

**Appearance-based or health-based message framing: what motivates physical activity participation?**

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A photograph of two hikers on a dirt trail. The hiker in the foreground is wearing a white shirt and dark shorts, and is using trekking poles. The hiker in the background is wearing a white shirt and dark shorts. The trail is rocky and surrounded by green foliage.

# APPEARANCE-BASED OR HEALTH-BASED MESSAGE FRAMING: WHAT MOTIVATES PHYSICAL ACTIVITY PARTICIPATION?

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# OVERVIEW

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- Message Framing
- Introduction
- Research Questions/Aims
- Methods
- Results
- Discussion
- Conclusion
- Questions



# MESSAGE FRAMING

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- ❑ How information is delivered can influence how receptive the person/audience is
- ❑ For Example:
  - ❑ Gain-framed: “Participating in exercise may improve your quality of life”
  - ❑ Loss-framed: “Not participating in exercise may decrease your quality of life”

(Salovey, Schneider & Apanovitch, 2002).

# INTRODUCTION

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- ❑ Benefits of physical activity are extensive including: maintaining healthy weight, improving mental health, preventing chronic disease and chronic pain

(Eime, Harvey, Charity & Nelson, 2018; Hodges & Smeets, 2015)

- ❑ Only 25% of Australian adults met the physical activity guidelines 2014 – 15

(AIHW, 2017)

**How do you educate clients?  
Can you improve education delivery to increase participation?**



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Additional information is available at the end of the article

## SPORTS & EXERCISE | REVIEW ARTICLE

# The effects of message framing characteristics on physical activity education: A systematic review

Jayde Williams<sup>1\*</sup>, Melissa Saken<sup>1</sup>, Suzanne Gough<sup>1</sup> and Wayne Hing<sup>1</sup>

**Abstract:** Physical activity is important to prevent chronic disease and improve mental health. Physical activity education needs to be delivered in an efficient, effective and persuasive way by health professionals to increase participation. Message framing can be used to influence health decision-making and motivate behavior change. This systematic review investigates the influence of different message framing characteristics on potential physical activity participation. A search of relevant databases, reference lists and grey literature was performed. Systematic review was performed. Thirteen studies met the inclusion criteria. The majority of participants were healthy adults with the exception of one study who included overweight people. All studies investigated gain and loss as well as at least one other message framing characteristic and how this influenced physical activity participation. The other characteristics included: source credibility (n = 4), presentation of affect (n = 1), number of arguments (n = 1), type of activity (n = 1), narrative versus statistical (n = 3), intrinsic versus extrinsic motivation (n = 1), social endorsement (n = 1), kernel type (n = 1) and ease of imagination (n = 2). There is no consistent consensus for the best message frame to increase physical activity participation. Further research is needed.





# AIM & RESEARCH QUESTIONS

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**Aim** Explore the usability of an online survey to investigate how health or appearance and negative or positive framed messages are perceived and how they may influence physical activity participation.

## Research Questions

1

What factors influence physical activity participation?

2

To what extent does message framing influence motivation to participate in physical activity?

