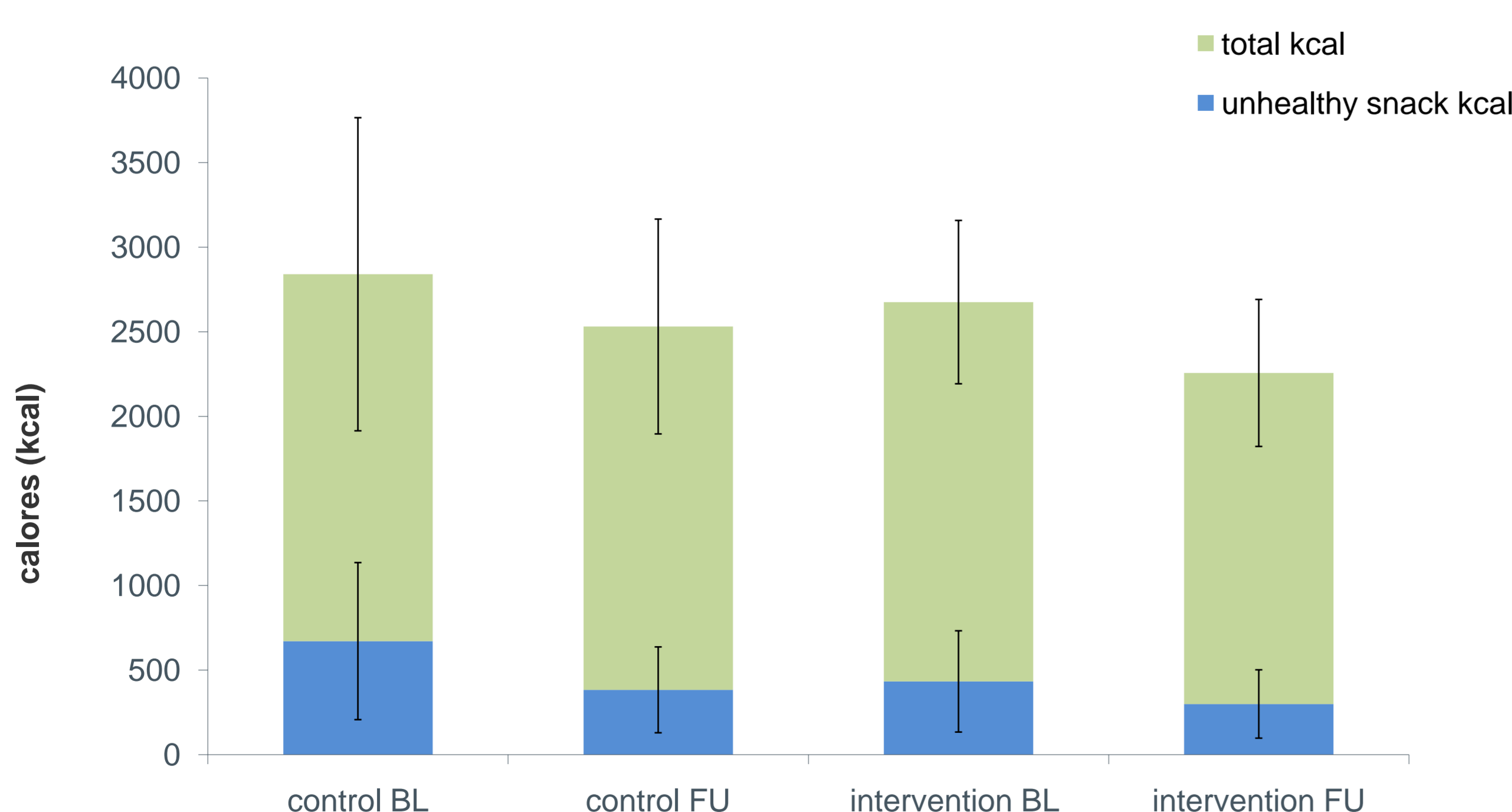


Figure 1. mean daily kcal intake and mean kcal intake from unhealthy snacks in control (n=9) and intervention (n=10) group

Mean daily total calorie intake, as well as mean daily calorie intake from unhealthy snacks, was reduced in both groups at FU (Figure 1). The percentage of calories derived from unhealthy snacks at baseline, 23.6% for the control group and 15.1% for the intervention group, decreased to 16.2% and 13.3% respectively.

