

Young people's Preferences Towards Web-based Mental Health Interventions for Anxiety and Depression: A Discrete Choice Experiment

PCR103

Thi Quynh Anh Ho¹, Dr Lidia Engel², Dr Jemimah Ride^{2,3}, A/Prof Glenn Melvin⁴, Dr Long Khanh-Dao Le², Dr Ha ND Le¹, Prof Cathrine Mihalopoulos^{1,2}

¹ Deakin Health Economics, Institute for Health Transformation, School of Health and Social Development, Deakin University, Melbourne, Victoria, Australia
² Monash University Health Economics Group, School of Public Health and Preventive Medicine, Monash University, Melbourne, Victoria, Australia
³ Health Economics Unit, School of Population and Global Health, University of Melbourne, Melbourne, Victoria, Australia
⁴ School of Psychology, Deakin University, Melbourne, Victoria, Australia



BACKGROUND

- 75% of mental disorders have an onset in the early adulthood¹.
 - Anxiety and depression are prevalent in young people worldwide¹.
 - Web-based mental health interventions (W-MHIs) are growing and have potential in reducing anxiety and depression symptoms compared to waitlist controls³.
 - Real-world engagement with W-MHIs remains low compared to that in clinical trials^{4,5} due to:
 - Structural factors (e.g., lack of time)
 - W-MHI related factors (e.g., cost, access to instructors)
 - Attitudinal factors (e.g., stigma)
- In Australia, a number of health care services incur out-of-pocket expenses to services users, including those using W-MHIs⁶.

Research gap

- Lack information about which intervention aspects are more important for young people's engagement with W-MHIs⁵, which can be done by using a discrete choice experiment (DCE).
- Limited understanding about young people's willingness to pay (WTP) for W-MHIs.
- Limited research has utilised DCE to elicit young people's preferences regarding mental health services^{7,8}.

Research objective

- This study applied a DCE to elicit young people's preferences regarding W-MHIs for anxiety and depression in Australia, with aims to:
- (1) identify the relative importance of W-MHI attributes;
 - (2) evaluate WTP for each W-MHI attribute.

METHOD

- Online survey using a DCE.
- Six attributes selected based on a systematic review, 20 interviews (or focus groups) with young people, and consultation with the research team.
- Using D-efficient approach design: 24 questions dividing into 3 blocks.
- Minimum sample size determined using the rule of thumb⁹.
- DCE analysis using mixed logit model.
- Willingness to pay calculated using marginal rate of substitution method.
- Relative attribute importance estimated based on the attribute-specific difference between the highest and lowest coefficients of that attribute.
- Marginal effects calculated using *mixlped* command in STATA.

Figure 1. Example of a DCE choice task

	Program 1	Program 2
Communication with other users (via a chat forum on the program platform)	Yes	Yes
Total time to go through <u>all</u> modules in the program (over several days/weeks)	5 hours in total	12 hours in total
Online screening to determine whether the program is right for me	No screening	No screening
Brief quizzes to check my understanding of what I have learned during the program	Brief quizzes	No quizzes
Access to a trained instructor during the program to help me complete the program and stay engaged	No access	Access via video call
One-off payment for the program (paid with me with my own money)	Free	\$100
Which program would you choose?	<input type="radio"/>	<input type="radio"/>

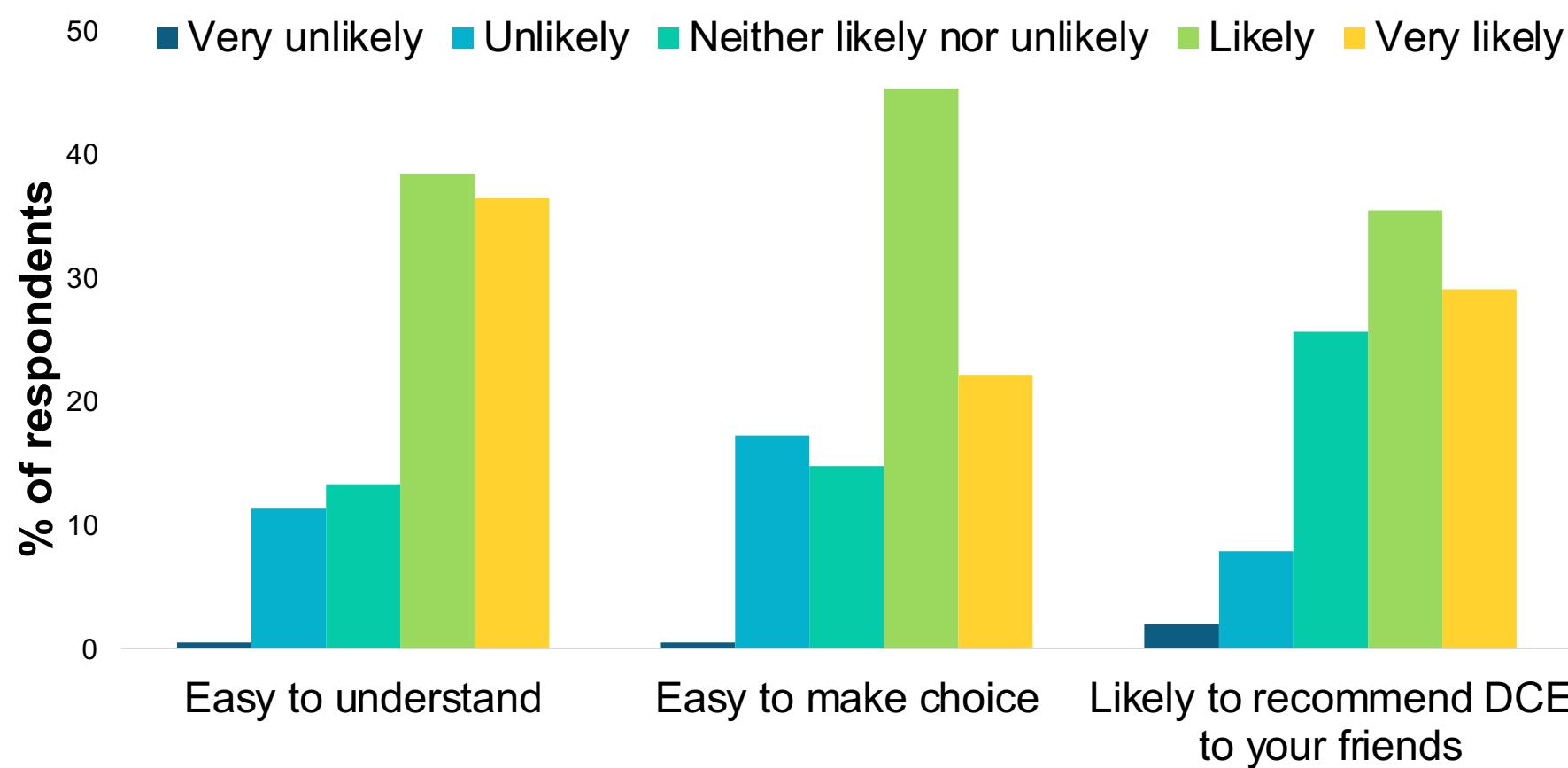
Participants (N=203)

Eligibility: (1) aged 18-25yr, (2) living in Australia, (3) self-reported anxiety or depression in the past 6 months, and (4) had used (or considered using) a W-MHI for anxiety or depression.

203 participants in Australia completed the survey:

- Mean age: 21.45yr (SD: 2.28)
- 64% identified as female.
- 82% lived in metropolitan areas.
- 64% had previously used W-MHIs. Among these, 36% of these did not complete W-MHIs.

Participants' evaluation of DCE



CONCLUSION



Trained instructors is a significant facilitator for engagement with W-MHIs, especially when offering *video or audio calls*.



Moderate completion time (5 hours) is a facilitator. Greater time required to complete W-MHIs (12 hours) or less time (2 hours), could be a barrier.



Lower cost is preferred. Significant WTPs for *instructors or moderate completion time* suggested **some out-of-pocket payment might NOT be a barrier if specific attributes are offered**.

