



# Effects of Radio Listening on Loneliness, Well-Being, and Cognitive Outcomes

| Kelly Marie Nettleton<sub>1</sub> | Muhammad Waqas<sub>2</sub> | Min Hooi Yong<sub>1</sub> |  
| <sub>1</sub>Department of Psychology | <sub>2</sub>Department of Management | University of Bradford |  
[k.nettleton@bradford.ac.uk](mailto:k.nettleton@bradford.ac.uk)

## INTRODUCTION

British Radio boasts a long and progressive history and shows no signs of languishing [1]. Its impact is minimally measured for psychological outcomes despite its century long reign.

- 1920's – British radio launches, deemed a Public Service [1],
- 1970/80's – Music gains traction as a positive psychological intervention[2],
- 2000 – Tachhi (2000) theorizes the importance of radio in the home, subsequent study confirms feelings of nostalgia and community [3],
- 2015 – Tailor-made radio station improves loneliness outcomes in older-aged participants [4]
- 2020 – Krause (2001) explores the impact of radio upon loneliness outcomes of older adults during COVID-19 lockdown, confirms positive results [5],
- 2022 – Radio Centre research reports feelings of happiness whilst radio listening,
- 2024 – Radio output reaches 90% UK adults each week [6].

## PRELIMINARY FINDINGS

Research explored during undergraduate studies suggests listening to the radio has the potential to positively influence psychological outcomes. Qualitative responses from 35 – 65-year-old population (N=130, M=50.5) indicate improved feelings of loneliness and well-being. Quantitative data was unable to illustrate true levels of loneliness, well-being, and cognition [7].

**The Humble Radio: Cost-Effective, Hands-Free, Portable/Self-Apply Anywhere, User-Friendly, Vast Variety of Content, Global, Non-Invasive**

Radio can provide social exchange without literal contact or direct engagement. Strong implications that radio has multifaceted meaning to the consumer and provides unmeasured social reward e.g., not exclusively musical identity, or news/sport preferences [6].

This research is designed to provide further understanding about radio listening's impact upon psychological outcomes. It will do this by:

- (1) Secondary analysis [8]
- (2) 3-group intervention study.

## AIMS

This research has three specific aims;

- 1, To examine loneliness, well-being, and cognitive outcomes of UK adult age groups spatiotemporally,
- 2, Extend understanding about broadcaster/listener relationships to explore if loneliness is a dominant reason for listening to the radio,
- 3, Understand the effects of radio listening on loneliness, well-being, and cognitive outcomes across UK adults age groups (ages 30 years +, 65 years +)



=



- Increased feelings of well-being,
- Decreased feelings of loneliness,
- Improved cognitive outcomes

## METHOD

### Secondary Analysis

Secondary analysis of UKHLS data using waves 2010 – 2015 across the UK adult population (N = >30,000). This will establish an understanding of the loneliness, well-being, and cognitive outcomes in the over 30+ age groups spatiotemporally [8],