There was a reduction in the amount of salt consumed in the intervention group. Mean daily intake dropped from 8.8g/day to 7.5g/day. There was no change in the control group (Figure 2).

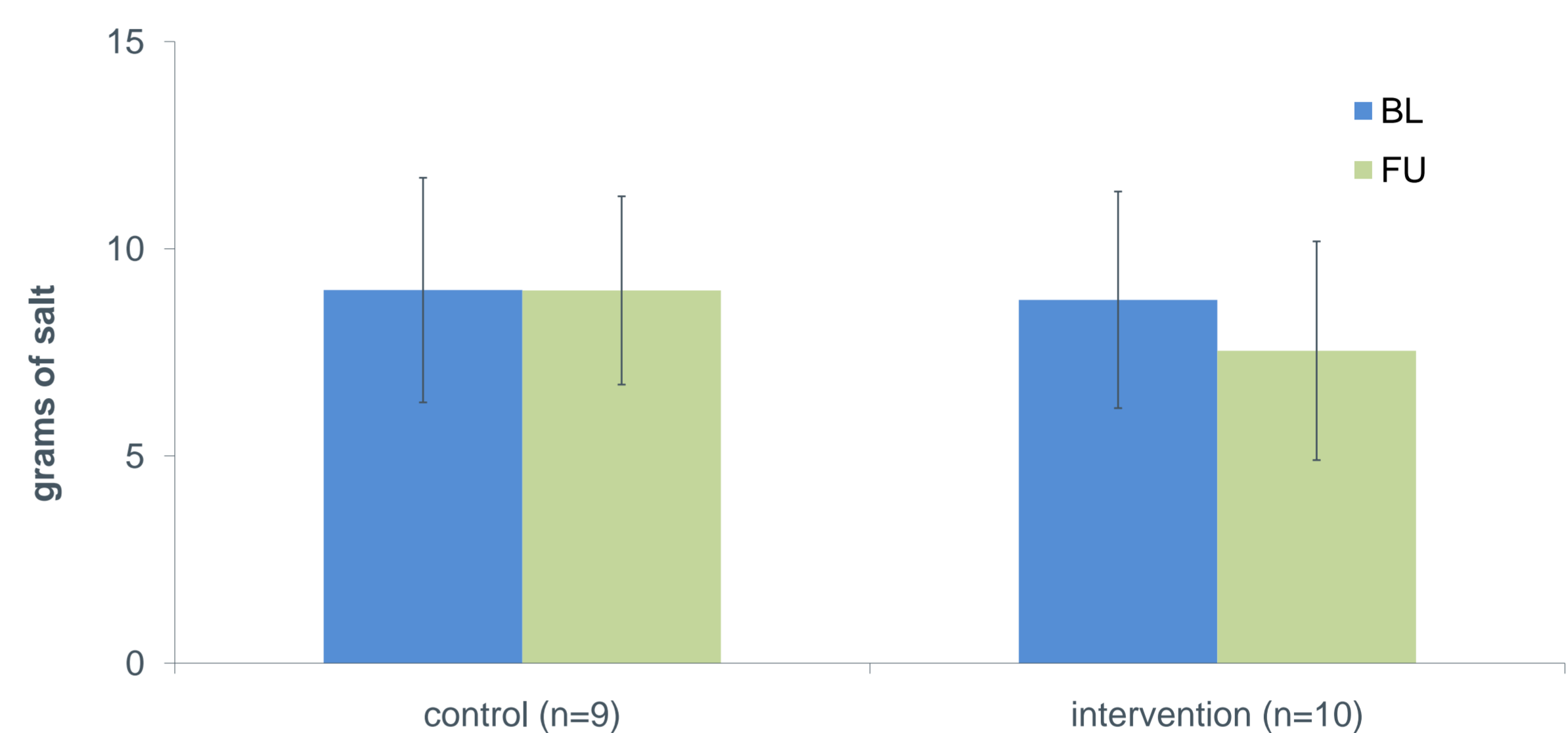


Figure 2. mean daily salt intake between control and intervention group at BL and FU

Fruit and vegetable consumption increased in the control group. A decrease was observed in the intervention group (Figure 3).

