

Fit4YAMs-2: health-related text messages preferences of overweight rural young adult males

Kumara Mendis¹, Jannine Bailey¹, Timothy McCrossin¹, Kate Steinbeck², Michael Kiernan³

¹Bathurst Rural Clinical School, University of Western Sydney, ²Academic Department of Adolescent Medicine, Children's Hospital at Westmead, ³School of Psychology, Charles Sturt University

Introduction

Overweight and obesity is a national health priority with 62.8% of Australian adults now classified as overweight or obese.¹ In 2011-12, men living in regional and remote Australia were more likely to be overweight or obese (74.4%) than rural women (63.2%) and men living in major cities (67.7%).¹ Data for the New South Wales (NSW) 16 – 24 year age group in 2011-12, based on direct measurement, also showed a higher prevalence of overweight and obese males than females (41.2%: 31.6%).²

Rapid weight gain tends to occur during young adulthood^{3,4} with males gaining more weight at an earlier age compared to females.⁵ Therefore it is important to prevent or reverse overweight and obesity and the associated future chronic diseases that will be a costly burden to the healthcare system should the obesity persist into the later adult years.^{4,6} In spite of this, young adult males (YAMs) in Australia are understudied as compared to their overweight and obese female counterparts.^{7,8} More importantly, there are no published studies specifically targeting overweight or obese rural and regional YAMs in Australia.

YAMs are a difficult group to engage in health promotion as they visit their general practitioner less often⁹ and use Medicare services much less frequently than young adult females.⁹ However, YAMs are high users of mobile communication technology.¹⁰ A 2014 systematic review and meta-analysis of interventions for weight management using text messaging found that participants in weight-loss programs that included a text messaging component lost on average seven times more weight than participants in interventions that did not include text messaging, in the short term.¹¹

To maximise the effects of text messaging interventions, messages need to be engaging and motivational. Striking the right balance with message content, text talk, text acronyms & emoticons, delivery frequency/time, and personalisation of messages is crucial.¹¹ This is particularly important when trying to appeal to traditionally hard to engage groups such as rural and regional YAMs.

This study describes the development and pre-testing of personalized mobile phone text message support (Fit4YAMs) to promote weight loss in overweight and obese young adult males aged 18-24 years in rural and regional Australia.

