



EARLY CAREER RESEARCH ENTRY

ENTRY TITLE: Identifying protective pathways for preventing suicide in the community

NAME OF APPLICANT: Dr. Jennifer Ma

**ORGANISATION: Centre for Mental Health Research,
The Australian National University**

1. Additional Information (max 400 words)

Please expand on Part A

Each year over 800,000 people die by suicide worldwide. For every suicide attempt it is estimated that three more people experience thoughts of suicide. Though preventable, suicidal thoughts and behaviours are complex phenomenon influenced by several interacting factors, including personal, social, psychological, cultural, biological, and environmental.

Recent theoretical models of suicide have been developed to provide testable hypotheses of causal factors associated with the development of suicidal desire and suicide attempt, which has the potential to improve knowledge of where suicide prevention and intervention can be focused. My research tests the validity of current, leading suicide theory/models in the Australian community to identify the most robust, modifiable targets for prevention/intervention across the suicide spectrum and promote their effective translation into suicide prevention and mental health research, policy and practice.

Through my systematic program of research on the Interpersonal Psychological Theory of Suicide, the critical role of perceiving oneself to be a burden was identified as a promising therapeutic target (i.e., via targeting feelings of self-hatred and being a liability on others) for the prevention of suicide-related behaviours in community and clinical settings. My work has highlighted the strong need for tailored approaches that take into account distinct suicide risk profiles in the community. Young Australians (18 to 29 years) with high levels of mental health symptoms represent a priority group because they had the highest levels of perceived burden and thwarted belonging (i.e., feeling alone and lacking positive reciprocal relationships), which was found to be associated with having thoughts of suicide in the past month.

In addition to identifying novel, modifiable targets and applicable subgroups through which developmental pathways for suicide risk can be effectively disrupted, I developed a new measure for interpersonal suicide risk – the Thwarted Belongingness Scale (TBS; see Supporting Material) – which has been validated in community-dwelling Australians ($n=747$) and since utilised by national and international researchers to track social support outcomes during the COVID-19 pandemic, evaluate a digital mental health mobile application for adolescents, and translated into Korean to support suicide prevention research in this high-prevalence region.

I have regularly collaborated with researchers and stakeholders (including people with lived experience of mental health problems and suicide) to explore help seeking for suicidality and mental health problems, consumer expectations and outcomes of using crisis support services, and the co-design of wellbeing education frameworks and implementation pathways for suicide protection and the broader promotion of mental-wellbeing in the community.

[400/400 words]

2. Focus

Describe how your research illustrates Innovation, Best Practice and or Excellence (maximum 200 words)

My research promotes *innovation* and *best practice* in suicide prevention through:

- (1) Testing the validity of recent, leading theoretical models of suicide in the Australian community. My research maps the role of causal factors associated with the development of suicidality to identify the most robust, modifiable targets for suicide prevention/intervention. My novel sub-group analysis has highlighted the need to tailor initiatives to different suicide risk and protective profiles in the community.
- (2) Developing the first alternative measure for interpersonal suicide risk. In a validation study of Australians ($n=747$), the 8-item Thwarted Belongingness Scale (TBS) provided enhanced identification of feeling alone and lacking reciprocal relationships and was applicable for use in low literacy populations.
- (3) Investigating consumers' expectations and outcomes of using crisis support services (including acceptability of Artificial Intelligence enhancements). This work is enabling services, such as Lifeline Australia, to better support the diverse needs and concerns of help-seekers and be a maximally effective, responsive and integral part of the healthcare and social assistance service systems.

My research has been recognised for its *excellence* by peak organisations such as Mental Health Australia, the Centre for Research Excellence in Suicide Prevention, and Suicide Prevention Australia through competitive awards and funding (\$659K).

[200/200 words]

3. Potential Impact

Summarise the potential contribution to and/or implications for the wider community (maximum 200 words)

Globally, 34.6 million years of life are lost from suicide annually. My research aligns with the national research priorities in suicide prevention and contributes significantly to the expansion and development of research in *suicide protection* by identifying the underlying mechanisms from which casual *risk and protective factors* for suicide operate in the community.

