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Testing campaign slogans designed to motivate older people to be more physically active

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Key points

- There is limited information about communications approaches that are likely to be most effective in motivating older people to be more physically active
- Five potential campaign slogans were tested and found to be effective across perception and motivation variables in people aged 50 years and older
- The slogan 'Use it or lose it' was the most effective across all criteria
- This preference is likely due to the use of messaging execution elements with demonstrated efficacy, such as rhyming and brevity

Abstract

Objectives and importance of study: Being physically active is critical for healthy ageing, yet many older people do not meet physical activity guidelines. The aim of this study was to test the relative effectiveness of five previously identified campaign slogans designed to encourage older people to be more physically active: 'Be active 30–60 minutes a day to stay fit and well'; 'Move more, live longer'; 'Stay fit to stay functional'; 'This is your time – enjoy being strong and active'; and 'Use it or lose it'.

Study type: Online experiment

Methods: A total of 1200 Australians aged 50 years and older (50% female, mean age 65 years) were recruited to complete an online survey, with respondents randomised to answer a series of questions on a video featuring one of the five slogan conditions. One-way ANOVAs with Tukey's post-hoc tests were used to identify differences in outcomes between slogans.

Results: Overall, the slogans were assessed favourably, suggesting older adults may be receptive to messages about increasing their physical activity. 'Use it or lose it' performed best across the outcome measures of internal and external motivation, perceived effectiveness, liking, believability, and personal relevance.

Conclusion: Efforts to encourage physical activity among older Australians could use the slogan 'Use it or lose it' as an evidence-based tagline.

Introduction

Physical activity participation levels are suboptimal across all age groups globally, but especially among older adults.¹ Being physically active reduces the risk of numerous age-related diseases (e.g., heart disease, stroke, and cancer) and can enhance physical and cognitive functionality to extend independence and maintain quality of life.² There is thus substantial potential to improve health outcomes for older people by developing and implementing interventions to increase their physical activity levels. Such interventions are especially important in the context of rapid population ageing in many countries.³

The World Health Organization (WHO) recommends the use of well-designed mass media campaigns to encourage higher levels of participation in physical activity, both at the population level and for particular groups, including older adults.^{4,5} The WHO notes that an important component of such campaigns is an overarching slogan that conveys the key message in a manner relevant to the target audience. To date, few jurisdictions have implemented mass media campaigns that focus on encouraging older people to stay physically active, and there is a lack of evidence on the types of slogans that resonate with this group.⁶

The present study aimed to identify a campaign slogan capable of clearly and effectively communicating the need for those in later life to actively include exercise in their lifestyles. The study context was Australia, where around two-thirds of those aged 65 years and older do not meet the national guideline of at least 30 minutes of moderate-intensity activity on most, but preferably all, days⁷, despite many being aware of the guideline.⁸ Building on a prior study that assessed the likeability and perceived effectiveness of a series of 12 campaign slogans developed with a sample of older Australians⁹, the present study tested the top five rated slogans in the context of a video advertisement portraying older people engaging in moderate to vigorous physical activity (MVPA). A broad range of advertising outcomes was assessed in the present study, including motivation to increase physical activity, ad perceptions, and elicited feelings.

The video ad development and testing process is described elsewhere.¹⁰ Briefly, the 15-second ad depicted older people engaging in various forms of activity (cycling, dancing, jogging, swimming, and tennis) to an upbeat soundtrack, culminating in one of five slogans being shown onscreen (randomly allocated): 1) *'Be active 30–60 minutes a day to stay fit and well'*; 2) *'Move more, live longer'*; 3) *'Stay fit to stay functional'*; 4) *'This is your time – enjoy being strong and active'*; and 5) *'Use it or lose it'*. Previous analyses found the ad to be considered believable, likeable, effective, and relevant by the large majority of older people surveyed.¹⁰ The present study extends this prior work by analysing differential responses to the video according to which slogan was shown.

Methods

An experimental study design using an online survey was employed to test the five slogans. An ISO-accredited web panel provider (Pureprofile) was commissioned to recruit a sample of 1200 Australians aged 50 years and older and host the survey. The survey was in the field during January 2018. Due to the need for people to establish regular physical activity habits in middle age to increase the likelihood of these habits continuing into older age¹¹, the sample comprised those aged 50 years and older to ensure any recommended slogans would also be appropriate for (and avoid alienating) those in the pre-retirement age group. Quotas were applied to obtain a sample characterised by equal gender representation and an even split across three age subgroups: 50–59 years, 60–69 years, and 70 years and older. As shown in Table 1, the resulting sample also had good coverage across education, socioeconomic position, and location (metropolitan versus regional) variables.