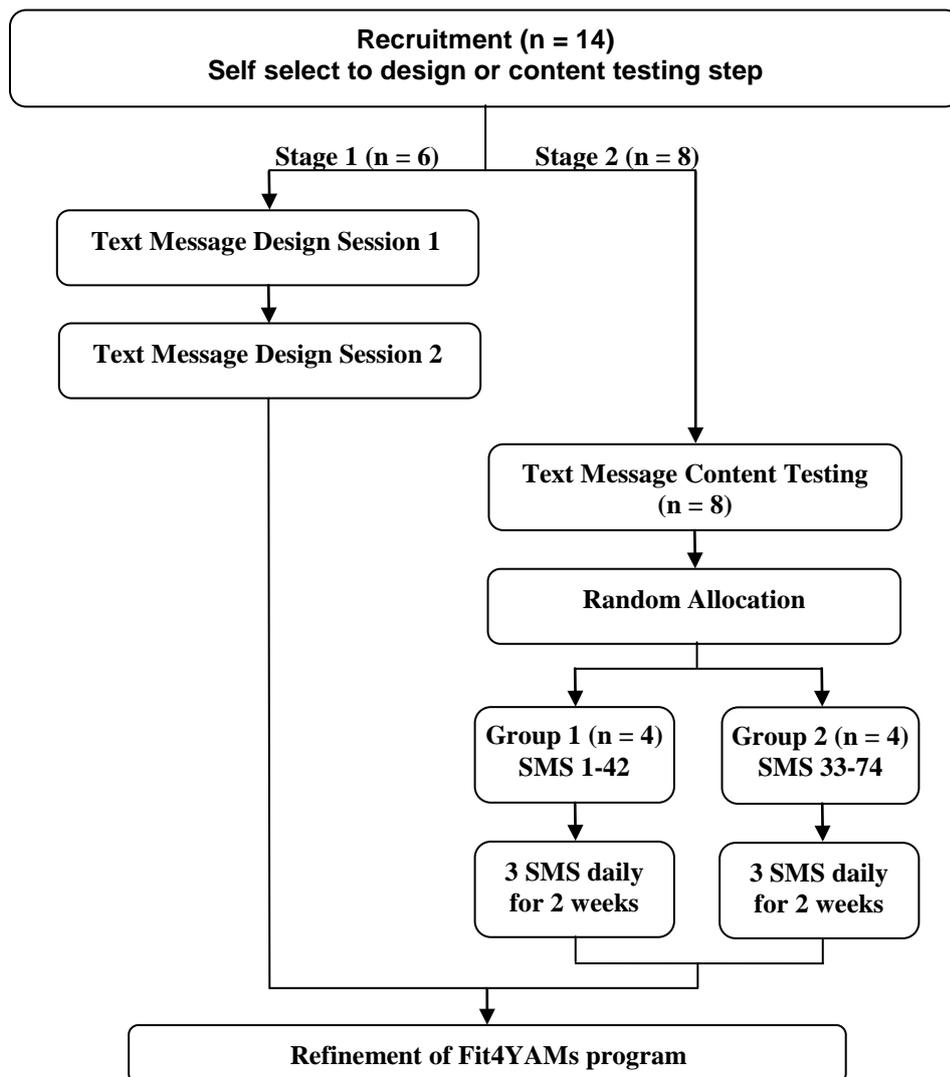
Methods

This study was approved by the University of Western Sydney, Human Research Ethics Committee (H10687).

A collection of health-related text messages on diet, exercise and motivation were created in consultation with a dietitian, personal trainer and clinical psychologist drawing on the stages of change identified in the transtheoretical model for health behaviour change.¹² In a two stage iterative process, YAMs participated in evaluating and refining the text message collection and the delivery program (Figure 1).

Fourteen 18-24 year old overweight or obese YAMs were recruited using traditional print media and face to face approaches. Inclusion criteria were: male aged 18-24 years; currently living in Bathurst, NSW with a home postcode of 2795; body mass index (BMI) greater than 25 and waist circumference greater than 94cm;¹³ fluent in English; own a mobile phone and be confident with text messaging. Exclusion criteria were: currently participating in another weight loss program; secondary obesity; physical condition that precludes physical activity; eating disorders; current history of depression or anxiety; currently undergoing psychological therapy; and taking medications that might interfere with weight loss.

Figure 1 Text message design and content testing timeline



In stage 1, two semi-structured focus groups were held with six of the participating YAMs with the objective of “YAMmizing” the text messages. That is, the participants provided feedback on the message content, as well as guidance on the wording and ‘text talk’ that would be most effective for other overweight or obese YAMs in the context of the Fit4YAMs intervention.

Part one of each session was a traditional focus group where participants discussed their preferences relating to text messages with regards to the Fit4YAMs intervention. Process details such as message length, message frequency, and time of the day to send were also covered. In part 2, participants were asked to rate and refine selected text messages from the collection using three different approaches:

- Provide an overall rating (Likert scale from 1 to 5) for individual messages that were displayed on a screen
- YAMmize a collection of messages, i.e., convert the message into their preferred format; this could include modifying the wording or text talk used, shortening or rearranging the message, or any other modifications that would make the message more effective for them in the context of the Fit4YAMs intervention
- Place in order of preference 3 different versions of the same/similar messages

In stage 2 of the study, 74 “YAMmized” text messages from the collection were sent to the other 8 participating YAMs at the rate of three texts per day over a 2 week period. The 8 participants were split into two groups of four, with group 1 receiving messages 1-42 in the collection and group 2 receiving messages 33-74. Text messages were delivered and received using a two-way text messaging platform from a major commercial SMS service (MessageNet Pty Ltd; www.messagenet.com.au).