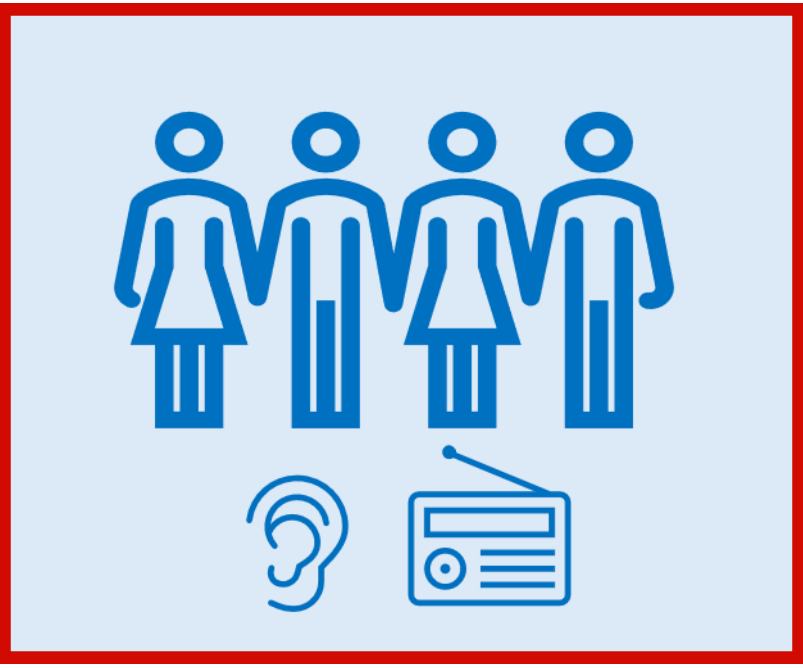
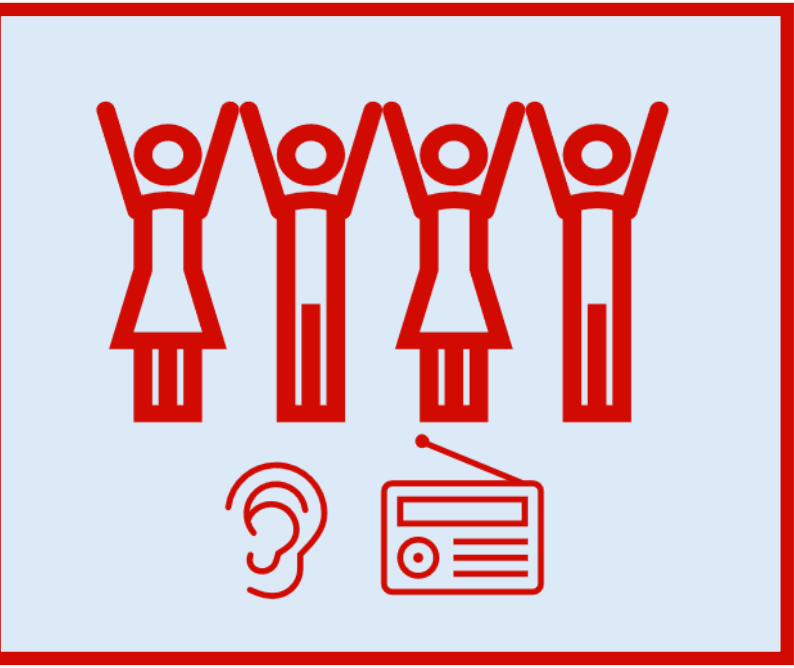
### Intervention Study

#### Participants

900 participants across 2 populations:  
30+ years N = 450  
65+ years N = 450  
3 intervention groups: N = 150 each

#### Intervention Groups

**Group-1**: Experienced listeners asked to listen to the radio for 10 hours per week for 3-months (N = 300),  
**Group-2**: Inexperienced listeners asked to listen to the radio for 10 hours per week for 3-months (N = 300),  
**Group-3**: Inexperienced listeners asked to read an information booklet about the history of radio over a 3-month period (N = 300). They will receive booklet about the potential benefits of listening to the radio at follow-up.



#### Measurements

- Questionnaires will be provided at four intervals: baseline, 1-month, 3-month, 1-month post intervention.
- Initial questionnaire will measure radio listening habits. Participants will be placed into one of three intervention groups based upon their responses. 3 subsequent questionnaires will capture their engagement with the intervention.
- Measures for loneliness, well-being, and cognition will be taken at all four intervals.

#### Materials

**Radio Listening** – Music Use and Background Questionnaire [9] and Measurement of Internet Delivered Audio Services Questionnaire [6] have been adapted to reflect this study. Additional questions informed by literature [10, 11]. Total of 49 questions.  
**Loneliness** – Lubben Social Network Scale [12] and UCLA 4-Question Scale [13, 14]. Total of 12 questions.  
**Well-Being** – General Health Questionnaire 12-Question [15], physical and mental health questions from Mini-Mental State Examination 4-Question [16], Subjective Social Class Scale 1-Question[17], Satisfaction with Life Scale 4-Question[18] and WEMWBS 13-Question [19]. Total of 30 questions  
**Cognition** – Breakfast Task [20, 21] and Healthy Aging Brain Care Monitor 26-question[22]. Total of 1 task and 26 questions.  
**Analysis** – Repeated measures ANOVA, in-group ANOVA, between-group ANOVA, and regression analysis will be performed using STATA17.