Findings are used to: (1) refine understandings of how people transition in terms of risk across the suicide spectrum, from ideation to action; (2) identify relevant, modifiable target points for the disruption of suicide risk pathways and the promotion of strengths; and (3) provide lived experience-informed recommendations for the effective translation of identified protective pathways into services, systems and policies involved in suicide prevention and intervention.

My translational research has identified opportunities for enhancing Lifeline Australia's crisis support services, including: better tailoring of practice for suicide-related help-seekers who were found to have greater expectations of the service, but less likelihood of having these expectations met; and highlighting the need for careful

messaging around the human connection not being lost when considering incorporating innovative technologies, such as Artificial Intelligence, to improve help-seeker outcomes, reach underserved groups, and address lack of workforce capacity in crisis support services.

[198/200 words]

4. Consumer's Contribution

Describe any contribution by Mental Health consumers/persons with lived experience other than as subjects e.g. reference group, researcher (maximum 200 words)

Lifeline Australia's Lived Experience Advisory Group, consisting of people who have experience of being in crisis or being a carer of a person in crisis, had a critical role in assisting with the interpretation of research findings around community and partner expectations for crisis support services (including the potential of novel, artificial intelligence technologies to enhance services). Their invaluable expert knowledge around the needs of people in crisis highlighted acceptability and ethical considerations that directly informed research methodology and messaging so that developed outputs were highly appropriate and relevant to Lifeline help-seekers (over one million Australians annually) and organisational practice.

Since 2022, I have partnered with an Advisory Group comprising of five people with lived experience (LE) of suicide that were recruited in collaboration with the leading LE suicide organisation in Australia, Roses in the Ocean. This Advisory Group actively contributes to the interpretation of my current program of research and assists with identifying how findings can be used to co-design new, evidence-based pathways for service providers and policy makers involved in suicide prevention. The co-design and implementation of wellbeing education frameworks tailored to educators and students' wellbeing and pedagogical needs demonstrates another aspect of my collaborative research with stakeholders.

[200/200 words]

Curriculum Vitae: Dr. Jennifer Ma

Response to Eligibility Rules for TheMHS ECR Award

- PhD awarded within 5-years of the award closing date (conferred 13/12/2018; first Post Doctoral position commenced 18/5/2020).
- Currently employed at academic Level B.
- Am available to attend and present at the annual TheMHS Conference; not a previous award winner.

Qualifications: 2018 – PhD (Australian National University (ANU)); 2013 – B. Psy (Hons) (ANU); 2012 – BSc (Psychology) and BA (Gender Studies, Sexuality and Culture) (ANU)

Career Summary

Following the attainment of my PhD in December 2018, I commenced my first Post-Doctoral position (academic Level B) in May 2020, during the COVID-19 pandemic. To date, I have been awarded over \$546K in competitive research funding as a primary and co-investigator; \$113K in awards/prizes/scholarships; published 18 peer-reviewed articles (3 in-press and an additional 2 under peer-review), 1 special journal issue, 1 report, 3 international magazine feature articles for parents and educators, and 1 children's book (with Library for All to support children experiencing learning poverty across the Pacific, Asia, and Africa); have been cited 549 times (GoogleScholar metrics) in the areas of suicide prevention, mental health, and wellbeing education research; and have disseminated my research across 18 national and international conferences.

My mission is to become a leading expert in protective factors for suicide and how these can be implemented to promote wellbeing via evidence-based, co-design approaches with organisational and education settings. My focus is on developing high-quality research outputs that make a strong impact on practice and policy in suicide prevention and mental health, with an emphasis on conducting translational research that is collaborative and community-centred.