# METHODS

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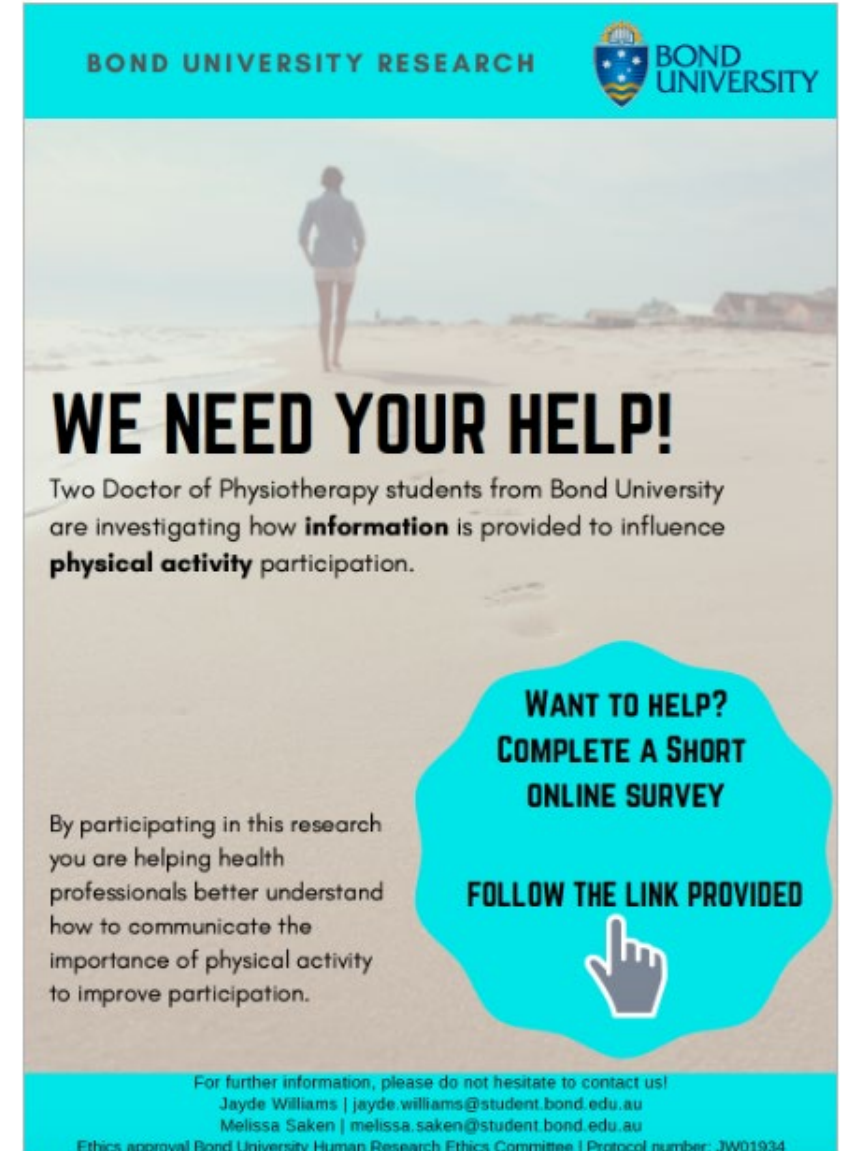
- ❑ **Design:** Self-administered questionnaire-based survey
- ❑ **Subject recruitment:**
  - ❑ Staff at Bond Institute of Sport and Health via email
  - ❑ Students recruited via social network
  - ❑ Researchers personal networks via social media and email


- ❑ **Inclusion criteria:**
  - ✓ Over 18 years of age
- ❑ **Exclusion criteria:**
  - x Under the age of 18 years old
  - x Unable to understand written English
- ❑ **Data analysis:**
  - ❑ Quantitative data
  - ❑ Qualitative data



# QUESTIONNAIRE

- Demographics
- Godin Leisure Time Exercise questionnaire (*Godin & Shephard, 1997*)
- Exercise motivators/barriers
- Message framing
- Manipulation check



BOND UNIVERSITY RESEARCH 

**WE NEED YOUR HELP!**

Two Doctor of Physiotherapy students from Bond University are investigating how **information** is provided to influence **physical activity** participation.

By participating in this research you are helping health professionals better understand how to communicate the importance of physical activity to improve participation.

**WANT TO HELP?  
COMPLETE A SHORT  
ONLINE SURVEY**

**FOLLOW THE LINK PROVIDED**

For further information, please do not hesitate to contact us!  
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Ethics approval Bond University Human Research Ethics Committee | Protocol number: JW01934



# MESSAGES

## OPTION 1: Positive + Health

Benefits of regular physical activity include:

- Decreased risk of chronic disease
- Decreased risk of depression
- Improved immune system
- Improved sleep quality
- Increased self-esteem
- Increased quality of life

## OPTION 2: Positive + Appearance

Benefits of regular physical activity include:

- Improved skin appearance
- Look skinnier/stronger/more athletic
- Clothes look good and fit better
- Prevent weight gain and assist in weight loss
- Increase muscle bulk and more lean
- Feel confident in summer outfits

## OPTION 3: Negative + Health

Risks of regular physical inactivity include:

- Increased risk of chronic disease
- Increased risk of depression
- Impaired immune function
- Decreased self-esteem
- Decreased quality of life

## OPTION 3: Negative + Appearance

Risks of regular physical inactivity include:

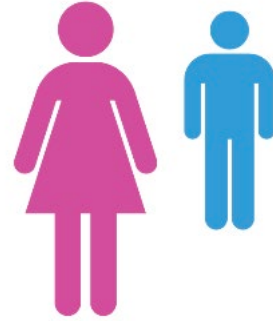
- Skin blemishes
- Look weaker/less athletic
- Clothes don't look good or fit as well
- Unhealthy weight gain
- Decreased muscle bulk and increased unwanted fat
- Feel less confident in summer outfits