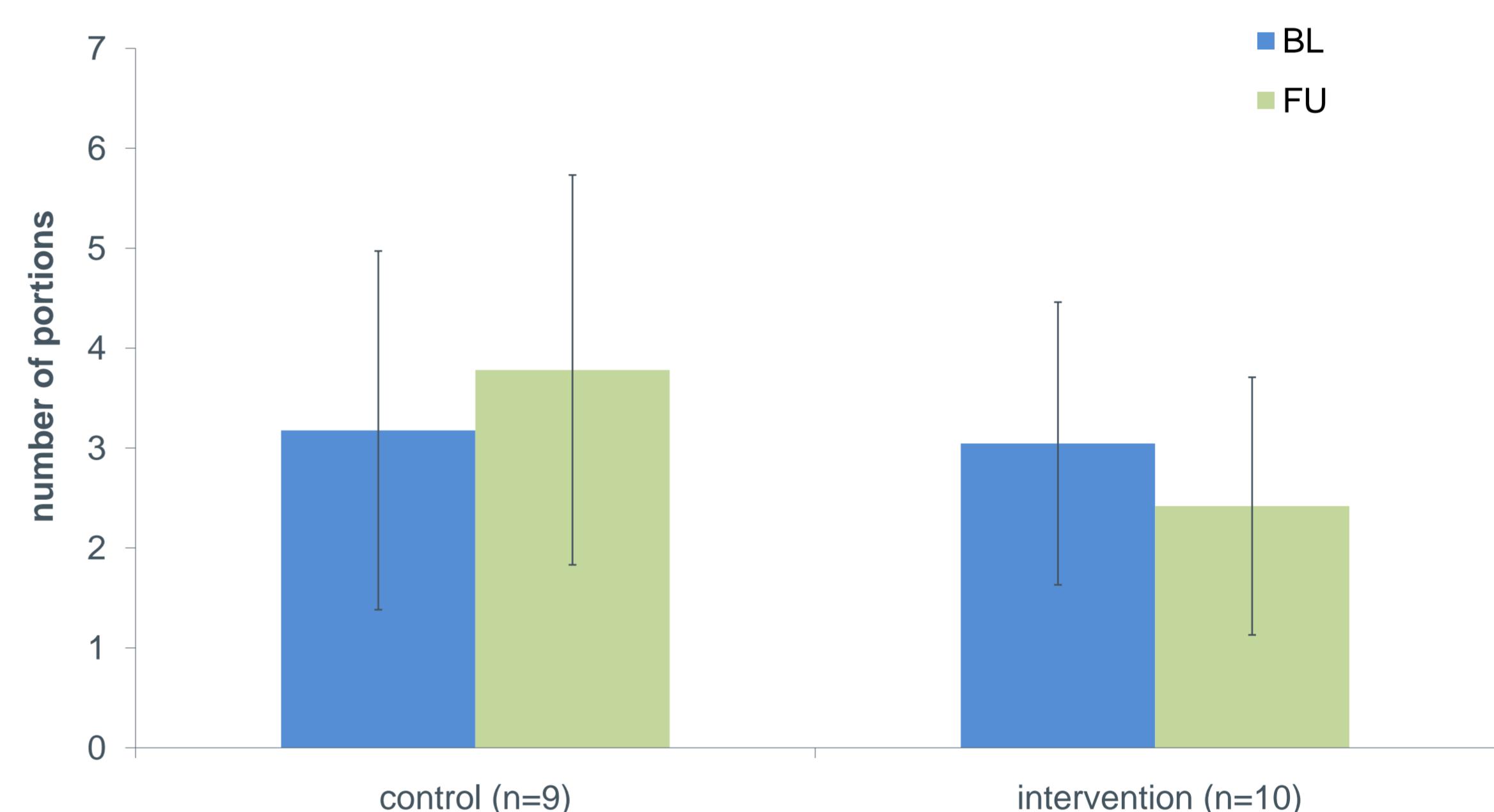


Figure 3. mean daily portions of fruit and vegetables in the control and intervention group at BL and FU

Conclusion

Baseline data indicated that the quality of dietary patterns in this group could be greatly improved. Fruit and vegetable intake was around 3.1 portions/day and stayed below the recommended 5 portions/day (80g per portion) at all measures. Salt intake, while being reduced by 1.3g/day in the intervention group at follow up, remained above the recommended 6g/day at all measures.

The results presented demonstrate some positive trends that support the implementation of a behavioural intervention combined with nutrition education in order to stimulate changes in cognitions and dietary habits in this age group.

References

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