RESULTS OF MIXED LOGIT MODELS

Figure 2. Relative importance of attributes

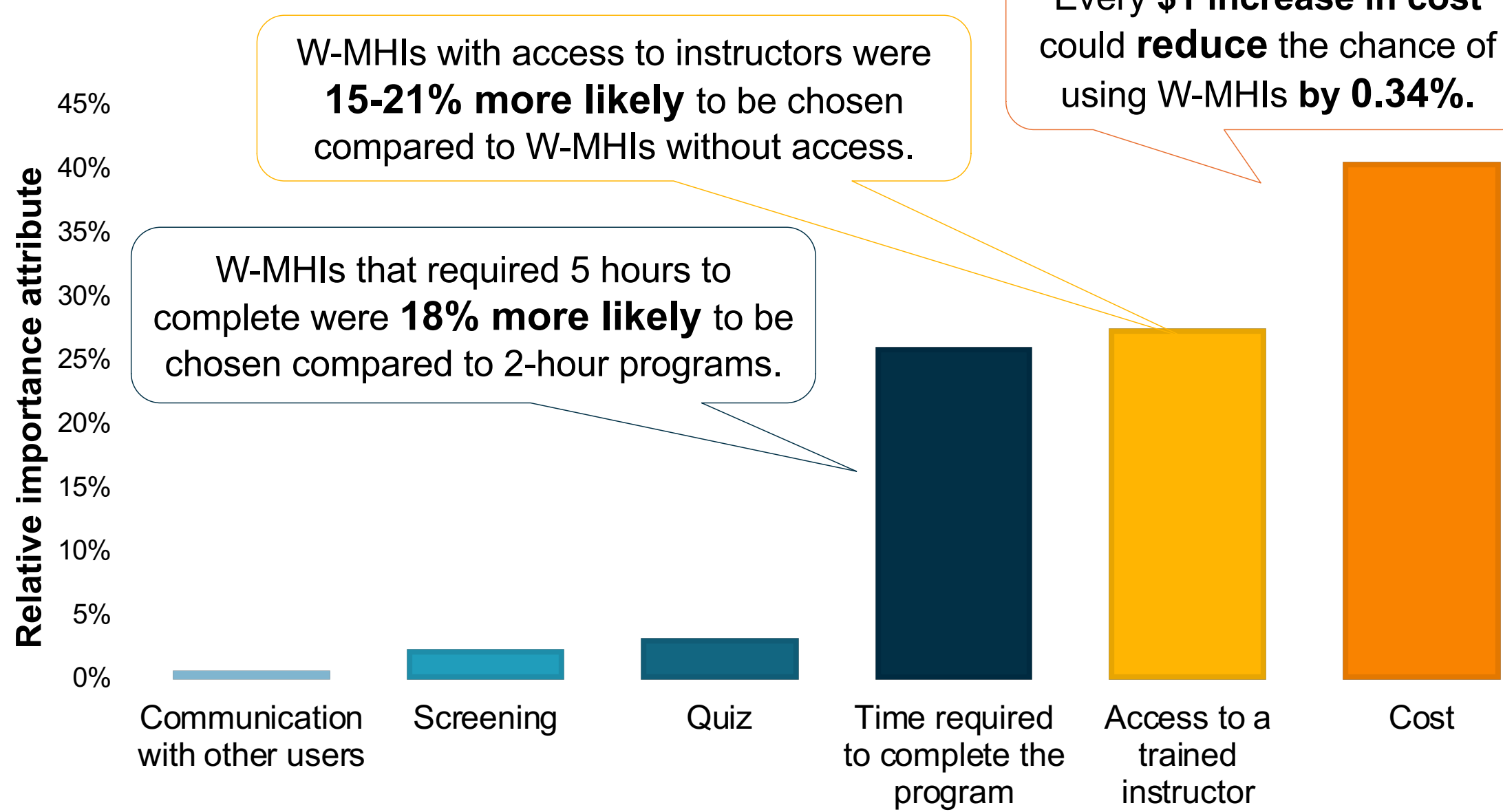
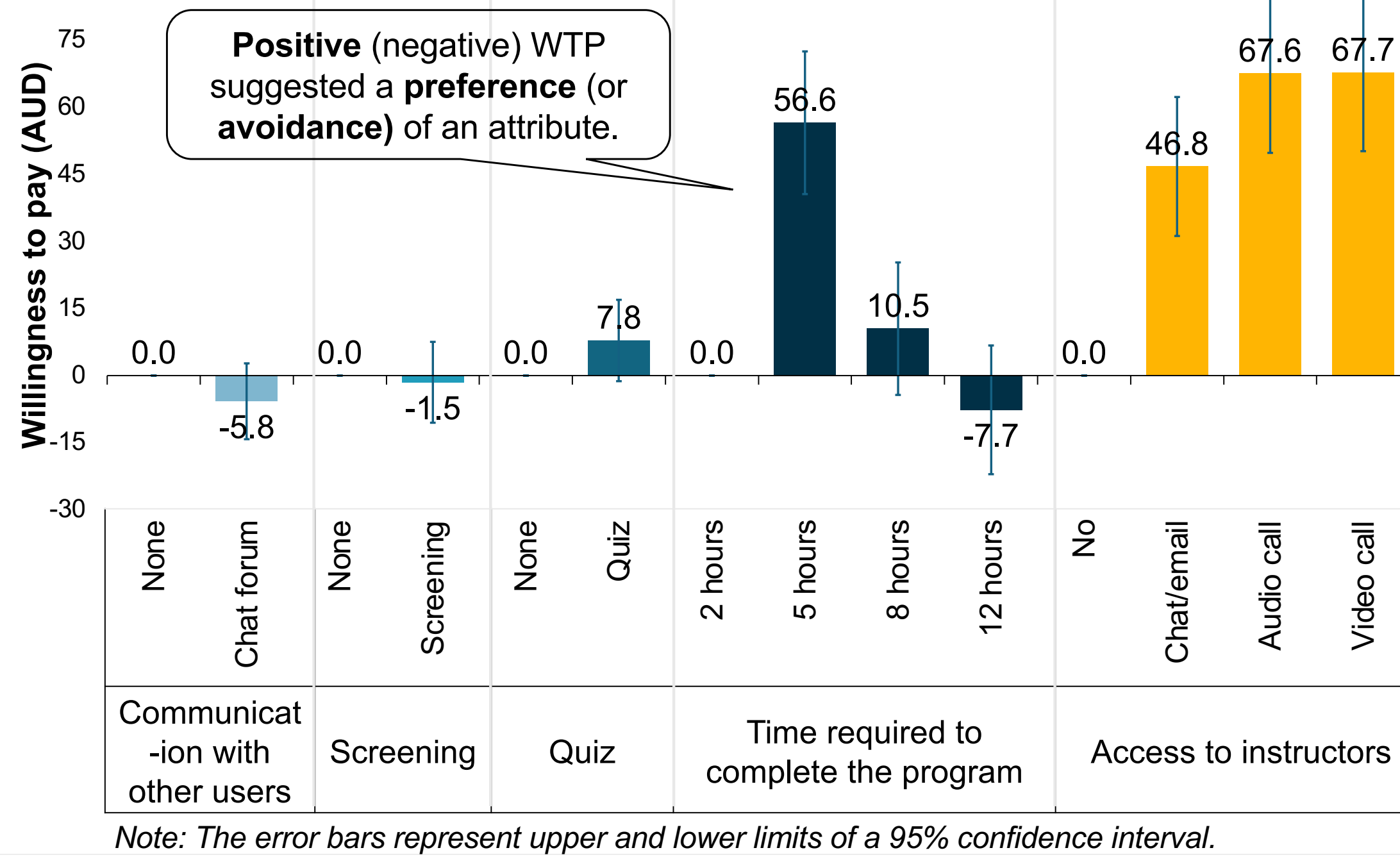


Figure 3. Willingness to pay for W-MHI attributes



Future research

- To confirm these findings;
- To investigate other attributes not included in this study;
- To investigate whether there are significant sub-group differences in preferences for different program attributes.

Reference
1. Jones, P.B. Adult mental health disorders and their age at onset. Br J Psychiatry Suppl. 2013; 54: 45-10.
2. The Global Burden of Disease Collaborator Network. Global Burden of Disease Study 2019 (GBD 2019) Results. Seattle, USA: Institute for Health Metrics and Evaluation (IHME); 2020.
3. Garrido S, Millington C, Cheers D, et al. What Works and What Doesn't Work? A Systematic Review of Digital Mental Health Interventions for Depression and Anxiety in Young People. Front Psychiatry. 2019; 10: 759.
4. Becker TD, Torous JB. Recent Developments in Digital Mental Health Interventions for College and University Students. Current Treatment Options in Psychiatry. 2019; 6: 210-20.
5. Ho TQA, Le LK-D, Engel L, Le N, Melvin G, Le HND, et al. Barriers to and facilitators of user engagement with web-based mental health interventions in young people: a systematic review. European Child & Adolescent Psychiatry. 2024.
6. Fleming T, Bavin L, Lucassen M, et al. Beyond the Trial: Systematic Review of Real-World Uptake and Engagement With Digital Self-Help Interventions for Depression, Low Mood, or Anxiety. J Med Internet Res. 2018; 20: e159.
7. Savaris F, Robinson S, Toll K, et al. Consumer preferences for telehealth in Australia: A discrete choice experiment. PLoS One. 2023; 18: e0283821.
8. Cunningham CE, Walker JR, Eastwood JD, et al. Modeling mental health information preferences during the early adult years: a discrete choice conjoint experiment. J Health Commun. 2014; 19: 413-40.
9. Johnson R, Orme B. Getting the most from CBC. Sequim: Sawtooth Software Research Paper Series, Sawtooth Software; 2003.