

# Choosing and following a very low-calorie diet program in Australia: A quasi-mixed methods study to understand experiences, barriers, and facilitators in a self-initiated environment

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### Introduction

In Australia, the recommendations for obesity (BMI  $\geq 30$  kg/m<sup>2</sup>) management include very low calorie diets (VLCDs) as an intensive weight loss strategy. Although healthcare professional (HCP) guidance is recommended, it is not mandated in Australia, and VLCD programs are available for self-initiation. An individual may choose how to follow the program and if they will engage healthcare professional support, making the Australian experience with VLCD programs different to other countries where VLCDs are available only by prescription or mandated medical supervision.

Understanding the Australian experience will help identify the factors associated with the perceived outcomes of VLCD programs and inform models of care to facilitate engagement with HCP support.

In Australian adults, this study seeks to describe the experiences and factors associated with the perceived outcomes of using a VLCD program for  $\geq 4$  weeks.

### Methods

- A quasi-mixed-methods study using semi-structured interviews and cross-sectional surveys
- Inclusion criteria:
  - Currently consuming at least one VLCD product daily for  $\geq 4$  weeks or had ceased consumption within 4 weeks.
  - Australians aged 18 to 65 years old
  - BMI  $> 25.0$  kg/m<sup>2</sup>
  - No contraindications for use of a VLCD
- Once enrolled, participants completed a:
  - cross-sectional survey to collect quantitative data
  - semi-structured 1:1 interview to collect qualitative data, which was thematically analysed.

### Results

- n = 31 (with 178 subjects screened)
  - No significant differences in demographic or medical characteristics between those that completed the interview and those that withdrew
  - 84% of participants had a BMI  $\geq 30$  kg/m<sup>2</sup>
  - 19% reported a perceived need for weight loss surgery
  - 94% reported having one or more comorbidities
  - The most frequently reported comorbidities were back pain/joint pain/poor mobility (52%) and depression/anxiety (48%)
  - 90% were currently on the VLCD program with 52% being first time users.

## Quantitative Survey results:

- Only 40% of participants reported using the official VLCD program online support platform, despite 97% being aware of the support.
- All reported weight loss since commencing the VLCD program, ranging from 3 to 90 kg (mean 19.1 kg) over an average of 5.2 months.
- 30 out of 31 participants reported that their main goal was weight loss; the other participant indicated weight maintenance was their primary objective.
- There was a strong correlation between weight loss and duration of VLCD program use ( $P < .001$ ) but no association found between weight loss and age or number of times using a VLCD program.

## Qualitative Interview results:

- Data analysis of participants' experiences identified a theoretical framework which described how Australian adults chose and followed the VLCD program, and the factors which facilitated or acted as a barrier to their perceived outcome.
- Thematic analysis identified two domains, both which involved several overlapping themes:

DOMAINS	Choosing the VLCD program	Following the VLCD program
THEMES	A journey of learning	Outcome as a reinforcing stimulus
	Convergence of internal motivations	Learning healthy behaviours
	Differentiating credibility	Fear-based dependency

- Participants who self-initiated the VLCD program were influenced by a journey of learning from their previous weight loss attempts
- Participants discerned the VLCD program as credible, and despite having low expectations of success still chose to commence the VLCD due to a convergence of internal motivators.
  - Internal motivators included vitality, physical health, social engagement, mental health, discrimination, and physical functioning.
- Health-related outcomes acted as a reinforcing stimulus to adhere to the program
  - For many, this led to learning new healthy behaviours
- Engagement with HCPs was minimal and was not perceived by participants as an important facilitator for perceived success
- The VLCD program was seen as evidence-based and credible, due to its association with a recommendation by HCPs.
- Participants reported widely recommending the program within their social networks
- Perceived outcomes were strongly linked to the VLCD program rather than the behaviour change, which led to participants describing hesitation or fear of returning to a diet without VLCD products

## Discussion

- This is the first study to explore and describe the real world experience of VLCD program usage in Australia.
- Healthcare professionals were minimally engaged, and less than half of users accessed the online support. HCPs were not considered a factor associated with improved adherence to the program. This is in direct contrast to research from Europe showing that targeted and effective HCP support were critical factors in achieving positive outcomes.
- Many users modify their plan to make it more flexible.

- The findings represent those who have continued the VLCD program for at least 4 weeks, and many for months or years, not those who ceased the program within the month.
- Participants still placed high value in the experiences of others and recommendations from social networks
- Internal motivators and outcomes were related to motivation to adhere to the program, as well as outcomes of others
- Despite reporting new healthy behaviours, participants felt dependent on the VLCD program. This may be related to the lack of engagement with HCPs, who would aid in preventing this dependence.
- Models of care should be implemented to facilitate access to HCPs to support adults on VLCD diets
- Barriers to VLCD program use included adverse events: participants reported they could be traumatising, particularly those related to GI function and hair loss.
- Research is required to explore the experiences of those who ceased the program prior to 4 weeks

## Conclusions

- Participants who self-initiated the VLCD program were influenced by their previous weight loss attempts and despite having low expectations, still chose to follow the VLCD due to internal motivators.
- The VLCD being discussed (OPTIFAST VLCD) was seen to be a credible brand
- Experiencing early improvements in health-related outcomes helped participants adhere to the program.
- Even with learned new behaviors, participants reported feeling dependent on the VLCD program due to fear of transitioning back to a diet without VLCD products.
- These themes provide guidance and direction to HCPs to support Australian adults on VLCDs.
- HCPs were not seen as essential for success, however meaningful engagement of HCPs would ultimately improve the experience, safety, and adherence to a VLCD program in Australia.

## Conflict of interest

Authors work independently for Nutrition Research Australia and declare no conflicts of interest. This study was funded by Nestlé Australia, however had no contribution to the methods, data collection and analysis, or drafting of the manuscript.