## NEXT STEPS

Intervention study opens to participants 1<sup>st</sup> May 2024 and will remain open until 1<sup>st</sup> December 2024. Individuals over the age of 30 years are desirable. Radio listening is not obligatory, and no musical/radio experience is required to participate.

**Academic engagement with the study is welcomed, should you wish to receive updates please contact [k.nettleton@bradford.co.uk](mailto:k.nettleton@bradford.co.uk)**

Secondary analysis of UKHLS continues, confirmed results ascertaining levels of loneliness, well-being, and cognition across the middle and older age groups expected December 2024.

Public relations with broadcasters and audience members will continue to play an important role throughout the research. Systematic review forthcoming 2025.

Community radio broadcasts to discuss Effects of Radio Listening anticipated Summer 2024 with two Yorkshire based radio stations [23].



=



- Feelings of a presence,
- Increased connectivity,
- Source of social currency,
- Provides sense of community [6]

Bibliography

[1] BBC, "BBC 100," BBC - BBC 100, 2022. <https://www.bbc.co.uk/100>

[2] D. J. Hargreaves, N. A. Marshall, and A. C. North, "Music education in the twenty-first century: a psychological perspective," British Journal of Music Education, vol. 20, no. 2, pp. 147–163, Jul. 2003, doi: <https://doi.org/10.1017/s0265051703005357>.

[3] J. Tacchi, "The need for radio theory in the digital age," International Journal of Cultural Studies, vol. 3, no. 2, pp. 289–298, Aug. 2000, doi: <https://doi.org/10.1177/136787790000300217>.

[4] C. Travers and H. P. Bartlett, "Silver Memories: Implementation and evaluation of a unique radio program for older people," Aging & Mental Health, vol. 15, no. 2, pp. 169–177, Mar. 2011, doi: <https://doi.org/10.1080/13607863.2010.508774>.

[5] A. E. Krause, "The Role and Impact of Radio Listening Practices in Older Adults' Everyday Lives," Frontiers in Psychology, vol. 11, no. 1, Dec. 2020, doi: <https://doi.org/10.3389/fpsyg.2020.603446>.

[6] Radio Centre Org, "Audio Needs State Navigator - Compare Mood," need-states-navigator.radiocentre.org, 2022. <https://need-states-navigator.radiocentre.org/compare-mood-profile>

[7] K. M. Nettleton, "An Age of Radio Listening: Its Impact upon Loneliness, Well-Being, and Cognitive Frailty Outcomes in Middle-Aged Adults," Dissertation - University of Bradford, University of Bradford, 2023

[8] University of Essex, Institute for Social & Economic Research, "Understanding Society [data series]," UK Data Service, 2023. <https://beta.ukdataservice.ac.uk/datacatalogue/series/doi?id=2000053>

[9] T.-C. Chin, E. Coutinho, K. R. Scherer, and N. S. Rickard, "MUSEBAQ," Music Perception: An Interdisciplinary Journal, vol. 35, no. 3, pp. 376–399, Jan. 2018, doi: <https://doi.org/10.1525/mp.2018.35.3.376>.

[10] A. D. Vanstone, M. Wolf, T. Poon, and L. L. Cuddy, "Measuring engagement with music: Development of an informant-report questionnaire," Aging & Mental Health, vol. 20, no. 5, pp. 474–484, Mar. 2015, doi: <https://doi.org/10.1080/13607863.2015.1021750>.