Professional Appointments & Research Funding (totalling \$546,716.42)

2022-current – Research Fellow in Suicide Prevention (Level B), Centre for Mental Health Research, The Australian National University

- Primary Investigator on 2021 Suicide Prevention Australia (SPA) Research Fund Post-Doctoral Fellowship (\$272,693) 2-year project: 'Protective Pathways for preventing suicide: Examining the role of interpersonal risk and protective factors for suicidality in the community'.

2021– Research Fellow (Level B; 0.2FTE), Faculty of Education, University of Canberra (UC)

- Primary research support (CIB) on 2020 UC-ACT Education Directorate Affiliated Schools Research Program (\$19,628.49) to co-construct, implement, and evaluate an evidence-based, personalised wellbeing framework at Maribyrnong Primary School.

2020-21 – Research Fellow (Level B; 0.8FTE), Faculty of Health (Psychology), UC

- Primary support on National Health and Medical Research Council (NHMRC) UC-Lifeline Australia partnership grant (\$1,116,891.60 over 5 years; ID: 1153481). Assisted Chief Investigators through project and communication coordination and coordination/participation in design, analysis and write-up.
- Co-investigator (CIG) on 2020 COVID-19 Medical Research Future Foundation (MRFF) 2-year grant (\$218,139.85; ID: 2005450) to significantly boost the capacity of Lifeline Australia's crisis support services to scale up rapidly to meet the mental health impacts of COVID-19 and future crises, through the development and implementation of novel artificial intelligence (AI) solutions.

2019-current – Adjunct Assistant Professor (Level A/B), Faculty of Education, UC

- Drafted research-consultancy and seed grant applications for wellbeing education action-research projects with schools and organisations.
- Advisor (2020) to the ACT Education and Training Directorate's 'Shape of ACT Senior Secondary Curriculum: Connected Learning' courses.
- Co-Investigator (CIB) on 2021 UC Industry Collaborative Research Seed Grant (\$36,255.08) to build the wellbeing education capacity of Canberra's largest provider of early childhood services, Communities@Work.
- Collaborator on 2021 Badminton World Federation Grant (\$26,044) to increase badminton participation rates, levels of physical activity, and wellbeing in female, LGBTQI+, disabled and Indigenous Year 7/8 student populations in ACT high schools.

2016-17 – Research Assistant – School of Psychology, Charles Sturt University

- Conducted qualitative analysis for end of life care data and co-authored academic publications associated with The Salvation Army Australia quality of life project.

Awards, Prizes, and Scholarships (totalling \$113,982)

- 2022** National Centre for Epidemiology and Population Health (NCEPH) Seed Funding Award (\$15,000).
- 2017** Grace Groom Memorial Scholarship endowed by Mental Health Australia to support mental health research that improves the lives of consumers and carers (\$5,000).
- 2016** Korten Prize for Best Published Research Paper by a PhD Candidate (\$1,000). First systematic review publication of the Interpersonal Psychological Theory of Suicide was judged as providing "a solid contribution for our understanding of suicide and the prevention and treatment of suicidal behaviour".
- 2015** Centre for Research Excellence in Suicide Prevention (CRESP) Travel Award (\$2,982) to support presentation of research at the 31st International Congress of Psychology (ICP) in Yokohama, Japan.
- 2015** ANU/National Health and Medical Research Council (NHMRC) Centre for Research Excellence in Suicide Prevention (CRESP) PhD scholarship (\$90,000).

Peer Reviewed Academic Publications

(including accepted for publication; total Google Scholar citations = 549)