Messages were randomized such that both groups received a mixture of diet, exercise and motivational messages. YAMs marked each message using a rating out of 5 on a Likert scale, 1 being very poor and 5 very good. When assigning a rating of 1 or 2 to a message, participants were asked to also include in their texted rating a reason or reasons for why they did not like the message out of the following alphabetised options:

A - not motivating; B - content; C - length; D - text talk used; E – emoticons used

An overlap of 10 messages between the two groups (messages 33-42) was included so that a Rasch judgement analysis¹⁴ could be performed. Using the ratings of these 10 common messages for calibration, the Rasch analysis locates all items (i.e. messages) and all participants within a common measurement frame of reference. This allows for predictions to be made about how a participant would rate a message that they did not actually receive.

Results

Stage 1: Focus group discussion of YAMs preferences regarding a text message intervention (direct quotes are shown in italics)

YAMs were unanimous in their preference for short, concise messages of one to two sentences. Longer messages were deemed un-engaging and would not be read.

Really just keep it short and simple

YAMs indicated a preference for correct spelling and grammar in the text messages. This was deemed particularly important for health-related text messages, but was also a general preference.

I just think when people use abbreviated terms it looks a bit stupid and on the subject of health I wouldn't take it seriously

Yeah it will come across better spelt properly I think

Yeah just lazy writing ...

The YAMs are not consistent users of emoticons and use of emoticons in health-related text messages was not a preference.

... receive them more off females because they use them like crazy

I wouldn't send it to a mate no

I think in a humorous way it would work, but I reckon if it said 'be healthy, be fit' or whatever and a little smiley face next to it, I'll probably run straightaway

I think it kind of takes away from like the sincerity of it when you start over using emoticons, kind of makes it more comical or more like cartoon... like I wouldn't have taken the message as seriously if I was receiving a large amount of emoticons

Yeah use sparingly

Personalisation of messages was deemed important. Not “fake” personalized with just their name at the start of the message, but really targeted towards their individual goals and interests.

But not fake personalised, anyone can stick my name in front of a message

Yeah so if your goal is to go to the gym three times a week, have you gone to the gym today?

When asked about process details relating to the Fit4YAMs intervention, there was general agreement that a message frequency of 3-4 messages per week would be optimal. Weekday afternoons and weekend mornings were considered the ideal time to send the messages. The group agreed that diet and exercise messages would be well received on any day, whilst motivational messages would be most effective on Mondays and Fridays. Messages advising how to stay on track when socializing (e.g. healthy pub meal options) and during weekend activities would be welcomed, although delivery would need to be optimized to individual schedules. One participant indicated that because they tend to work every Saturday and Sunday their “weekend” falls on a Thursday and Friday. For them, a shift of message delivery to complement this timeline would be optimal.

Stage 1: Feedback on messages from the Fit4YAMs collection

Despite indicating a liking for picture messages in the focus group discussion, when shown examples of actual picture messages these were not as well liked. YAMs endorsed the text content of the picture message but did not see any real purpose for the picture itself. Further, concerns were expressed over their ability to receive such messages, especially for those without a smart phone.

Quotes from well-known athletes, e.g. Mohammed Ali, were endorsed and it was suggested to include more messages of this type from a variety of sports to cover all interests e.g. football, cricket, soccer etc.

Messages containing credible health/scientific information were preferred over generic messages. For example, referring to “a US study showed ...” or “studies have shown ...” rather than just stating “you can cut calories by doing ...”

There was some disagreement over other message preferences. Some participants endorsed the so-called “cheesy” or “clichéd” messages for that reason, but others did not like these messages for that very reason.

Stage 2: Rating of the Fit4YAMs message collection by a new group of participants

According to the Rasch judgement analysis of participant ratings, 50 out of the 74 messages from the collection that were tested were more likely to be endorsed by participants than not. Table 1 lists some examples of messages that were favoured and some that were not.

Within the 23 messages that did not rate well, we deliberately included several messages that used emoticons and acronyms, to confirm the findings from the Stage 1 participants, who expressed a dislike of messages that incorporated these items. These types of messages were also not well received by participants in Stage 2, but were not the most disliked messages within the collection. A message relating to the consumption of frozen meals in place of takeaway food was the least favoured message followed closely by another message which addressed reducing alcohol consumption to cut kilojoule intake (Table 1).