[11] G. Vetere et al., "The relationship between playing musical instruments and cognitive trajectories: Analysis from a UK ageing cohort," International Journal of Geriatric Psychiatry, vol. 39, no. 2, Jan. 2024, doi: <https://doi.org/10.1002/gps.6061>.

[12] J. Lubben et al., "Performance of an Abbreviated Version of the Lubben Social Network Scale Among Three European Community-Dwelling Older Adult Populations," The Gerontologist, vol. 46, no. 4, pp. 503–513, Aug. 2006, doi: <https://doi.org/10.1093/geront/46.4.503>.

[13] Office for National Statistics, "Measuring loneliness: guidance for use of the national indicators on surveys - Office for National Statistics," www.ons.gov.uk, 2018.

<https://www.ons.gov.uk/peoplepopulationandcommunity/wellbeing/methodologies/measuringlonelinessguidanceforuseofthenationalindicatorsonsurveys>

[14] M. Panayiotou, J. C. Badcock, M. H. Lim, M. J. Banissy, and P. Qualter, "Measuring Loneliness in Different Age Groups: The Measurement Invariance of the UCLA Loneliness Scale," Assessment, vol. 30, no. 5, p. 107319112211195, Aug. 2022, doi: <https://doi.org/10.1177/10731911221119533>.

[15] C. Jackson, "The General Health Questionnaire," Occupational Medicine, vol. 57, no. 1, pp. 79–79, Aug. 2006, doi: <https://doi.org/10.1093/occmed/kqj169>.

[16] Oxford Medical Education, "Mini-mental state examination (MMSE)," Oxford Medical Education, Aug. 30, 2015. <https://oxfordmedicaleducation.com/geriatrics/mini-mental-state-examination-mmse/>

[17] M. Rubin, N. Denson, S. Kilpatrick, K. E. Matthews, T. Stehlik, and D. Zygier, "I am working-class' subjective self-definition as a missing measure of social class and socioeconomic status in higher education research," Educational Researcher, vol. 43, no. 4, pp. 196–200, May 2014, doi: <https://doi.org/10.3102/0013189X14528373>.

[18] O. N. E. Kjell and E. Diener, "Abbreviated Three-Item Versions of the Satisfaction with Life Scale and the Harmony in Life Scale Yield as Strong Psychometric Properties as the Original Scales," Journal of Personality Assessment, vol. 103, no. 2, pp. 1–12, Mar. 2020, doi: <https://doi.org/10.1080/00223891.2020.1737093>.

[19] R. Tennant et al., "The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation," Health and Quality of Life Outcomes, vol. 5, no. 1, p. 63, 2007, doi: <https://doi.org/10.1186/1477-7525-5-63>.

[20] N. S. Rose, L. Luo, E. Bialystok, A. Hering, K. Lau, and F. I. M. Craik, "Cognitive processes in the Breakfast Task: Planning and monitoring," Canadian Journal of Experimental Psychology/Revue canadienne de psychologie expérimentale, vol. 69, no. 3, pp. 252–263, 2015, doi: <https://doi.org/10.1037/cep0000054>.

[21] M. Kosowicz and S. E. MacPherson, "Improving multitasking assessment in healthy older adults using a prop-based version of the Breakfast task," Applied Neuropsychology: Adult, vol. 24, no. 3, pp. 252–263, Apr. 2016, doi: <https://doi.org/10.1080/23279095.2015.1136310>.

[22] P. Monahan, C. Alder, B. Khan, T. Slump, and M. Boustani, "The Healthy Aging Brain Care (HABC) Monitor: validation of the Patient Self-Report Version of the clinical tool designed to measure and monitor cognitive, functional, and psychological health," Clinical Interventions in Aging, vol. 2014, no. 9, p. 2123, Dec. 2014, doi: <https://doi.org/10.2147/cia.s64140>.

[23] BCB Radio, "Hear My Voice | BCB Radio 106.6FM," Bradford Community Broadcasting, 2022. <https://www.bcbradio.co.uk/hear-my-voice/>