1. Acheson, K., Bhuyan, D., Brewster, L., Burgess, J., Dirkx, J., Grande, S., Kapadia, S., Kenny, A., Kouwenaar, K., Lovat, T., **Ma, J.**, Ma, W., Nakamura, Y. T., Nielsen, T., Nishitani, H., Pang, G., Raab, C., Shealy, C., Staton, R., Sternberger, L., Still, I., Style, J., Toomey, R., & Wiley, J. (In press). Cultivating the globally sustainable self: What we've learned from 30 years of theory, research, and practice. In C. N. Shealy (Ed.), *Cultivating the globally sustainable self: How the human species might fulfill its potential*. Oxford University Press.
2. Acheson, K., Bhuyan, D., Brewster, L., Burgess, J., Dirkx, J., Grande, S., Kapadia, S., Kenny, A., Kouwenaar, K., Lovat, T., **Ma, J.**, Ma, W., Nakamura, Y. T., Nielsen, T., Nishitani, H., Pang, G., Raab, C., Shealy, C., Staton, R., Sternberger, L., Still, I., Style, J., Toomey, R., & Wiley, J. (In press). Demonstrating the value of values-based education: What we've learned about learning from the beliefs, events, and values inventory (BEVI). In T. Lovat, R. Toomey, & N. Clement (Eds.), *The International Research Handbook on Values Education and Student Wellbeing* (2nd ed.). Springer Netherlands.
3. Nielsen, T. W. & **Ma, J. S.** (In press). Values and wellbeing education – pedagogical compass or fleeting trend? In T. Lovat, R. Toomey, & N. Clement (Eds.), *The International Research Handbook on Values Education and Student Wellbeing* (2nd ed.). Springer Netherlands.
4. **Ma, J. S.**, O'Riordan, M., Mazzer, K., Batterham, P. J., Bradford, S., Kölves, K., Titov, N., Klein, B., & Rickwood, D. J. (2022). Consumer perspectives on the use of artificial intelligence technology and automation in crisis support services: Mixed methods study. *JMIR Human Factors*, 9(3), e34514. <https://doi.org/10.2196/34514>
5. O'Riordan, M., **Ma, J. S.**, Mazzer, K., Batterham, P., Kölves, K., Woodward, A., Klein, B., Larsen, M., Goecke, R., Gould, M., & Rickwood, D. (2022). Help-seeker expectations and outcomes of a crisis support service: Comparison of suicide-related and non-suicide-related contacts to Lifeline Australia. *Health and Social Care in the Community*, 30(6), e4535-e4544. <https://doi.org/10.1111/hsc.13857>
6. **Ma, J. S.**, Batterham, P. J., Kölves, K., Woodward, A., Bradford, S., Klein, B., Titov, N., Mazzer, K., O'Riordan, M. & Rickwood, D. (2022). Community expectations and anticipated outcomes for crisis support services – Lifeline Australia, 30(5), 1775-1788. *Health & Social Care in the Community*. doi: 10.1111/hsc.13557
7. Nielsen, T. W. & **Ma, J. S.** (2021). Examining the social characteristics underpinning Danish 'hygge' and their implications for promoting togetherness in multicultural education, 13(2), 179-189. *Multicultural Education Review*. doi: 10.1080/2005615X.2021.1919964
8. Lee, M., Nielsen, T. W., & **Ma, J.** (2020). Danish experiences of 'togetherness' and its implications for multicultural education [Editorial]. *Multicultural Education Review*, doi: 10.1080/2005615X.2020.1720291
9. Cameron, A., Stevens, B., Shaw, R., Bewert, P., Salt, M., & **Ma, J.** (2019). Towards a 'social anthropology' of end-of-life moral deliberation: a study of Australian Salvation Army officers. *Studies in Christian Ethics*. doi: 10.1177/0953946819847996
10. **Ma, J.**, Batterham, P. J., Calear, A. L., & Sunderland, M. (2019). The development and validation of the Thwarted Belongingness Scale (TBS) for