Table 1 Examples of messages from the Fit4YAMs collection

Messages that rated highly	Messages that rated poorly
When you skip meals you are more likely to give in to cravings. It is important to maintain an even blood sugar level to prevent hunger	Need a quick healthy fix? Try a frozen meal. No cooking, no dishes, and no guilt.
The first step is always the hardest. Ensure your success by setting small achievable goals to boost your confidence and keep you motivated to carry on.	Be aware of your alcohol intake when losing weight. 2 schooners of beer = 1 chicken burger.
Rethink your drink - water has zero calories and no sugar. Aim for 8 cups a day.	A month from now u will wish u had started 2day
Short of time? Try this; 5 rounds of 10 x pushups, 10 x sit ups, 10 x squats. Time how long it takes and challenge yourself to beat it next time.	Cut down on TV and try something new. Think about what you might like to do and reward yourself.

Discussion

This study is the first of which the authors are aware to specifically develop, refine and test a text message collection for use as a lifestyle intervention in overweight or obese rural and regional young adult males (YAMs) aged 18-24 years old in Australia. The Fit4YAMs program is consistent with the best available evidence regarding intervention strategies that might be effective in promoting the adoption of a healthy lifestyle, and subsequently weight loss, in YAMs.^{6,11} Out of the 74 messages that were tested by the participating YAMs, 50 were endorsed and will therefore be retained for use in an intervention trial. Further messages can now be developed, and added to the collection, using a style and format similar to those that were endorsed by the participants.

Contrary to our hypothesis that YAMs would prefer health messages that used text talk, acronyms and emoticons,^{15,16} the participating YAMs preferred correct spelling and grammar. Despite this, there was consensus that messages needed to be short and succinct. These findings around the limited use of acronyms, emoticons and text talk by YAMs in this study may represent a fundamental difference between young adult males and females today. According to our participants, these items are used frequently by females in their age group, but not by themselves or other YAMs. This highlights the need for establishing a health-related text message collection specifically tailored to suit the preferences of YAMs.

For optimal engagement with the intervention, all YAMs agreed that personalisation was essential. Personalisation was also found to be important by Hebden & colleagues who recently evaluated the effectiveness of an “*mhealth*” weight loss intervention that included twice weekly SMS and email contact, as well as an internet forum and smartphone application.⁴ They found no difference between the *mhealth* intervention group and controls with respect to weight loss, physical activity levels and dietary behaviours. Participant feedback indicated that the intervention needed to be more personalised, providing what felt to them like one-on-one support. This sentiment was also echoed in preliminary research conducted by two of the authors (KM and KS) with YAMs in the regional town of Dubbo, NSW¹⁸ and has been an important consideration in the development of the Fit4YAMs intervention.

In terms of policy recommendations, there is a need for targeted public health strategies to prevent or reduce unhealthy weight gain in young adult males and females. Whilst text messaging lifestyle interventions appear to be effective for weight loss in females of all ages and university students,¹¹ there is a paucity of research in young adult males, including those residing in rural and regional Australia. The results of this study suggest that a one-size-fits-all approach to delivering a text message lifestyle intervention will not lead to beneficial outcomes for all participants. There appear to be clear differences between the texting preferences of young adult males versus females in the context of a lifestyle intervention. The distinction between young adult males and males of other age groups has not yet been elucidated. The development and testing of tailored programs that will engage the hard-to-engage young adult male in adopting a healthy lifestyle are urgently required to help curb the obesity pandemic in this group. The next stage of the Fit4YAMs project will be a pilot study to ascertain the effectiveness of using specifically designed health-related text messages to promote and maintain weight loss in 18-24 year old overweight or obese YAMs in rural and regional Australia.

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Presenter

Jannine Bailey is a research officer in Rural Health at the Bathurst Rural Clinical School, University of Western Sydney. She graduated with a BSc. (Hons) in Biomedical Science from the University of Western Sydney followed by a PhD in Biomedical Science (Microbiology) from the University of Sydney in 2006. Since that time she has worked as a research associate on various projects concerned with gastrointestinal health, the impact of the microbial flora on host health and the incidence of antibiotic resistance within the community. While still maintaining an interest in these areas, as a research officer in rural health her primary focus is on the broader health issue of obesity, particularly in rural young adult males. Other areas of particular interest are patient experiences with managing diabetes care and bibliometric research.