Figure 1. Message Framing Options

# RESULTS



N = 213 participants



51 (23.9%) Male

161 (75.6%) **Female**



19 - 76 years old

(Median = 36.0yrs; Mean = 38.8yrs)



United Kingdom

United States

Australia

Canada

# RESULTS



N = 213 participants



104 (48.8%)  
Non-health profession

109 (51.2%)  
Health profession



182 (85.4%) **Active**

31 (14.6%) Inactive

# RESULTS

**Table 1.** Messages most likely and least likely to motivate

	<b>Most likely</b>	<b>Least likely</b>
Option 1	132 (62.0)	11 (5.2)
Option 2	66 (31.0)	26 (12.2)
Option 3	12 (5.6)	59 (27.7)
Option 4	3 (1.4)	117 (54.9)

# RESULTS

**Table 2.** Binary logistic regression comparing positive/health and positive/appearance

		Variables in the Equation					95% C.I. for EXP(B)		
		B	S.E.	Wald	df	Sig.	Exp(B)	Lower	Upper
Step 1 <sup>a</sup>	Grouped into 35 and under and over 35(1)	-.763	.342	4.981	1	.026	.466	.238	.911
	Sex(1)	.352	.399	.781	1	.377	1.422	.651	3.106
	Is one of your qualifications health related? (e.g. medicine, nursing, allied health, personal training etc.)(1)	.569	.346	2.697	1	.101	1.766	.896	3.483
	Active and inactive grouping(1)	1.023	1.153	.787	1	.375	2.782	.290	26.683
	Constant	-1.789	1.194	2.246	1	.134	.167		

a. Variable(s) entered on step 1: Grouped into 35 and under and over 35, Sex, Is one of your qualifications health related? (e.g. medicine, nursing, allied health, personal training etc.), Active and inactive grouping.

# RESULTS

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## ❑ Motivators to exercise:

- 1. Health (83%)**
2. Enjoyment (42%)
3. Appearance (24%)
4. Social interaction (20%)

## ❑ Barriers to exercise:

- 1. Lack of time (52%)**
2. Injury (21%)
3. Fatigue/soreness (14%)
4. Weather (10%)



# DISCUSSION

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❑ **Motivators:** *health (83%), enjoyment (42%), appearance (24%), social interaction (20%)*

❑ 18-25 years old males: appearance (45%), health (41%)

(Ashton et al., 2017)

❑ **Barriers:** *lack of time (52%), injury (21%), fatigue/soreness (14%), weather (10%)*

❑ 18-25 years old males

- ❑ lack of motivation (66%)
- ❑ lack of time (58%)
- ❑ lack of facilities (33%)

(Ashton et al., 2017)

❑ 45-59 years old

- ❑ lack of time (47%)
- ❑ lack of facilities (33%)

❑ >59 years old

- ❑ lack of time (48%)
- ❑ lack of facilities (35%)
- ❑ lack of motivation (38%)

(Justine et al., 2013)

# DISCUSSION

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- ❑ A **positive health-based** message is **most** motivating for physical activity participation
- ❑ A **negative appearance-based** message is **least** motivating for physical activity participation
- ❑ Participants 36 years+ were 53% less likely to choose appearance over health framed messages (OR:0.47, 95% CI: 0.24, 0.91,  $p=0.03$ )
- ❑ Consistent with findings regarding positively/negatively framed messages in systematic review by Williams et al. (2019)

# LIMITATIONS

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- ❑ Respondent population not representative of global demographics
  - ❑ Over representation of females is common finding in message framing questionnaires (Gallagher & Updegraff, 2011; Gray & Harrington, 2011; De Bruijn et al., 2014).
  - ❑ 51.6% participants with a health based qualification, predominantly movement based, which may explain an over representation of active participants
- ❑ Schnell & Cox = 4.4%
- ❑ Social media main distribution method



# CONCLUSION & KEY PRACTICE POINTS

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This is the first study to explore the usability of an online survey to investigate how health or appearance and negative or positive framed messages are perceived and how they may influence physical activity participation.

## 1 What factors influence physical activity participation?

- ❑ **Motivators to exercise:** Health (83%), Enjoyment (42%), Appearance (24%), Social interaction (20%)
- ❑ **Barriers to exercise:** Lack of time (52%), Injury (21%), Fatigue/soreness (14%), Weather (10%)

## 2 To what extent does message framing influence motivation to participate in physical activity?

- ❑ **Positive** messages **most** motivating
- ❑ **Negative** messages **least** motivating
- ❑ Participants 36 years+ were 53% less likely to choose appearance over health framed messages

*Assist your clients by promoting motivators and overcome barriers!*

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