- interpersonal suicide risk. *Journal of Psychopathology and Behavioral Assessment*, 1-14. doi: 10.1007/s10862-019-09721-6
11. Han, J., Batterham, P. J., Cleave, A. L., & Ma, J. (2018). Seeking professional help for suicidal ideation: A comparison between Chinese and Australian university students. *Psychiatry Research*, 270, 807-814. doi: 10.1016/j.psychres.2018.10.080
 12. Nielsen, T. W. & Ma, J. S. (2018). Connecting social and natural ecologies through a curriculum of giving for student wellbeing and engagement. *Australian Journal of Environmental Education*, 1-13. doi: 10.1017/aee.2018.41
 13. Howard, K. A., Griffiths, K. M., McKetin, R., & Ma, J. (2018). Can a brief biologically based psychoeducational intervention reduce stigma and increase help seeking intentions for depression in young people? A randomised controlled trial. *Journal of Child & Adolescent Mental Health*, 30:1, 27-39. doi: 10.2989/17280583.2018.1467323
 14. Ma, J., Batterham, P. J., Cleave, A. L., & Han, J. (2018). Suicide risk across latent class subgroups: A test of the generalizability of the Interpersonal Psychological Theory of Suicide. *Suicide and Life-Threatening Behavior*, 49(1), 137-154. doi: 10.1111/sltb.12426
 15. Batterham, P. J., Walker, J., Leach, L. S., Ma, J., Cleave, A. L., & Christensen, H. (2018). A longitudinal test of the predictions of the interpersonal-psychological theory of suicidal behaviour for passive and active suicidal ideation in a large community-based cohort. *Journal of Affective Disorders*, 227, 97-102. doi: 10.1016/j.jad.2017.10.005
 16. Stevens, B. A., Shaw, R., Bewert, P., Salt, M., & Ma, J. (2018). Unique needs: Salvation Army officers in retirement and end-of-life care. *Journal of Religion, Spirituality & Aging*, 30(1), 63-77. doi: 10.1080/15528030.2017.1344178
 17. Nielsen, T. W., & Ma, J. (2016). Investigating meaningful happiness and wellbeing in college students through a 'curriculum of giving' outdoor education program. *International Education Research*, 4(2), 1-13. doi: 10.12735/ier.v4n2p01
 18. Ma, J., Batterham, P. J., Cleave, A. L., & Han, J. (2016). A systematic review of the predictions of the Interpersonal-Psychological Theory of Suicidal Behaviour. *Clinical Psychology Review*, 46(Jun), 34-45. doi: 10.1016/j.cpr.2016.04.008
 19. Burns, R. A., & Ma, J. (2015). Examining the association between psychological wellbeing with daily and intra-individual variation in subjective wellbeing. *Personality and Individual Differences*, 82, 34-39. doi: <https://doi.org/10.1016/j.paid.2015.02.023>

Professional Engagement & Leadership

- 2022** Next Gen Researcher Network Member, The ALIVE National Centre for Mental Health Research Translation
- 2022** NECTAR Custodian, The Network for Early Career Academics at ANU
- 2021** Co-Director, International Beliefs and Values Institute (IBAVI) Australian Chapter, the University of Canberra (UC)
- 2020** Early- and Mid-Career (EMCR) Forum Member, Australian Academy of Science
- 2020** Associate Member, Suicide Prevention Australia (SPA)

Referees



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National
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13 April 2023

Dear TheMHS Awards Committee,

It gives me great pleasure to support **Dr. Jennifer Ma's application for the 2023 TheMHS ECR Award**. I am a Professor at the Centre for Mental Health Research and served as Jennifer's PhD primary supervisor from 2015-18 and am currently her post-doctoral supervisor (2022-present).

Dr. Ma is a highly promising early career researcher in the field of suicide prevention, mental health and wellbeing research. Her research focuses on finding ways to better understand, assess, and modify causal risk and protective factors for suicide to promote strengths and suicide protection in the community, adopting evidence-based, co-design approaches with stakeholders and service providers.

Jennifer's research has significantly shaped how theoretical models of suicide are researched nationally and internationally. She published the first English systematic review of the Interpersonal Psychological Theory of Suicide (377 citations), consolidating over 10 years of research on interpersonal risk factors for suicide and highlighting critical gaps for research and practice on critical suicide ideation-to-action transitions. Her research has tested the robustness and generalisability of risk and protective factors in contributing to trajectories of mental illness, suicide ideation and suicide attempt in community and clinical populations. Her research incorporates meaningful partnership with people with lived experience to identify novel and acceptable approaches for reducing suicidal behaviour and mental ill health in the community.