After reporting their demographic characteristics, respondents were required to view their randomly assigned version of the ad twice and then answer a series of questions relating to their perceptions of the ad. Based on measures used previously in anti-tobacco ad testing research¹², assessed perception outcomes were intrinsic motivation (*"To what extent did the ad make you feel that you want to do more physical activity"*), five response options: *'Not at all'* to *'A lot'*; extrinsic motivation (*"To what extent did the ad make you think you should do more physical activity"*), five response options: *'Not at all'* to *'A lot'*; perceived effectiveness (*"How effective do you think this ad will be in encouraging older people to do more physical activity?"*), five response options: *'Very ineffective'* to *'Very effective'*; likeability (*"Did you like or dislike the ad?"*), five response options: *'Did not like it at all'* to *'Liked it very much'*; believability (*"How believable was the message in the ad?"*), five response options: *'Not at all believable'* to *'Very believable'*; and personal relevance (*"How relevant to you was the message in this ad?"*), five response options: *'Not at all relevant'* to *'Very relevant'*.

Respondents were also asked to report the extent to which they experienced a range of feelings in response to the ad. From the list of feelings in the affective lexicon, 16 were deemed to be relevant to responses to physical activity messages.¹³ The selected feelings were: amused, annoyed, anxious, bored, determined, disgusted, fearful, guilty, hopeful, inspired, interested, motivated, regret, sad, uncomfortable, and worried (presented in randomised order). Five-point response scales were used ranging from *'Not at all'* to *'A lot'*. Ethics approval was obtained from the Curtin University Human Research Ethics Committee (HR21/2014), and all participants provided informed consent.

Analysis

To determine whether there were any significant demographic differences between the five slogan conditions, one-way ANOVAs with Tukey's post-hoc tests were used for continuous variables (age), and Pearson's chi-square tests were used for categorical variables (gender, socioeconomic position, tertiary education, and location). A significance threshold of $p < 0.05$ was applied.

To identify differences between slogan outcomes on each of the dependent variables, one-way ANOVAs with Tukey's post-hoc tests were conducted (significance threshold: $p < 0.05$). To explore differences by gender, age, socioeconomic position, and education, slogan rankings by these demographic characteristics were

calculated for the key outcomes of internal and external motivation. Rankings were obtained by deriving mean scores for each slogan for each demographic subgroup (e.g., mean scores for internal/external motivation were compared between males and females for each slogan).

Results

There were no significant demographic differences between those assigned to each slogan condition, indicating that randomisation was successful. Across the five tested slogans, 'Use it or lose it' performed best for almost all assessed perception variables, with the next best-performing slogan being 'Move more, live longer' (see Table 2). However, while there were some significant

Table 1 Sample profile overall and by slogan condition

	Overall N = 1200	'Fit to functional' ^a n = 240	'Move more, live longer' n = 240	'Thirty to sixty mins' ^b n = 240	'Use it or lose it' n = 240	'Your time' ^c n = 240
Gender (%)						
Male	50	50	52	50	49	49
Female	50	50	48	50	51	51
Age (years)						
50–59 (%)	33	36	34	32	37	26
60–69 (%)	34	33	33	34	29	41
≥70 (%)	33	31	34	34	34	33
Mean (SD)	64.55 (8.71)	64.06 (8.57)	64.50 (8.60)	64.85 (8.98)	65.46 (9.12)	64.89 (8.29)
Education (%)						
No tertiary degree	75	75	78	70	75	76
Tertiary degree or higher	25	25	22	30	25	24
SEP (%)						
Low	35	40	38	30	35	32
Mid	43	28	43	48	42	43
High	22	22	20	23	23	25
Location by region (%)						
Metropolitan	67	68	67	66	70	63
Regional	33	32	33	34	30	37

^aFit to functional = *Stay fit to stay functional*

^bThirty to sixty mins = *Be active 30–60 minutes a day to stay fit and well*

^cYour time = *This is your time – enjoy being strong and active*

SD = standard deviation; SEP = socioeconomic position, derived as per the Australian Bureau of Statistics Index of Relative Disadvantage,²⁵ which is based on postcode.

Table 2. Variable outcomes by slogan (N = 1200)

	'Fit to function' ^a n = 240		'Move more, live longer' n = 240		'Thirty to sixty mins' ^b n = 240		'Use it or lose it' n = 240		'Your time' ^c n = 240	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Perceptions										
Internal motivation ^d	3.10 ^{x,y}	1.08	3.15 ^{x,y}	1.14	3.10 ^{x,y}	1.10	3.20 ^x	1.11	2.9 ^y	1.20
External motivation ^d	3.28 ^{x,y,z}	1.09	3.40 ^{x,z}	1.17	3.20 ^{x,y}	1.11	3.46 ^z	1.13	3.12 ^y	1.30
Perceived effectiveness ^e	3.51 ^{x,y}	1.13	3.55 ^{x,y}	1.10	3.44 ^{x,y}	1.13	3.61 ^x	1.07	3.38 ^y	1.25
Liking ^e	3.66	1.10	3.66	1.07	3.54	1.07	3.70	1.13	3.52	1.16
Believability ^e	3.99 ^{x,y}	1.13	4.0 ^{x,y}	1.09	3.90 ^{x,y}	1.06	4.05 ^x	1.12	3.85 ^y	1.14
Personal relevance ^e	3.54	1.25	3.61	1.30	3.41	1.29	3.61	1.27	3.44	1.44
Feelings elicited^d										
Amused	2.23	1.21	2.10	1.16	2.09	1.19	2.19	1.13	2.05	1.18
Annoyed	1.55	1.06	1.53	1.03	1.50	0.92	1.53	0.97	1.43	0.95
Anxious	1.4 ^{x,y}	0.92	1.56 ^{x,y}	1.01	1.46 ^x	0.84	1.65 ^y	0.99	1.50 ^{x,y}	0.98
Bored	1.66	1.12	1.65	1.06	1.62	1.05	1.72	1.12	1.69	1.14
Determined	2.63 ^{x,y}	1.29	2.57 ^{x,y}	1.27	2.45 ^x	1.28	2.73 ^y	1.31	2.51 ^{x,y}	1.31
Disgusted	1.25	0.65	1.29	0.78	1.28	0.67	1.30	0.73	1.20	0.58
Fearful	1.43	0.88	1.45	0.90	1.39	0.83	1.54	0.91	1.45	0.93
Guilty	2.03	1.24	2.09	1.37	1.95	1.22	2.10	1.33	1.95	1.21
Hopeful	2.79	1.28	2.72	1.28	2.60	1.27	2.77	1.25	2.59	1.29
Inspired	3.00 ^{x,y}	1.28	2.86 ^x	1.28	2.81 ^x	1.35	3.10 ^y	1.26	2.85 ^x	1.37
Interested	3.21 ^{x,y}	1.24	3.14 ^{x,y}	1.26	3.00 ^x	1.23	3.23 ^y	1.21	3.05 ^{x,y}	1.34
Regret	1.87	1.20	1.93	1.30	1.87	1.17	2.06	1.30	1.98	1.28
Sad	1.63	1.10	1.72	1.17	1.58	1.00	1.64	1.09	1.65	1.15
Uncomfortable	1.57	1.03	1.57	1.02	1.48	0.89	1.57	0.95	1.49	0.99
Worried	1.50 ^{x,y}	0.90	1.61 ^{x,y}	1.13	1.47 ^x	0.84	1.66 ^y	1.04	1.47 ^x	0.90

Note. Within rows, mean scores sharing a same superscript letter (either x or y or z) are not significantly different to each other. Mean scores with a different superscript letter (either x or y or z) are significantly different to each other.

^a Fit to functional = 'Stay fit to stay functional'

^b Thirty to sixty minutes = 'Be active 30–60 minutes a day to stay fit and well'

^c Your time = 'This is your time – enjoy being strong and active'

^d Measured on 5-point scales: 1 (Not at all), 2 (Not much), 3 (A little), 4 (Quite a bit), and 5 (A lot).

^e Measured on 5-point scales: 1 (Very ineffective/Did not like it at all/Not at all believable/Not at all relevant/Not at all) to 5 (Very effective/Liked it very much/Very believable/Very relevant/A lot).

differences in perception outcomes between slogans, all five produced favourable results, with means generally above the '3' midpoint of the 5-point item scales. The partial exception was *'This is your time – enjoy being strong and active'*, which had a mean below the midpoint for the internal motivation variable.

Few of the feeling elicitation scores were above the neutral scale midpoint of '3'. The exceptions were 'Interested' (all five messages yielded a mean score of 3 or higher) and 'Inspired' (*'Use it or lose it'* and *'Stay fit to stay functional'* yielded mean scores of 3 or higher). There were relatively few significant differences in results for the feelings elicited by each slogan, and where they occurred, they were typically between *'Use it or lose*

it' and at least one other slogan, with *'Use it or lose it'* producing the greater effect.

The ranking of the five slogans for the two motivation variables by respondent demographic characteristics is shown in Table 3. Reflecting the distribution of mean scores for these variables shown in Table 2, *'Use it or lose it'* ranked first for most population subgroups across the two motivation variables (in 12 out of 20 possible instances). *'This is your time – enjoy being strong and active'* ranked last most frequently (16 out of 20 instances).

There were some notable variations in ranking between groups. In particular, respondents of higher socioeconomic position were less likely to endorse *'Use it or lose it'*, instead preferring *'Move more, live longer'*. The

Table 3. Slogan ranking on key outcome variables by demographic characteristics*

Outcomes	Demographic characteristics	Slogan rank				
		<i>'Fit to function'</i> ^a	<i>'Move more, live longer'</i>	<i>'Thirty to sixty'</i> ^b	<i>'Use it or lose it'</i>	<i>'Your time'</i> ^c
Internal motivation	Male	3	2	4	1	5
	Female	4	2	3	1	5
	50–59 years	4	3	1	2	5
	60–69 years	3	1	4	2	5
	≥70 years	2	3	4	1	5
	Low SEP	3	4	1	2	5
	Mid SEP	3	2	4	1	5
	High SEP	2	1	4	3	5
	No tertiary qualification	4	2	3	1	5
	Tertiary qualification or higher	2	3	4	1	5
	Subtotal of ranks	30	23	32	15	50
External motivation	Male	3	1	5	2	4
	Female	3	2	4	1	5
	50–59 years	4	1	3	2	5
	60–69 years	3	2	5	1	4
	≥70 years	2	3	4	1	5
	Low SEP	4	2	3	1	5
	Mid SEP	3	2	4	1	5
	High SEP	3	1	5	2	4
	No tertiary qualification	3	2	5	1	4
	Tertiary qualification or higher	3	1	4	2	5
	Subtotal of ranks	31	17	42	14	46
Summed ranks	61	40	74	29	96	
Overall rank	3	2	4	1	5	

* Ranking was based on mean scores. Lower scores indicate higher ranking (1 = ranked first, 2 = ranked second, etc.), lower totals = higher overall ranking.

^a Fit to functional = *'Stay fit to stay functional'*.

^b Thirty to sixty minutes = *'Be active 30-60 minutes a day to stay fit and well'*.

^c Your time = *'This is your time- enjoy being strong and active'*.

SEP = socioeconomic position.

slogan providing guidance in the form of the number of activity minutes, *'Be active 30–60 minutes a day to stay fit and well'*, did not rank well among older respondents but performed markedly better among those in the youngest age group who ranked it first for internal motivation. By comparison, the *'Stay fit to stay functional'* slogan performed better among older respondents and worse among younger respondents. The differences in rankings across the two motivation variables were minor for the demographic characteristics of gender and education. For example, there were no differences between males and females for three of the five messages, and there was only one ranking step difference for the other two messages.

Discussion

A key finding of the present study is that older Australians appear receptive to campaigns encouraging them to engage in greater levels of physical activity. In general, the ads featuring the five assessed slogans were considered to be believable, likable, personally relevant, motivating, and effective. Overall, *'Use it or lose it'* appears to be the strongest option, and *'This is your time – enjoy being strong and active'* is the weakest. The superior performance of *'Use it or lose it'* could be due to a range of factors, including greater familiarity with this term due to its colloquial nature, the elicitation of stronger favourable feelings relative to the other slogans, the attributes of rhyming and brevity that have been found in previous studies to enhance outcomes^{9,14}, and the mention of a potentially negative outcome that could serve to emphasise the need to act on the message.¹⁵ The second-highest performing slogan, *'Move more, live longer'*, had similar attributes in terms of brevity, alliteration, and providing a reason to comply.

Although the tested slogans scored well across the assessed outcome variables, of note are the weaker results for arguably the most important outcome – internal motivation. Self-determination theory emphasises the particular importance of internal motivation in achieving lasting behaviour change.¹⁶ There is a recognised knowledge-behaviour gap whereby an understanding of the need for behaviour modification can be inadequate to motivate the desired change, often due to a lack of self-efficacy in relation to the specific behaviour.¹⁷ The lower scores found for internal motivation in the present study highlight the need to overcome the knowledge-behaviour gap by facilitating physical activity among older people by providing appropriate assistance to overcome enactment barriers, thereby enabling individuals to act on internal motivation. Physical activity promotion interventions targeting older adults, therefore, require a comprehensive approach that includes both mass media campaigns and a suite of accompanying strategies using a systems approach to create environments that enable and encourage higher levels of activity.⁴

Given the substantial heterogeneity of older cohorts, it is important to identify any differences in slogan performance across demographic subgroups to determine whether different messages are needed.¹⁸ The small number of notable differences found in this study is a positive outcome as it indicates that consistent messaging would be appropriate to target broad cohorts of older Australians. However, there were two results worthy of consideration during campaign development. In particular, the weaker preference of older versus younger respondents for the slogan stating a suggested time commitment (*'Be active 30–60 minutes a day to stay fit and well'*) could reflect lower levels of physical conditioning that make this amount of exercise appear unrealistic for older people. As even low levels of exercise offer health benefits, it has been noted that it is important to avoid communicating activity threshold levels that are not feasible for older adults because this could reduce motivation to act.² More generic slogans such as *'Use it or lose it'* and *'Move more, live longer'* thus appear better suited for communicating with older cohorts. The other notable demographic difference related to socioeconomic position – *'Use it or lose it'* performed better among respondents with low- and mid-socioeconomic positions. Physical activity rates tend to be substantially lower among those living in lower socioeconomic areas in Australia⁷, highlighting the importance of ensuring that selected campaign slogans are effective with this group. This supports the overall conclusion that *'Use it or lose it'* is likely to be the optimal choice among the assessed slogans.

Limitations and strengths

The primary limitation of the present study was the reliance on a web panel for respondent recruitment. This limited the sample to those with internet access and computer skills, potentially resulting in skews on unassessed respondent attributes. Secondly, the study was confined to a single country, and further research is required to investigate whether the findings would be relevant in other cultural contexts. Further, the needs of older Aboriginal and Torres Strait Islander peoples were not considered in the study, and additional work is needed in this area.

Study strengths included the range of outcome variables assessed and the large sample that included both those approaching and experiencing older age, providing insights into campaign slogans that are likely to be effective across these groups. In addition, the different slogans were tested in the context of a video advertisement that was identical in all other respects, making any identified differences in results specific to the individual slogans. The use of visual content that conveyed a range of physical activity options presented with a positive affective tone is consistent with recommendations to cater to older people's information processing preferences through the use of clear

examples depicted via images in a positive emotional context.^{19,20} The novel approach used in the present study to pair such images with evidence-based, randomly allocated slogans to assess slogan performance was effective in identifying significant differences in the key outcome measures. This methodological approach could also be used to test various types of messages being developed for older people and other age groups across a range of health and wellbeing domains, for example nutrition, alcohol consumption, and health screening.

Conclusion

In conclusion, the slogan 'Use it or lose it' produced favourable results among older Australians, suggesting it would be a useful component of mass media campaigns designed to increase physical activity in this group. Such campaigns are needed in the context of rapid population ageing, the demonstrated benefits of physical activity for achieving healthy ageing, and current low physical activity levels among older adults.

Peer review and provenance

Externally peer reviewed, not commissioned.

Competing interests

None declared.

Author contributions

SP wrote the original draft and contributed to the conceptualisation, methodology, and project administration. MJ contributed to the conceptualisation, methodology, formal analysis, writing, review and editing. LD, RR, BJ and RN contributed to the formal analysis, writing, review and editing.

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