Jennifer has a strong and growing track record, and her research excellence is demonstrated through the many awards and grants she has received. This has included over \$546K in competitive funding, as primary and co-investigator from the Suicide Prevention Australia Research Fund, the Medical Research Future Fund, University of Canberra, and ACT Education Directorate; and \$113K in awards, prizes and scholarships.

Jennifer's research addresses a pressing need to better understand the mechanisms through which social connectedness and support protect individuals against suicide and mental ill health, while promoting wellbeing more broadly by providing specific, actionable recommendations for service providers and policy makers. I strongly and unreservedly support her application for the 2023 TheMHS ECR Award.

Kind Regards,

A handwritten signature in black ink, appearing to read 'Phil Batterham'.

Professor Phil Batterham
Co-Head, Centre for Mental Health Research
College of Health and Medicine
The Australian National University

63 Eggleston Road
The Australian National University

Canberra 2600, ACT Australia
CRICOS Provider No. 00120C

Contact details for an additional referee who may be contacted by phone

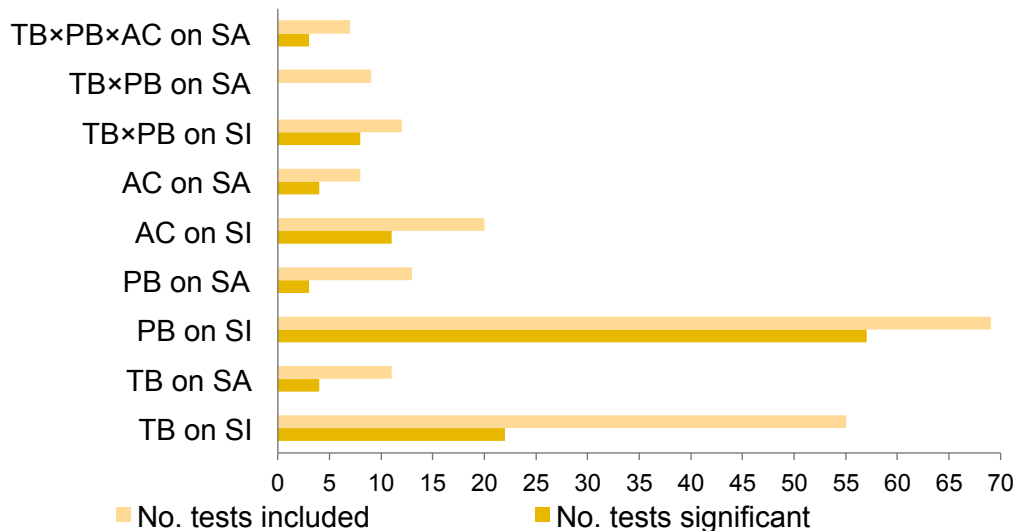
Professor Debra Rickwood

Faculty of Health (Psychology), University of Canberra

Phone: +61 2 6201 2701; Email: debra.rickwood@canberra.edu.au

Supporting Material

Overview of findings from my systematic review of the Interpersonal-Psychological Theory of Suicidal Behaviour (Ma, J., Batterham, P. J., Caley, A. L. et al. (2016); <https://doi.org/10.1016/j.cpr.2016.04.008>).



Note. TB = Thwarted Belongingness; PB = Perceived Burdensomeness; AC = Acquired Capability; SI = Suicide Ideation; SA = Suicide Attempt; × = interaction.

Thwarted Belongingness Scale (TBS)

Please rate on the scale below, how you have been feeling recently about the following:

Not at all true for me			Somewhat True for me			True for Me
1	2	3	4	5	6	7

1. I feel isolated
2. I don't matter to other people
3. Nobody cares about me
4. I feel there is no one I can talk to
5. I don't fit in
6. I don't play an important role in other people's lives
7. I am not close to anyone
8. I am alone in this world

Scoring: Total scores are calculated as the sum of the eight items (range 8–56).

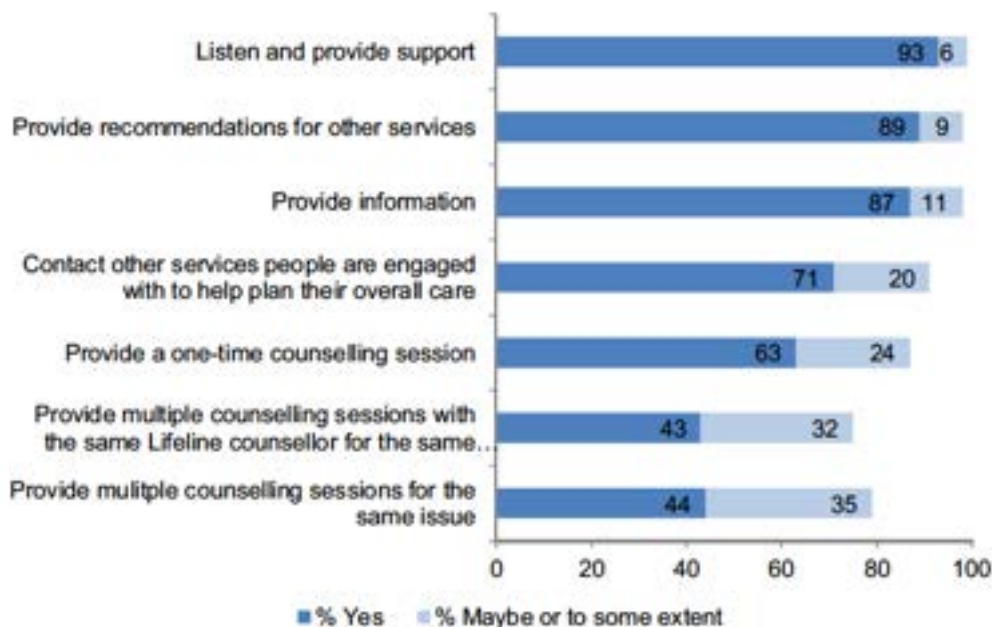
Ma, J., Batterham, P.J., Caley, A.L. et al. (2019) <https://doi.org/10.1007/s10862-019-09721-6>

A 42-item pool underwent refinement via three consecutive stages: (1) expert feedback, (2) item selection study using a sample of community-dwelling Australian adults (Study 1, $N = 284$), and (3) validation study and test of IPTS predictions in a larger sample of community-dwelling Australian adults (Study 2, $N = 747$). Factor analyses supported unidimensionality and Item Response Theory analysis indicated that the TBS provides enhanced identification of TB when at moderate to high levels.

Findings from studies of community and consumer expectations and outcomes of Lifeline Australia’s crisis support service.

- **Ma, J. S.**, Batterham, P. J., Kølves, K., *et al.* (2022). Community expectations and anticipated outcomes for crisis support services – Lifeline Australia. *Health & Social Care in the Community*, <https://doi.org/10.1111/hsc.13557>
- **Ma, J. S.**, O’Riordan, M., Mazzer, K., *et al.* (2022). Consumer perspectives on the use of artificial intelligence technology and automation in crisis support services: Mixed methods study *JMIR Human Factors*, <https://doi.org/10.2196/34514>
- O’Riordan, M., **Ma, J. S.**, Mazzer, K., *et al.* (2022). Help-seeker expectations and outcomes of a crisis support service: Comparison of suicide-related and non-suicide-related contacts to Lifeline Australia. *Health and Social Care in the Community*, <https://doi.org/10.1111/hsc.13857>

Expected service responses for help-seekers accessing Lifeline (%) (N=1,300):



Reasons for community (n=595) and help-seeker (n=200) participants not using the Lifeline crisis support service if technology were used:

