Check for updates

OPEN ACCESS

EDITED BY Yibo Wu, Peking University, China

REVIEWED BY Alice Košárková, Palacký University, Olomouc, Czechia Neesa Ameera Mohamed Salim, Universiti Teknologi MARA Puncak Alam, Malaysia Sophie Tô, American Institutes for Research, United States Sivan Regev, Ben-Gurion University of the Negev, Israel Sarah Dodds, Massey University, New Zealand Leanne Fried, University of Western Australia, Australia

*CORRESPONDENCE Christina R. Davies ⊠ christina.davies@uwa.edu.au

RECEIVED 17 March 2025 ACCEPTED 29 May 2025 PUBLISHED 26 June 2025

CITATION

Davies CR, Pescud MT, Clifford R, McGrath R, Thomson A, Jeffrey M, Stoneham M, Pikora T, Wright P, Girdler S, Baldassar L and Clift S (2025) Good Arts, Good Mental Health[®]: the effectiveness of an Australian health promotion media campaign in promoting community mental wellbeing via the arts. *Front. Public Health* 13:1594846. doi: 10.3389/foubh.2025.1594846

COPYRIGHT

© 2025 Davies, Pescud, Clifford, McGrath, Thomson, Jeffrey, Stoneham, Pikora, Wright, Girdler, Baldassar and Clift. This is an open-access article distributed under the terms of the Creative Commons Attribution License (CC BY). The use, distribution or reproduction in other forums is permitted, provided the original author(s) and the copyright owner(s) are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

Good Arts, Good Mental Health[®]: the effectiveness of an Australian health promotion media campaign in promoting community mental wellbeing via the arts

Christina R. Davies^{1*}, Melanie T. Pescud¹, Rhonda Clifford², Richard McGrath³, Annie Thomson¹, Mia Jeffrey¹, Melissa Stoneham⁴, Terri Pikora¹, Peter Wright⁵, Sonya Girdler^{2,6}, Loretta Baldassar⁷ and Stephen Clift⁸

¹Centre for Arts, Mental Health and Wellbeing, School of Allied Health & School of Humanities, The University of Western Australia, Crawley, WA, Australia, ²School of Allied Health, University of Western Australia, Perth, WA, Australia, ³Allied Health and Human Performance, University of South Australia, Adelaide, SA, Australia, ⁴Public Health Advocacy Institute, Curtin University, Bentley, WA, Australia, ⁵School of Education, College of Health and Education, Murdocch University, Bentley, WA, Australia, ⁶Curtin Autism Research Group, School of Allied Health, Curtin University, Bentley, WA, Australia, ⁷School of Arts and Humanities, Edith Cowan University, Joondalup, WA, Australia, ⁸Sidney De Haan Research Centre for Arts and Health, Canterbury Christ Church University, Canterbury, United Kingdom

Introduction: This study describes and evaluates *Good Arts, Good Mental Health*[®] (GAGMH), a groundbreaking, population-level, arts-mental health promotion media campaign. The objectives of the campaign (Wave 1) were to increase brand awareness, comprehension, and agreement with the tagline *Good Arts, Good Mental Health*[®] and empower the general population to form an intention to engage in the Arts for their mental wellbeing.

Methods: The campaign ran from August to September 2024 (4 weeks), cost AUD\$198,965 (23% creative and 77% media/advertising distribution), and targeted the Western Australian (WA) general population aged 18-65 years, all genders, in both metropolitan and regional areas. The campaign was distributed through a variety of platforms, channels, visual, audio, and static assets. To gauge the success of the campaign, a process evaluation and (short-term) outcome evaluation were conducted by sourcing online analytics and conducting an online survey of the campaign target group (n = 661).

Results: Overall, campaign reach and frequency were optimal and met set targets. Campaign website engagement substantially increased from baseline (7,505 to 53,810 events 1 month after the campaign). Advertising cost-per-reach was effective and ranged from \$0 for free/organic media to \$0.10 for radio. For paid media channels, the highest reach (948,106 people) and best cost-per-reach (\$0.02) were delivered by Meta (Facebook and Instagram).

Measured as both (1) a proportion of total respondents and (2) a sub-set analysis of each preceding level in the cognitive impact hierarchy, post-campaign, one-in-four respondents were aware of *Good Arts, Good Mental Health*[®]. This is comparatively high for a new tagline and health campaign without TV advertising. Overall, comprehension was satisfactory. Agreement and intention

to act on the message were high and double that of comparison Western Australian health promotion campaigns.

Discussion: Study findings indicate the GAGMH campaign was successful. If funded, future waves of the campaign could build on Wave 1 to reinforce message awareness, increase understanding of GAGMH concepts, focus more on the *arts-mental health dose*, and extend the outcome evaluation by measuring behavioral action. The information contained in this study is useful to Public Health, Mental Health, and Arts-Health professionals in the planning, implementation, and evaluation of future arts-mental health promotion strategies and campaigns.

KEYWORDS

health promotion, mental health, arts, campaign, Good Arts Good Mental Health, dose

Introduction

Do you take part in recreational arts or sport for better mental health? How do you "know" sport is good for your mental health, and why do you (try to) exercise for 30 minutes (1) per day? Part of the reason is because the evidence and benefits of sport and physical activity are widely promoted by government and health organizations. Underpinned by both social marketing (2) and communication-behavior change models, (3) there are many examples of population-level, health promotion media campaigns that encourage engagement in recreational sport and active living including "Be Positive, Be Connected, Be Active," (4) "Find 30," (1, 5) "Make Healthy Normal," (6) and "Life. Be in it," (7) In comparison to sport, however, recreational arts are under-promoted by government and health organizations, especially in terms of health promotion media campaigns, sponsorships, resources, learning, and engagement opportunities (8-12).

Globally, mental health issues are increasing for reasons including the growing climate crisis, disease outbreaks, health, social, and economic inequities (13, 14). Similar to engagement in recreational sport, there is strong evidence that recreational arts engagement enhances mental wellbeing (15-20) and should be utilized as a mental health prevention and early intervention strategy (15). An arts-mental health dose (i.e., how much arts engagement is needed for good mental health) has also been calculated, with two or more hours of recreational arts engagement per week linked to better mental wellbeing than lower levels of engagement for adults in the general population (10). The purpose, therefore, of this paper was to extend the field by describing and evaluating a world first, trademarked, arts-mental health promotion media campaign Good Arts, Good Mental $\mathit{Health}^{\mathbb{R}}$ (GAGMH) that aimed to address this lack of artsmental health promotion at a population level. Good mental health enables individuals to contribute to their community, realize their potential, work productively, and cope with the stresses of everyday life (21). Good mental health is essential for individual and community wellbeing (22). In Australia, poor mental health is

a leading cause of disease burden, injury, and disability, with one in five adults experiencing mental illness each year (22, 23). As a result, the Australian health system is under increasing pressure to deliver mental health services which in 2021–2022 was estimated to cost AUD\$12 billion (24, 25). Evidence-based, population-level innovation, such as *Good Arts, Good Mental Health*[®] is needed to address the mental health crisis Australia and the world are facing.

Recreational arts engagement

Recreational arts engagement is an "umbrella term" encompassing the various ways in which people engage in the arts in their everyday life (e.g., listening to music, reading books, coloring, photography, sewing, going to concerts, festivals, art class, and so much more) (26). Within this definition, the Arts has been defined by Davies et al. (26, 27) through five art forms and a variety of activities and events, i.e., visual arts, design and craft; community and cultural festivals; online, digital and electronic arts; performing arts, and literature (Figure 1). For clarity, it should be noted that recreational arts engagement (the focus of this study) and art therapy/therapies are not the same thing (26). Art therapy/therapies involve a therapeutic relationship between a qualified therapist and individual who undertake creative activities for diagnostic or treatment purposes (26, 28). Recreational arts engagement, however, is something anyone can do, regardless of health status, as part of their everyday life, for enjoyment, entertainment, socially, or as a hobby (26). Recreational arts engagement occurs on a continuum from active involvement (making) to receptive involvement (attending, listening, and viewing) and occurs within a variety of settings including the home, work, schools, parks, community centers, cultural centers, etc (15, 26, 29). Recreational arts can be undertaken alone (as an individual) or with others (e.g., friends, family, artists, musicians, audience members, and art class participants) (26). In Australia, the most popular modes of recreational arts engagement are listening to music (97%), reading books (79%), and attending arts events (72%) (30). Even though yearly engagement in the arts is high (31), most adults engage (dose-response) at levels insufficient to achieve mental wellbeing benefits (15), that is, less

Abbreviations: GAGMH, Good Arts, Good Mental Health®.



than the estimated *arts-mental health dose* of two or more hours per week (10).

Public health media campaigns

Population-level health communication refers to the various means by which public health information reaches a large number of people (32). Media campaigns are a form of paid advertising where a complex message is communicated in terms of information and imagery (33, 34). Public health media campaigns play a pivotal role in population-level health communication to promote, maintain, and improve population health (35) and are used/have been used to influence community beliefs and behavior around a number of health issues including immunization, seat-belt use, alcohol consumption, sun safety, physical activity, healthy eating, and tobacco use (1, 6, 34, 36-39). Public health media campaigns involve a variety of channels including television, radio, cinema, print media (newspapers, magazines, etc.), websites, signage (posters, billboards, flags, etc.), social media (Instagram, Facebook, Twitter/X, LinkedIn, TikTok, etc.), online advertising (YouTube, Google, etc.), educational resources (brochures, flyers, and newsletters), mobile phone technology (SMS messaging, campaign Apps, advertising within gaming/mobile apps), campaign merchandise (bags, stickers, pens, stress-balls, hats, t-shirts, etc.), engagement opportunities (workshops, courses, e-learning, programs, etc.), and endorsements (by celebrities, community leaders, politicians, influencers, etc.) (32, 34, 37, 39, 40). In general, public health media campaigns often use

messages/taglines as a cognitive strategy to influence thinking and the adoption of health-enhancing behaviors (34, 41). When delivering a campaign, message/tagline effectiveness is often assessed by measuring "reach" (number of people who saw the content), "frequency" (number of times a person was exposed to the content), cost, and cognitive impact of the message (i.e., awareness, comprehension, agreement, and intention) (3, 6, 37, 42-47). With regard to cognitive impact, underpinning the approach and evaluation of many Western Australian health promotion campaigns (5, 43, 44, 48-50), including GAGMH, is McGuire's communication-behavior change model or "communication-persuasion model" (3). McGuires model has been used extensively in mass-media campaigns and emphasizes a cognitive communication sequence which starts at message awareness and is followed by comprehension, agreement, and intention to act on the message (3). In Western Australian, physical activity (e.g., Find 30), anti-smoking (e.g., Quit), sun protection (e.g., Sun Smart), nutrition (e.g., Go for 2 and 5), and mental health (e.g., Act, Belong Commit) campaigns have been evaluated by calculating this communication sequence as a proportion of total respondents and also as a subset for each level within the cognitive impact hierarchy (5, 43, 44, 48-50).

The Good Arts, Good Mental Health[®] (GAGMH) initiative

Given the strong evidence that recreational arts engagement enhances mental wellbeing (15), it is time to more effectively utilize and promote this low cost/no cost, non-pharmacological method through a population-level, mental health promotion media campaign. The GAGMH initiative started in January 2022 and is led by arts-health research academics based at the University of Western Australia. GAGMH has been developed in partnership with the community, six universities, and 31 government, industry, and philanthropic partners. GAGMH is evidence-based, guided by the literature (3, 10, 15, 26, 27, 29, 37, 46, 51-61), multi-award winning, and aims to improve community mental wellbeing by communicating the value of recreational arts as a mental health promotion strategy. GAGMH is inclusive of all art forms and arts activities (26) and respectful of individual differences, individual preferences, budgets, lifestyle, and life-stage factors. Where possible, the GAGMH campaign website (www.goodartsgoodmentalhealth.com.au) and social media accounts (Instagram and Facebook handle = @goodartsgoodmentalhealth) offer low-cost and no-cost options for engagement (e.g., open-access to publications, free learning videos, downloadable resources, coloring sheets, a Spotify playlist, etc). GAGMH also promotes the arts-mental wellbeing relationship to the general population via a range of learning (e.g., faceto-face workshops, professional development, and e-learning) and demonstration programs (large, medium, and small events). Most recently, GAGMH launched a world first, population-level, trademarked, arts-mental health promotion media campaign, Good Arts, Good Mental Health^(K) which is the focus of this paper.

The GAGMH media campaign[®] (Wave1)

The GAGMH campaign (Wave 1) was promoted across the whole of the Australian state of Western Australia (WA) from the 17 August to the 14 September, 2024. WA is Australia's largest state with a land area of 2.6 million square kilometers (i.e., WA is larger than Western Europe, 10 times the size of the UK, and 4 times the size of Texas) (62) and has a population of \sim 2.9 million people (63). The GAGMH campaign target group was adults, 18-65 years, all genders, in both metropolitan and regional areas of WA. Guided by theories of positive psychology, social psychology (e.g., Theory of Planned Behavior), social epidemiology (psychosocial and eco-social), social marketing, and communication-behavior change (2, 3, 64-66), the primary focus of the GAGMH campaign was to (Objective 1) increase brand recognition/awareness, comprehension, and agreement with the tagline "Good Arts, Good Mental Health" and (Objective 2) empower community members to form an intention to proactively and regularly engage in the arts activities that make them feel good, therefore enhancing their mental wellbeing.

The creative components of the campaign (e.g., wording, images, and language) were co-designed via a rigorous formative research process including surveys, focus groups, and interviews with project partners, i.e., community members n = 3,560, industry n = 29, a state government reference group (from arts, mental health, and health departments) who met with GAGMH on a quarterly basis n = 7, philanthropy who met with GAGMH on a quarterly basis n = 2, and a community/consumer reference group with backgrounds in the arts, public health, and/or lived experience of mental health challenges/recovery, n = 6. Project partners, especially community members, emphasized the importance of

using positive and inclusive images (all genders, ages, abilities, ethnicities, etc.), positive words (e.g., good mental health, mental wellbeing, happy, strong, relaxed, connected vs. stressed, anxiety, depressed, and lonely), and invitational words (e.g., try vs. start, as the general population did not wish to be told what to do) and preferred the word "arts" to "creative" or "creativity," as to them, creativity implied making and some people only wanted to engage receptively in the arts (e.g., attend, view, listen, and read). Project partners also recommended promoting a range of arts activities, low-cost and no-cost options, easily actionable tips, and suggestions in non-academic, everyday language. As above, the partner-endorsed campaign *tagline* was *Good Arts, Good Mental Health*[®]. The *manifesto* was as follows:

"You don't have to be good at art for the arts to be good for you. Do the art that makes YOU feel GOOD. TRY for two hours per week. It could make a difference to your mental health. Good Arts, Good Mental Health".

The tagline and manifesto were positive and solutionfocused and encouraged people to think about and then take part in the arts activities that made them feel good (vs. sad, embarrassed, stressed, not interested in). It acknowledged that people enjoy different arts activities (e.g., one person may like singing, another may prefer attending concerts and knitting, while another may prefer reading, dancing, and painting). The manifesto also aimed to empower people with the knowledge that the arts could positively impact their mental health and that they could take part, no matter their skill level. While not the primary focus of Wave 1 of the campaign, the *arts-mental health dose* of two or more hours per week was also introduced to the community.

Campaign assets and delivery

Utilizing the creative ideas developed with our project partners, a professional communication agency was employed to advise and support the campaign (i.e., asset creation, media deployment and delivery, and collection of process evaluation data). The campaign budget was AUD\$198,965, of which 23% was used to create the website, visual, audio, and static assets and 77% for media distribution. As described below, a variety of campaign assets were created and delivered; however, paid television advertising was not possible due to budget constraints.

 Radio advertising: A 15 second advertisement (advert) based on the manifesto was developed for radio. The script was: "Music, reading, painting, dance - whatever art makes you feel good. You don't have to be good at art, for the arts to be good for you. Try for two hours per week. It could make a difference to your mental health. Good Arts, Good Mental Health." Due to their popularity and high prevalence of engagement by the community (30, 31, 67), music, reading, painting, and dance were said at the start of the advert to increase the possibility of immediate advert relevance to listeners. The script was spoken in a female voice (early 30s, friendly, happy, kind). The background music was relaxed and "easy-listening." The radio advert was played by two metropolitan and 13 regional radio stations via broadcast and digital audio. A total of 3,463 advertising spots over 4 weeks were delivered (1,909 paid and 1,554 pro bono). Due to a partnership between one of the radio stations and a popular chain of supermarkets, the GAGMH advert was also played in 100 supermarkets across WA (30 spots per week for 4 weeks). The GAGMH radio adverts were complemented by co-branded radio station adverts, show/talent integration (live reads), competitions, prizes, GAGMH merchandise giveaways (e.g., GAGMH eco-bags, pens, coloring packs, etc), and social media posts/stories about the arts-mental health relationship from the radio station and station talent.

- 2. **Spotify advertising:** The same 15 second advert developed for radio was played on *Spotify Free*. The logo and banner were designed in the GAGMH font, brand colors and contained the campaign tagline. The advert also contained a tagline extension "*Try some arts for your mental health*" and a "*learn more*" button that jumped listeners to the campaign website (Figure 2). Spotify Ad Manager was used to distribute the paid GAGMH advert to the campaign target group.
- 3. Meta advertising (Facebook and Instagram): Similar to the radio and Spotify adverts, the focus for the paid Meta advertising was also music, reading, painting, and dance (Figure 3). For each arts activity, the following was developed: (i) one square and one long format illustrated tile, (ii) wording within the post (e.g., for the music tile the wording was "Music could help you relax and lift your mood. Do the arts that make you feel good. Good Arts, Good Mental Health"), (iii) an arts-mental health image headline (e.g., for dancing, the headline was "Dancing makes us feel connected"), and (iv) a post headline "Arts for mental health" and "learn more" button that jumped viewers to the campaign website. Meta Ad Manager was used to promote the paid posts to the target group as a single image and/or carousel of images.
- 4. Editorial: A popular local news/media service was paid to write an article about GAGMH. The company promoted their article through its e-newsletter which was delivered to 95,583 Western Australian subscribers. The news service was also paid to create a short GAGMH social media video/reel which they shared through their Instagram, Facebook, LinkedIn, and TikTok accounts.
- 5. Campaign website: A web consultant was paid to design and build the campaign website www.goodartsgoodmentalhealth. com.au. The website contained a home/landing page (welcome video, sub-hub intro, social media intro, and partner/advisor/mentor acknowledgment) and five sub-hubs titled Learning (learning videos, quiz), Research (information about the GAGMH team, open-access to papers, reports, publications), Campaign (free access to a 5-day arts challenge, poster, Spotify playlist, links, and downloadable resources), News (videos and articles), and Youth/Kids (free activities, coloring sheets, links, and downloadable resources). The website also linked to the GAGMH social media accounts and gave viewers the option to sign-up to the GAGMH newsletter. The website was launched on 25 July 2024 to ensure that any website problems or errors were rectified before the campaign launch.
- 6. **Signage:** A "static" poster in the GAGMH font and brand colors that highlighted the popular arts activities of music, reading,

painting, and dance but also coloring, photography, and knitting was created (Figure 4). The poster included the campaign tagline, manifesto suggestion "You don't have to be good at art, for the arts to be good for you" and a tagline extension "Your arts for your mental health" to increase viewer comprehension and understanding of the message/images. The poster was printed in color on 150GSM gloss paper (n = 750 in A4, A3). The poster was distributed electronically or in hard copy to project partners, metropolitan and regional arts organizations, and local governments so that they could be placed in high visibility, community relevant areas. In the metropolitan area, the poster was also displayed in 300 cafes, community venues, and notice boards by a signage distribution company.

7. **Organic media:** In addition to the "paid assets" described above, the campaign was also amplified by organic or free media. This included a media release which resulted in 12 newspaper/magazine/e-articles. The first author was also invited to conduct a national mid-day TV interview with one of Australia's leading TV stations and 14 radio interviews. In addition, the campaign was promoted in three GAGMH e-newsletters to 544 subscribers (with newsletter sharing requested), in eight project partner/community newsletters, 73 Instagram posts, 53 Facebook posts, 26 Linked-In posts, 31 Twitter posts, and eight YouTube videos (organic media reach during the campaign is unknown).

As stated above, the purpose of this paper is to describe the *Good Arts, Good Mental Health*[®] campaign (see above). The remainder of this paper will evaluate the reach, frequency, cost, and cognitive impact (awareness, comprehension, agreement, and intention) of the GAGMH campaign.

Method

Permission to conduct this initiative and evaluation was granted by the University of Western Australia Human Research Ethics Committee (2022/ET000140).

Process evaluation

A process evaluation was conducted to determine the success of the campaign implementation. Prior to the campaign starting (25 July–16 August 2024), during the campaign (17 August–14 September), and 1 month after the campaign (14 October), users and event information were collected via Google Analytics for the campaign website (e.g., page views and downloads). From 17 August to 14 September 2024 (during the campaign), reach and frequency analytics were sourced about campaign channels/platforms from Spotify Ad Manager, Meta Ad Manager, Campaign Manager 360, service providers, and Google Analytics. According to the literature, it can be estimated that for a spend of \sim \$100,000, the level of advertising intensity needed to drive optimal population-level brand awareness occurs at a reach of between 36% and 46% and frequency of two to five exposures. (68–72) Given this, our GAGMH goal was to achieve a reach



of 36%-46% and frequency between two and five exposures. "Cost-per-reach" (i.e., \$cost divided by the number of individuals who saw the content) was also calculated for each campaign channel/platform as a measure of effectiveness. A "good" cost-per-reach is suggested to be between \$0.20 and \$1.00 (73).

Outcome evaluation (short-term)

To determine whether the campaign increased awareness, comprehension, and agreement with the tagline Good Arts, Good Mental Health[®], and encouraged community members to form an intention to engage in the arts for their mental wellbeing, a (short term) outcome evaluation was conducted. An independent market research company was contracted to collect the evaluation data. From 14th to 23rd September 2024 (after the campaign), an online survey was conducted with members of the campaign target group who were randomly selected from the market research companies panel of 40,000 Western Australians. For precision purposes, a minimum sample size of 385 surveys was needed to achieve 80% power at the 5% level of significance. The evaluation survey was based on previously established surveys (50, 74) and asked three demographic (i.e., gender, age group, and location) and five cognitive impact questions (two awareness and one comprehension, agreement, and intention question).

To measure awareness, each respondent was asked whether they "recalled seeing or hearing any health messages related to taking part in the arts for good mental health" (unprompted awareness), followed by if they had "seen or heard the message Good Arts, Good Mental Health[®]" (prompted awareness). Respondents were then asked, "What do you think the Good Arts, Good Mental Health® message means?" (comprehension). As this was the first time the media campaign had been run, all respondents were then informed, "Good Arts, Good Mental Health $^{\mathbb{R}}$ aims to encourage people to do arts activities that make them feel good for better mental wellbeing. This includes reading books, listening to music, playing a musical instrument, singing, dancing, going to a concert, woodwork, craft, sewing, pottery, painting, creative writing, coloring, and so much more." Respondents were then asked, "Do you agree with the Good Arts, Good Mental Health[®] message?" (acceptance/agreement) and "Does knowing about the Good Arts, Good Mental Health® message, make you think about doing something related to the message?" (intention). As a comparative benchmark, Australian campaigns have been found to achieve awareness levels between 4% and 98%, with an average of 58% (1, 6, 38, 48, 75, 76). As is the case with the GAGMH tagline, new health taglines with little to no TV advertising have been found to achieve message awareness of between 4% and 30% (the GAGMH awareness goal) (76). As a proportion of all respondents surveyed and as a subset of the behavioral cognitive hierarchy, on average, established WA health promotion campaigns (that include TV advertising) have been found to achieve comprehension levels of 74% (43% of total respondents surveyed), agreement of 92% (40% of total respondents surveyed), and intention to act of 41% (16% of total respondents surveyed) (48).

Analysis

The number, reach, and frequency of process evaluation analytics are reported as sourced from Spotify Ad Manager, Meta Ad Manager, Campaign Manager 360, service providers, and Google Analytics by the communication agency. The cognitive impact data were analyzed using IBM SPSS Statistic (Version



29). The analysis involved a descriptive investigation of the data followed by a chi-square analysis and pairwise comparisons using a Fisher's exact test to check for demographic differences. For reasons of transparency, respondent awareness, comprehension, agreement, and intention to act on the message were calculated as both a proportion of total respondents (n = 661) and a proportion of each preceding level in the cognitive impact hierarchy. The question about agreement asked for a yes/no response. The comprehension question was open-ended and coded as "correct" if respondents mentioned taking part in the arts activities that made them, or people in general feel good so as to promote, maintain, and/or improve their mental health/mental wellbeing. Respondents needed to mention both (1) the arts-in general or specific recreational arts activities, and (2) mental wellbeing outcomes, e.g., "Doing art can be good for mental health," "Do arts and crafts to be happy," and "Try arts for good mental health." Comprehension was coded as incorrect if the respondents reply was non-specific, they were unsure or did not know, e.g., "good for all" and "not sure." Comprehension was also coded as incorrect if respondents did not mention both arts engagement and mental wellbeing (e.g., "Doing arts") or mentioned "therapy," "art therapy," or mental illness (e.g., "Art provides therapy for mental health challenges"). The awareness and intention questions asked for a yes/no response and if "yes," respondents were asked to clarify which message(s) they saw or heard (awareness) and what they intended to do (intention). In this way, awareness and intention responses could be checked. It should be noted that intention could include responses related to the respondent (e.g., "Listening to music makes me happy so I could do that") and also encouraging others to engage in the arts to promote, maintain, and/or improve their mental wellbeing (e.g., family, co-workers, and friends). To increase reliability, all open-ended responses were reviewed and coded independently by the second author and a research assistant. To increase inter-rater reliability, before coding commenced, coders took part in a training exercise with the first author to ensure coding consistency. Any coding differences or disagreements were moderated and resolved by the first author via discussion with both the second author and research assistant.

Results

Process evaluation

Advertising reach and frequency varied by campaign channel (Table 1). Overall, the advertising reach was between 33% and 80% of the Western Australian (WA) population, (i.e., 33% = 948,106 Meta reach divided by the 2.9 million WA population which assumes other channels/platform reach was not mutually exclusive; 80% = 2,325,833 each platform reach taken as mutually exclusive divided by the 2.9 million WA population). On average, our advertising frequency was 7.3 across channels, which is high. The advertising cost-per-reach ranged from \$0 (free/organic media) to \$0.10 (radio). For paid media channels, the highest reach (948,106 people) and cost-per-reach (\$0.02) were delivered by Meta (Facebook, Instagram).

As a result of the campaign, a significant uplift in website users (x10) and events (x5) was seen during the campaign vs. the 4 weeks prior (Table 1). A direct word search was the leading method used by the general population to get to the campaign website. The number of users and website events continued to grow even



YOUR ARTS FOR YOUR MENTAL HEALTH



Good Mental Health[®]





YOU DON'T HAVE TO BE GOOD AT ART, FOR THE ARTS TO BE GOOD FOR YOU.

FIGURE 4 GAGMH poster.

Advertising channel/platform		Reach (estimated number of people who actually saw the content)		Frequency (estimated number of times a person was exposed to the content)	Impressions (exposure— number of times the channel has displayed the content)	Media, distrik (/Advertising oution cost \$AUD)	Cost per reach	
Radio		873,815		14.6	11,242,000	\$18,5 \$70	95 Regional ,000 Metro	0.10	
Spotify		218,957		7.8	1,700,400	:	\$12,530	0.06	
Meta		948,106		5.9	5,593,200	:	\$18,330	0.02	
Editorial		284,955		1.2	341,946		\$14,906	0.05	
Signage		_		_	-		\$562	-	
Organic media		-		_	-	\$0	(no cost)	0.00	
Agency fees, licenses		NA		NA	NA		\$17,574	NA	
Website	4 wee	ks prior to the ampaign	[(17	During the campaign August-14 Septembe	r) 1 month af campai	1 month after the campaign		Website cost (\$AUD)	
Users		614		6,722	7,940	7,940		\$29,870	
Total events	7,505		35,879		53,810	53,810			

TABLE 1 Process evaluation results*: GAGMH (Wave 1) reach, frequency, impressions, cost, and cost-per-reach by advertising channel/platform; Website users, events, and cost.

*WA population = 2.9 million people (63), campaign target group = WA adults 18–65 years, all genders, metropolitan, and regional areas; total cost = \$198,965; not reported or not known = -; not applicable, NA.

TABLE 2 Survey respondent demographic ($n = 661^*$).

Variable	Level	n	%	2021 Western Australian population% (***, ***)	Proportion of total respondents			
					Awareness	Comprehension	Agreement	Intention
Gender	Female	371	56%	50%	20%	55%	94%	52%
	Male	283	43%	50%	28%	41%	83%	28%
	Non-binary	7	1%	Not reported	29%	71%	100%	57%
					p = NS	<i>p</i> < 0.001	<i>p</i> < 0.001	<i>p</i> < 0.001
Age Group*	18-29 years	154	23%	23%	29%	46%	84%	33%
	30-49 years	309	47%	45%	24%	49%	90%	42%
	50–65 years 19	198	30%	32%	20%	53%	92%	47%
					p = NS	p = NS	p = 0.04	<i>p</i> = 0.03
Location	Metropolitan	514	78%	79%	26%	48%	88%	41%
	Regional	147	22%	21%	16%	52%	93%	43%
					p = 0.02	p = NS	p = NS	p = NS

*NB 18-65 years only (17 years and under, 66 years, and over excluded as not part of the campaign target group).

1 month after the campaign had finished (users x13 and events x7 compared to website use 4 weeks prior to the campaign).

Outcome evaluation (short term)

A total of 661 WA respondents took part in the campaign outcome evaluation. As shown in Table 2, respondents were representative of the WA population in terms of gender, age group, and location. Whether calculated as a proportion of total respondents or sub-set proportion of the cognitive hierarchy, one in four respondents (24%) were aware of the *Good Arts, Good Mental Health*[®] message (Table 3). As shown in Table 2, total awareness (unprompted plus prompted awareness) did not differ by gender or age group; however, people in the metropolitan area were significantly more likely to be aware of the message than those in regional areas (p < 0.02). Of those aware of the message, most indicated that they saw/heard the message via social media. Whether calculated as a proportion of total respondents or as a proportion within the cognitive hierarchy (i.e., those who were aware), comprehension of the message was 49% (Table 3). As a proportion of total respondents, agreement with the message was 89%. However, in terms of the cognitive hierarchy, of those

a. Proportion of total respondents				b. Cognitive impact hierarchy sub-set (proportion aware followed by subset analysis of each preceding level in the hierarchy)			
Variable	Level	n	%	Variable n		%	
Awareness	No	504	76	Awareness (of those surveyed)	157	24	
	Yes	157	24				
Comprehension	No	337	51	Comprehension (of those aware)	77/157	49	
	Yes	324	49				
Agreement	No	72	11	Agreement (of those aware and who comprehended)	75/77	97	
	Yes	589	89				
Intention	No	387	58	Intention (of those aware, comprehended and who agreed)	54/75	72	
	Yes	274	42				

TABLE 3 Cognitive impact of the GAGMH media campaign by (a) total respondents $n = 661^{\circ}$ and (b) sub-set analysis of each preceding level in the cognitive impact hierarchy n = 157.

*NB 18-65 years only (17 years and under, 66 years and over excluded as not part of the campaign target group).

who were aware and comprehended the message, agreement was 97%. As a proportion of total respondents, intention to act on the message was 42%; however, in terms of the cognitive hierarchy, of those who were aware, comprehended, and agreed with the message, intention to act was 72%. Overall, agreement and intention to act on the message significantly increased with age, while males were significantly less likely to comprehend, agree, or to form an intention to act on the message (Table 2).

Discussion

Since the 1980s, public health professionals in Australia have adopted many of the concepts and tools of commercial marketers including the use of large scale media campaigns to promote a health-related message (33). By documenting the *Good Arts, Good Mental Health*[®] media campaign and evaluation, this paper contributes to the public health, mental health, and arts-health literature as it increases knowledge of and provides insight about *how to plan, implement, and evaluate* an arts-mental health promotion media campaign for the general population. Mass media campaigns that encourage members of the general population to "shift" their behavior by encouraging actions that enhance wellbeing is a common health promotion strategy as this approach, at a population level, can benefit more people (overall) than targeting only specific groups within the population (35).

Process evaluation

Attempting to influence population-level thinking about arts engagement as a strategy for promoting and maintaining mental wellbeing requires interventions that can reach a large number of people at a relatively low cost (34). Overall, our campaign budget of AUD\$198,965 was very small compared to other population-level health promotion campaigns (e.g., 2015 Make Healthy Normal AUD\$3.5Million (6) and 2008–10 Find Thirty AUD\$1.8Million). Despite our budget limitations, and lack of TV advertising, the

process evaluation results suggest that the GAGMH campaign (Wave 1) was successfully implemented. As mentioned above, to achieve optimal population-level brand awareness, our "reach" goal was 36%-46% and our "frequency" goal was two to five exposures (68-72). Given this, our advertising reach can be rated as "good" given that we reached a minimum of 33% of the WA population, up to a maximum of 80% (if reach by channel/platform was taken as mutually exclusive). In comparison, campaign frequency could be considered as "very good" with an average of 7.3 across channels/platforms. If we err on the side of caution and assume our reach was 33%, to maximize reach in future waves of the campaign, it is suggested that a "frequency cap" at five exposures be implemented for Meta, Spotify, and radio. While not used in Wave 1 of the campaign, a frequency cap (79) would control how many times the target audience sees an arts-mental health advert during the campaign. With regard to effectiveness, a "good" cost-per-reach was suggested to be between \$0.20 and \$1.00 (73). In comparison, the GAGMH campaign cost-per-reach was found to be "very good" with an average cost-per-reach of \$0.05, with the best cost-perreach of \$0.02 delivered by Meta. As social media is ingrained in our daily lives, with high usage and ease of engagement, it is an attractive tool for health behavior communication efforts and promoting behavior change (80). As our findings suggest social media was the most effective method for promoting mental wellbeing via the arts, priority will be given to social media campaign investment for future waves of the campaign.

As a result of the success of the GAGMH campaign implementation, a significant uplift in website users and events was observed. It is interesting to note that even though Meta and Spotify had clickable, direct links to the GAGMH website, a direct word search via a search engine was the leading method used by the general population to access the GAGMH website. The general population tends to search for health information through search engines due to its convenience, accessibility, and decentralized nature (81). In comparison, reasons for social media clicks include enjoyment, incentives, pleasing others, and passing time, while non-clicks resulted from factors including lack of motivation, lack of time, technical constraints, not wanting to "train the algorithm" to display similar content, and privacy concerns (82). In terms of website direct word searches, the results of our study should be seen positively as radio and social media adverts are often a conversation starter that spark more in-depth interactions (e.g., web searches) (82). When this occurs, this could be seen as a more authentic signal of relational and cognitive investment in a campaign than interaction with one-click social media links (82).

Campaign outcomes

At a population level, public health media campaigns are an important strategy for informing large numbers of people about health research/evidence and health recommendations. Public health media campaigns are also essential for creating a strong social environment to encourage, enable, and reinforce a promoted message or to focus on the benefits (e.g., mental wellbeing) of community members adopting suggested health behaviors (i.e., arts engagement) (34, 83, 84). Our goal for the GAGMH campaign (Wave 1) was to achieve WA general population awareness between 4% and 30% (76). This was achieved. Whether calculated as a proportion of total respondents or sub-set within the cognitive hierarchy, one in four respondents (24%) were aware of the Good Arts, Good Mental Health® tagline. It should be noted that most respondents indicated they saw/heard the message via social media-this result also fits with our process evaluation results which found that the highest reach (948,000 people) was delivered by Meta. However, as outlined above, it is interesting that website visits mostly occurred via a direct word search. While awareness did not differ by gender or age group, respondents in the metropolitan area were significantly more likely to be aware of the message than those in regional areas. Possible explanations as to why this occurred include (1) scheduling and (2) differences in the promotion of visual, audio, and static assets across channels (1). Overall campaign scheduling focused on high-rating morning, drive-home, and weekend radio segments and popular social media and Spotify user times. In the metropolitan area, there was high contract compliance and engagement with radio stations/talent, whereas in some regional areas, scheduled "live radio reads" did not occur and possibly impacted awareness. As our advertising was scheduled during "peak times" when the media environment is crowded with other advertising messages (1), this too may have impacted awareness overall and in regional areas. There is also the possibility that differences in the promotion of campaign assets across channels impacted awareness. This is likely due to a higher proportion (79%) of the advertising budget being spent on the metropolitan area as this is where most of the WA population resides. In addition, a distribution company was hired to put up signage in the metropolitan area; however, due to distance and associated costs, this was not possible for regional areas. Future GAGMH campaigns should make a concerted effort to increase the regional reach of the message by directing a higher proportion of the advertising budget to target regional areas (e.g., via social media, local radio, and signage).

Established WA health promotion campaigns (with TV advertising) have been found to achieve average *comprehension*

levels of 43% of total respondents surveyed or 74% as a proportion of the cognitive hierarchy (i.e., the proportion of those who were aware and comprehended the message) (48). When compared to the literature average (43%) for total respondents, our campaign comprehension of 49% was higher than other WA health promotion campaigns. However, when compared to the literature average (74%) within the cognitive hierarchy, our message comprehension (49%) was found to be much lower. A possible explanation for comprehension of "other" WA health promotion messages being higher is due to years of prior exposure via media campaigns (that include TV advertising), event sponsorships, access to resources, learning, and engagement opportunities (48). In terms of the GAGMH campaign, this suggests that work still needs to be continued in terms of advertising, and at a ground level (sponsorships, resources, learning, and engagement opportunities) to increase both awareness and understanding of the GAGMH tagline and manifesto. It should be noted that when the openended comprehension responses were coded, of those respondents who were "aware but who did not comprehend the message," this was because most responses related to art therapy/therapies instead of recreational arts (see above definition for why this is different) or focused on mental illness rather than promoting, maintaining, and/or improving mental health/mental wellbeing. Before future campaigns are run, this outcome should be discussed with project partners to co-design solutions such as the stronger promotion of recreational arts definitions, distinctions, and arts activity options and to increase understanding of the arts-mental wellbeing (vs. illness) relationship.

As outlined above, as this was the first time the GAGMH media campaign had been run, after the comprehension questions, all respondents were informed: "Good Arts, Good Mental Health® aims to encourage people to do arts activities that makes them feel good for better mental wellbeing. This includes reading books, listening to music, playing a musical instrument, singing, dancing, going to a concert, woodwork, craft, sewing, pottery, painting, creative writing, coloring, and so much more." Respondents were then asked if they agreed with the message and if they intended to do something about the message. Established WA health promotion campaigns (that include TV advertising) have been found to achieve average agreement levels of 40% of the total respondents surveyed or 92% as a proportion of the cognitive hierarchy (i.e., the proportion of those who were aware, comprehended, and agreed with the message) (48). In comparison, general population agreement with our campaign for total respondents was 89%, and within the cognitive hierarchy it was 97%. When compared to the literature average for total respondents, the general population agreement with our campaign more than doubled that achieved by other WA health promotion campaigns. In addition, general population agreement within the cognitive hierarchy was also higher than that achieved on average by other WA health promotion campaigns. This likely indicates that the WA population is supportive of the GAGMH campaign. Given the campaign was co-designed in a respectful manner with the WA community and other project partners, this finding is not surprising, as a tagline and manifesto that is positive, solution focused, and designed by community, is more likely to translate, resonate, and be accepted by community (51, 85).

Intention to act on the GAGMH message was 42% of total respondents and 72% within the cognitive hierarchy (i.e., proportion who were aware, comprehended, agreed, and intended to act on the message). General population intention to act resulting from the GAGMH campaign was double the average intention received by other WA health promotion campaigns reported in the literature (16% total respondents and 41% cognitive hierarchy) (48). A possible reason for this is that positively framed messages that provide reasons, ways, increase confidence, and encourages people to "try" have been found to be effective (39). If reported intentions translate into behavioral action whereby more WA community members are engaging in the arts for their mental wellbeing, this is a particularly positive outcome for individual and community mental health. In addition, this is also a positive outcome for WA artists and arts organization, in terms of the potential for increased attendance, income, perceived community value of the arts, and artist wellbeing. It should be noted that for this campaign, agreement and intention to act on the message significantly increased with age, which is consistent with the literature for WA health promotion messages (48). In addition, males were significantly less likely to comprehend, agree, or to form an intention to act on the GAGMH message. The literature also suggests that males are less likely than females to adopt health enhancing behaviors or to recognize and seek help for mental health issues (86-88). Given this, to increase GAGMH translation among males and younger people, qualitative and quantitative research should be conducted with these target audiences to increase campaign effectiveness and inclusivity. In particular, research should be conducted to better understand whether or not GAGMH campaign assets appealed to them, if they have any specific preferences regarding imagery, language (e.g., humor, positive/negative words, solution/problem focused, and authenticity of the communication), mode of delivery (e.g., social media, radio, signage), and communication intensity (e.g., 15 or 30 second ads/reels), and if there are gender or age-specific barriers to arts engagement that need to be addressed (e.g., stereotypes, accessibility, location, cost, attitudes, beliefs, knowledge/skills, time, etc).

Good Arts, Good Mental Health (Wave1) was successful

Overall, GAGMH was successful as a population-level, artsmental health promotion message, with process and outcome targets achieved. In fact, the implementation and outcome results achieved were far beyond the expectations of the GAGMH team given our small advertising budget and the (land) size of Western Australia. A number of factors may have contributed to the success of the campaign. First, the collaboration between the GAGMH team, our project partners, and service providers was mutually respectful, inclusive, openly adapted to feedback, and came from a place of shared values toward empowering the general population to improve their mental wellbeing via the arts (51). Our project partners willingly assisted in the translation of our organic media (e.g., via posts/reposts, inclusion in their newsletters, and assistance with signage distribution) and our paid media via their channels which resulted in reach beyond what the GAGMH team could have achieved ourselves. Our service providers also delivered bonus, pro-bono value of AUD\$90,154 to the campaign via the provision of free radio advertising spots and social media posts. Show and talent integration by radio stations was also above expectations, for example, the breakfast team of one of the radio stations designed a fun and inclusive "GAGMH drawing challenge" that included the community, celebrities, sports stars, and in September 2024, the Australian Prime Minister, the Hon. Anthony Albanese MP (Figure 5).

Second, as suggested in the literature (46, 51, 89), formative research with partner organizations and the targeted audience was used to co-design the campaign development and was of particular benefit in guiding the selection of campaign assets, channels, imagery, language, and the distillation of research into a single clear message. We carefully defined the campaign target group and, when conducting our formative research, aimed to see "solutions" from the perspective of the target group, rather than from our role as arts-health research academics (51). To encourage behavior change, the creation of the GAGMH message and manifesto focused on target group lifestyles, budgets, attitudes, choice, mental wellbeing, helpful frames, and deeply held values (e.g., hedonism, stimulation, self-direction, and universalism) (51, 85). GAGMH's message and manifesto also aligned with a story structure that was positively framed and solution focused, rather than negative, fear, guilt, or problem focused (85). We presented a positive outcome (e.g., mental wellbeing, "good mental health") and addressed the issue of people thinking they needed a high level of artistic skill, talent, ability, or expertise to take part-this was highlighted in our formative research as a major barrier that undermine engagement in the arts. We addressed this in the manifesto by stating "you don't have to be good at art for the arts to be good for you." The GAGMH media campaign also empowered people to take action to achieve the promoted outcome (i.e., "do the arts activity that makes you feel good, try for two hours per week"). Importantly, the campaign acknowledged that every time a person is exposed to an issue related message, it is strengthened as a frame in their mind and therefore more likely to influence behavior by being activated the next time they think about that issue (85). Focusing therefore on negative myths or concepts (e.g., people thinking they are "bad" at art and people thinking they have to be an "expert" to do art) would have had the counterproductive effect of activating and strengthening the negative myths and concepts that GAGMH is trying to dispel. Third, the GAGMH campaign followed the "4 Ps" of marketing. That is, we made sure the right "Product" (i.e., the arts activity a person has a preference for and that makes them feel good) was available at the right "Price" (i.e., low cost, no cost activities promoted; arts dose/time suggested), in the right "Place" (i.e., community suggested channels, GAGMH website, and GAGMH social media), and was well "Promoted" (90). In addition, we also emphasized the mental wellbeing benefit (product benefit) of the arts rather than only promoting engagement in the arts (e.g., participation and attendance at events). For example, the social media tile for "reading" (see Figure 3) includes an image of someone reading, the word reading, but also highlights an evidence-based, mental wellbeing benefit of reading (i.e., "reading makes me feel relaxed") (83).



FIGURE 5

The Australian Prime Minister, the Hon. Anthony Albanese taking part in a GAGMH drawing challenge with Nathan, Nat and Shaun on Nova 93.7 radio (Note: the drawing is of the Prime Ministers dog 'Toto'). Photo Credit and Permission: Nova 93.7.

Strengths and limitations of this study

As Western Australia is representative of the broader Australian population (e.g., gender distribution, 5-year age groups, median age, population over 15 years, proportion born in Australia, household composition, average household size, employment, etc) (91), a strength of this study is that the findings are applicable and can be generalized to other Australian states/territories. In addition, the GAGMH campaign offers a promising model for population-level, mental health promotion in other countries, with similar health and socio-demographic profiles to Australia (e.g., New Zealand, Canada, United Kingdom, and various member states within the European Union) who are also facing similar mental health challenges in their general population. Other strengths of this study include the evaluation data being collected by an independent market research company, therefore reducing the possibility of researcher bias, and all open-ended responses being double-coded. Limitations of the evaluation reported in this study include the outcome data being selfreported and therefore subject to recall bias. Data on actual behavior change resulting from reported intentions were also not collected and therefore cannot be commented on but should be collected in future studies or waves of the campaign. In addition, our respondent comparisons only occurred in relation to gender, age group, and location. To better understand and increase campaign effectiveness and inclusivity, future studies or waves of the GAGMH campaign should consider extending the data collection and analysis to include other important demographic and effect modifying variables (e.g., education and income).

Conclusion

Population-level health communication via media campaigns aim to transmit public health concepts to large numbers of people and if implemented correctly can result in meaningful changes in community awareness, attitudes, and health behaviors (32). As longer running and more intensive campaigns are likely to be more effective than a single, one-off campaign (40), it is recommended that funding be sought so that a second wave of the GAGMH campaign can be run within the next 12 months. Future waves of the GAGMH campaign should aim to reinforce campaign awareness and also increase understanding of GAGMH concepts, focus more on the "arts-mental health dose," and extend the evaluation by measuring behavioral action. Future campaigns should promote activities (e.g., singing, reading, dancing), events (e.g., concerts, art exhibitions), and services (e.g., libraries, art classes, programs, workshops) and encourage arts-mental wellbeing policy and enviro-structural changes (e.g., allocated spaces and places for community arts to occur) (34).

Given that globally, mental health issues are increasing, the GAGMH campaign offers a promising model for populationlevel, arts-mental health promotion in Western Australia, other Australian states, and many other countries. The information contained in this study is useful to Public Health, Mental Health, and Arts-Health professionals in the planning, implementation, and evaluation of future population-level, arts-mental health promotion strategies, programs, and media campaigns. It is our view that there is substantial room for further arts-mental health research, evaluation, and translation to occur that explores and promotes the potential of the arts to positively impact community mental wellbeing.

Data availability statement

The datasets presented in this article are not readily available because secondary analysis of the data was not previously agreed to by respondents. Requests to access the datasets should be directed to A/Prof Christina Davies, christina.davies@uwa.edu.au.

Ethics statement

The studies involving humans were approved by the University of Western Australia Human Research Ethics Committee (2022/ET000140). The studies were conducted in accordance with the local legislation and institutional requirements. The participants provided their written informed consent to participate in this study.

Author contributions

CD: Funding acquisition, Formal analysis, Resources, Data curation, Writing – original draft, Visualization, Project

administration, Investigation, Conceptualization, Validation, Writing - review & editing, Methodology, Supervision. MP: Methodology, Writing - original draft, Data curation, Investigation, Visualization, Supervision, Formal analysis, Conceptualization, Resources, Validation, Writing - review & editing, Funding acquisition, Project administration. RC: Conceptualization, Writing - original draft, Investigation, Funding acquisition, Writing - review & editing, Methodology, Supervision, Project administration. RM: Methodology, Conceptualization, Writing - original draft, Writing - review & editing, Investigation, Funding acquisition. AT: Methodology, Project administration, Conceptualization, Writing - original draft, Visualization, Investigation, Resources, Writing - review & editing. MJ: Project administration, Resources, Writing - original draft, Writing - review & editing, Methodology, Visualization. MS: Writing - original draft, Funding acquisition, Writing - review & editing, Conceptualization, Methodology. TP: Conceptualization, Methodology, Validation, Project administration, Writing original draft, Funding acquisition, Writing - review & editing, Formal analysis. PW: Conceptualization, Methodology, Writing - original draft, Funding acquisition, Writing - review & editing. SG: Methodology, Conceptualization, Funding acquisition, Writing - review & editing, Writing - original draft. LB: Funding acquisition, Writing - review & editing, Writing - original draft, Methodology, Conceptualization. SC: Methodology, Writing review & editing, Conceptualization, Writing - original draft, Funding acquisition.

Funding

The author(s) declare that financial support was received for the research and/or publication of this article. This research was supported by the Western Australian Future Health Research and Innovation Fund, which is an initiative of the Western Australian State Government (TFMH2021Davies); the Ian Potter Foundation (31110974); Minderoo Foundation (2022/GR000916); the Department of Local Government, Sport and Cultural Industries (22-1380); and St John of God Health Care and CircuitWest.

Acknowledgments

We would like to thank our project partners and the people of Western Australian for their co-contribution in designing GAGMH and for taking part in the process and outcome evaluation. CD, MP, and MJ salaries and campaign costs were funded by the Western Australian Future Health Research and Innovation Fund, which is an initiative of the Western Australian State Government; The Ian Potter Foundation (31110974); Minderoo Foundation (2022/GR000916); the Department of Local Government, Sport and Cultural Industries (DLGSC); St John of God Health Care and CircuitWest. The authors would like to thank The Brand Agency for their campaign support and data collection, Thinkfield Market Research, for collecting the campaign outcome data, A/Prof Claire Hooker for her advice, Josh Haines for his marketing assistance, and Brid Phillips for her research assistance with initial community focus groups. We are also extremely grateful to members of the GAGMH consumer reference group and members of the GAGMH government mentor group (made up of the WA Department of Health, Mental Health Commission and the Department of Local Government, Sport and Cultural Industries) for their guidance.

Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

References

1. Leavy J, Rosenberg M, Bull F, Bauman AE. Who do we reach? Campaign evaluation of find thirty every daye using awareness profiles in a western Australian cohort. *J Health Commun.* (2014) 19:853–69. doi: 10.1080/10810730.2013.837560

2. Nutbeam D, Muscat D. *Health Promotion Glossary of Terms 2021*. Geneva: World Health Organization (2021). Available online at: https://www.who.int/publications/i/ item/9789240038349 (accessed December 4, 2022).

3. McGuire WJ. Public communication as a strategy for inducing health-promoting behavioral change. *Prevent Med.* (1984) 13:299–319. doi: 10.1016/0091-7435(84)90086-0

4. Think Mental Health. 'Be Positive. Be Connected. Be Active' Perth: Mental Health Commission - Government of Western Australia. (2020). Available online at: https:// www.thinkmentalhealthwa.com.au/think-mental-health/be-positive-be-connectedbe-active-campaign/ (accessed November 17, 2024).

5. Leavy JE, Rosenberg M, Bauman AE, Bull FC, Giles-Corti B, Shilton T, et al. Effects of find thirty every dayFC, Giles-Corti B, Shilton T, e-be-connected-be-active-campaign/vwide mass media campaign, 2008-2010. *Health Educ Behav.* (2013) 40:480–92. doi: 10.1177/1090198112459515

6. Kite J, Gale J, Grunseit A, Bellew W, Li V, Lloyd B, et al. Impact of the make healthy normal mass media campaign (Phase 1) on knowledge, attitudes and behaviours: a cohort study. *Aust N Z J Public Health.* (2018) 42::269–76. doi: 10.1111/1753-6405.12779

7. National Museum Australia. *Defining Moments: Life. Be in it.* Canberra: NMA (2022). Available online at: https://www.nma.gov.au/defining-moments/resources/ life-be-in-it-launch (accessed December 4, 2022).

8. Michalos AC. Arts and the quality of life: an exploratory study. Soc Indic Res. (2005) 71:11-59. doi: 10.1007/s11205-004-8013-3

9. Davies C, Knuiman M, Wright P, Rosenberg M. The art of being healthy: a qualitative study to develop a thematic framework for understanding the relationship between health and the arts. *BMJ Open.* (2014) 4:1–10. doi: 10.1136/bmjopen-2014-004790

10. Davies C, Knuiman M, Rosenberg M. The art of being mentally healthy: a study to quantify the relationship between recreational arts engagement and mental well-being in the general population. *BMC Public Health.* (2016) 16:15. doi: 10.1186/s12889-015-2672-7

11. Davies C, Pescud M, Anwar-McHenry J, Wright P. Arts, public health and the national arts and health framework: a lexicon for health professionals. *Aust N Z J Public Health*. (2016) 40:304–06. doi: 10.1111/1753-6405.12545

12. Australia Council for the Arts. Arts in Daily Life: Australian Participation in the Arts (2014). Retrieved from: https://creative.gov.au/research/arts-daily-life-arts-participation-survey-2014 (accessed July 5, 2014).

13. World Health Organization. Mental health Geneva: WHO (2022). Available online at: https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response (accessed December 4, 2022).

14. Australian Institute of Health and Welfare. *Mental Health Services in Australia.* (2020). Available online at: https://www.aihw.gov.au/reports/mental-health-services/ mental-health-services-in-australia/data (accessed October 12, 2020).

15. Davies C, Pescud M. The Arts, Creative Industries and Health: an Evidence Check Rapid Review brokered by the Sax Institute for The Victorian Health Promotion Foundation. New South Wales: Sax Institute (2020). p. 1–87.

Generative AI statement

The author(s) declare that no Gen AI was used in the creation of this manuscript.

Publisher's note

All claims expressed in this article are solely those of the authors and do not necessarily represent those of their affiliated organizations, or those of the publisher, the editors and the reviewers. Any product that may be evaluated in this article, or claim that may be made by its manufacturer, is not guaranteed or endorsed by the publisher.

16. Read RK, Mason OJ, Jones CJ. A randomised controlled trial (RCT) exploring the impact of a photography intervention on wellbeing and posttraumatic growth during the COVID-19 pandemic. *Arts Health.* (2022) 2:1–17. doi: 10.1080/17533015.2022.2107033

17. Martin L, Oepen R, Bauer K, Nottensteiner A, Mergheim K, Gruber H, et al. Creative arts interventions for stress management and prevention-a systematic review. *Behav Sci.* (2018) 8:28. doi: 10.3390/bs8020028

18. de Witte M, Spruit A, vanHooren S, Moonen X, Stams G-J. Effects of music interventions on stress-related outcomes: a systematic review and two meta-analyses. *Health Psychol Rev.* (2019) 15:1–31. doi: 10.1080/17437199.2019.1627897

19. Beauchet O, Cooper-Brown L, Hayashi Y, Deveault M, Launay CP. Improving the mental and physical health of older community-dwellers with a museum participatory art-based activity: results of a multicentre randomized controlled trial. *Aging Clin Exp Res.* (2022) 37:1645–54. doi: 10.1007/s40520-022-02139-3

20. Daykin N, Mansfield L, Meads C, Julier G, Tomlinson A, Payne A, et al. What works for wellbeing? A systematic review of wellbeing outcomes for music and singing in adults. *Perspect Public Health*. (2018) 138:39–46. doi: 10.1177/1757913917740391

21. World Health Organisation. *Mental Health: A State of Well-Being.* (2013). Available online at: https://www.who.int/news-room/facts-in-pictures/detail/mental-health (accessed August 10, 2014).

22. Australian Institute of Health and Welfare. Mental health Canberra: AIHW (2020). Available online at: https://www.aihw.gov.au/reports/australias-health/mental-health (accessed August 2, 2021).

23. WA Department of Health. Western Australian Burden of Disease Study 2015 East Perth: WA DoH. (2021). Available online at: https://ww2.health.wa.gov. au/Reports-and-publications/Western-Australian-Burden-of-Disease-Study-2015 (accessed October 17, 2021).

24. Australian Government - Productivity Commission. Report on Government Services 2024: Australian Government. (2024). Available online at: https://www. pc.gov.au/ongoing/report-on-government-services/2024/health/services-formental-health#:~:text=Nationally%20in%202021%2D22%2C%20aroundin%20the %20population%20(table%2013A) (accessed October 22, 2024).

25. Australian Institute of Health and Welfare. *Expenditure on Mental Health Services: Australian Government.* (2024). Available online at: https://www.aihw.gov.au/mental-health/topic-areas/expenditure (accessed October 22, 2024).

26. Davies C, Clift S. Arts and health glossary - a summary of definitions for use in research, policy and practice. *Front. Psychol.* (2022) 13:949685. doi: 10.3389/fpsyg.2022.949685

27. Davies C, Rosenberg M, Knuiman M, Ferguson R, Pikora T, Slatter N. Defining arts engagement for population-based health research: art forms, activities and level of engagement. *Arts Health.* (2012) 4:203–16. doi: 10.1080/17533015.2012.656201

28. American Art Therapy Association. *About Art Therapy Alexandria, VA AATA*. (2017). Available online at: https://arttherapy.org/about-art-therapy/ (accessed June 26, 2022).

29. Davies C. Healthy arts? Exploring the relationship between arts engagement and population health. Doctoral Thesis. Perth: The University of Western Australia (2015). Available online at: https://research-repository.uwa.edu.au/en/publications/healthy-arts-exploring-the-relationship-between-arts-engagement-a (accessed August 8, 2019).

30. Australia Council for the Arts. *Connecting Australians: Results of the National Arts Participation Survey* (2017). Available online at: https://creative.gov.au/research/connecting-australians-results-national-arts-participation-survey-june-2017 (accessed September 25, 2019).

31. Creative Australia. *Creating Value: Results of the National Arts Participation Survey Sydney: Australian Government.* (2023). Available online at: https://creative.gov. au/advocacy-and-research/creating-value/ (accessed September 24, 2023).

32. Centers for Disease Control Prevention. Best Practices for Comprehensive Tobacco Control Programs. Atlanta, USA: Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health (2014). Available online at: https://www.cdc.gov/tobacco/stateandcommunity/guides/pdfs/ 2014/introduction.pdf (accessed July 5, 2014).

33. Jalleh G, Donovan RJ, Giles-Corti B, Holman CDJ. Sponsorship: impact on brand awareness and brand attitudes. *Soc Market Quart.* (2002) 8:35– 45. doi: 10.1080/15245000212545

34. Cavill N, Bauman A. Changing the way people think about health-enhancing physical activity: do mass media campaigns have a role? *J Sports Sci.* (2004) 22:771–90. doi: 10.1080/02640410410001712467

35. Wakefield M, Loken B, Hornik R. Use of mass media campaigns to change health behaviour. *Lancet.* (2010) 376:1261–71. doi: 10.1016/S0140-6736(10)60809-4

36. Ananthapavan J, Tran HNQ, Morley B, Hart E, Kennington K, Stevens-Cutler J, et al. Cost-effectiveness of LiveLighter-effectiveness of LiveLig of ley B, Hart E, Kenninsity prevention. *PLoS ONE.* (2022) 17:e0274917. doi: 10.1371/journal.pone.0274917

37. Davies C, Pescud M, Phillips B, Stoneham M, Pikora T, Clifford R, et al. Australian Public Health Campaign Areas, Methods, Target Groups and Evaluation Results – A Rapid Review of the Literature. Perth, Western Australia: The University of Western Australia (2023). p. 1–13.

38. Morley B, Niven P, Dixon H, Swanson M, Szybiak M, Shilton T, et al. Populationbased evaluation of the 'LiveLighter' healthy weight and lifestyle mass media campaign. *Health Educ Res.* (2016) 31:121–35. doi: 10.1093/her/cyw009

39. Durkin S, Brennan E, Wakefield M. Optimising tobacco control campaigns within a changing media landscape and among priority populations. *Tob Control.* (2022) 31:284–91. doi: 10.1136/tobaccocontrol-2021-056558

40. Stead M, Angus K, Langley T, Katikireddi SV, Hinds K, Hilton S, et al. Mass media to communicate public health messages in six health topic areas: a systematic review and other reviews of the evidence. *Public Health Res.* (2019) 7:238. doi: 10.3310/phr07080

41. Mills C, Knuiman M, Rosenberg M, Wood L, Ferguson R. Are the arts an effective setting for promoting health messages? *Perspect Public Health.* (2013) 133:116–21. doi: 10.1177/1757913911419895

42. Bauman AE, Bellew B, Owen N, Vita P. Impact of an Australian mass media campaign targeting physical activity in 1998. *Am J Prev Med.* (2001) 21:41–7. doi: 10.1016/s0749-3797(01)00313-0

43. Davies C, Knuiman M, Pikora T, Rosenberg M. Health in arts: are arts settings better than sports settings for promoting anti-smoking messages? *Perspect Public Health*. (2013) 135:145–51. doi: 10.1177/1757913913502475

44. Ferguson R, Mills C, Rosenberg M. Sponsorship Monitor Evaluation Results 2008/2009. Perth: Health Promotion Evaluation Unit, The University of Western Australia (2009).

45. Mills C, Rosenberg M, Lovering L, Wood L, Teal R. The effectiveness of youth audience participation at dance performances to promote the "Be Active" physical activity message. UNESCO Observ J Multi-Discip Res Arts. (2011) 2:1–8.

46. Bauman A, Nutbeam D. Evaluation in a Nutshell: A Practical Guide to the Evaluation of Health Promotion Programs. (2nd Edn). Sydney, Australia: McGraw-Hill Education (2013).

47. Nutbeam D, Harris E. *Theory in a Nutshell: A Guide to Health Promotion Theory.* Sydney: McGraw-Hill (1999).

48. Rosenberg M, Ferguson R. Maintaining Relevance: An Evaluation of Health Message Sponsorship at Australian Community Sport and Arts Events BMC Public Health. (2014) 14:1-8. doi: 10.1186/1471-2458-14-1242

49. Holman CDAJ, Donovan RJ, Corti B. Evaluating projects funded by the Western Australian health promotion foundation: a systematic approach. *Health Promot Int.* (1993) 8:199–208. doi: 10.1093/heapro/8.3.199

50. Holman C, Donovan R, Corti B. Report of the Evaluation of the Western Australian Health Promotion Foundation. Perth: The University of Western Australia (1994). p. 1–347.

51. Davies C, Pescud M, Maury S, Sullivan D. A new perspective to an old problem -Mobilizing research into policy and practice using an arts and health case study. *Front Public Health.* (2024) 17:1392146. doi: 10.3389/fpubh.2024.1392146

52. Clift S, Camic P, editors. Oxford Textbook of Creative Arts, Health, and Wellbeing: International Perspectives on Practice, Policy and Research. Oxford: Oxford University Press (2016). 53. Zbranca R, Dâmaso M, Blaga O, Kiss K, Dascăl, Yakobson D, et al. CultureForHealth Report. Culture's contribution to health and well-being. A report on evidence and policy recommendations for Europe: CultureForHealth. *Cult Action Eur.* (2022) 1–193.

54. All-Party Parliamentary Group on Arts Health and Wellbeing. *Creative Health: The Arts for Health and Wellbeing (Short Report).* (2017). Available online at: http://www.artshealthandwellbeing.org.uk/appg-inquiry/ (accessed August 30, 2017).

55. A New Approach (ANA). Transformative: Impacts of Culture and Creativity Acton ACT: Produced by ANA Think Tank with Lead Delivery Partner the Australian Academy of the Humanities. (2019). Available online at: https://www.humanities.org. au/new-approach/report2/ (accessed June 27, 2020).

56. Department of Local Government Sport and Cultural Industries. *Creative WA:* A 10 year Vision to Grow and Sustain our Creative Ecosystem. Perth: Government of Western Australia, (2024). p. 60.

57. Commonwealth of Australia. *Revive: A Place for Every Story, A Story for Every Place – Australia's Cultural Policy for the Next Five Years.* Canberra: Australian Government (2023). Available online at: https://www.arts.gov.au/publications/ national-cultural-policy-revive-place-every-story-story-every-place (accessed March 29, 2023).

58. Australian Government. *Connected Lives: Creative Solutions to the Mental Health Crisis. Report on the Arts, Creativity and Mental Wellbeing Policy Development Program.* NSW: Australia Council for the Arts (2022).

59. Corbin JH, Sanmartino M, Hennessy EA, Urke HB, editors. Arts and Health Promotion: Tools and Bridges for Practice, Research, and Social Transformation. Switzerland: Springer Nature (2021).

60. Davies CR, Budgeon CA, Murray K, Hunter M, Knuiman M. The art of aging well: a study of the relationship between recreational arts engagement, general health and mental wellbeing in cohort of Australian older adults. *Front Public Health.* (2023) 11:1288760. doi: 10.3389/fpubh.2023.1288760

61. White M. Arts Development in Community Health: A Social Tonic. Oxon: Radcliffe Publishing (2009).

62. Conacher A, Fox C. Western Australia: Britannica (2024). Available online at: https://www.britannica.com/place/Western-Australia (accessed October 28, 2024).

63. Australian Bureau of Statistics. National, State and Territory Population: Statistics about the Population and Components of Change (Births, Deaths, Migration) for Australia and its States and Territories. Canberra: ABS, Commonwealth of Australia (2024). Available online at: https://www.abs.gov.au/statistics/people/population/ national-state-and-territory-population/latest-release (accessed February 19, 2025).

64. Seligman M, Csikszentmihalyi M. Positive psychology: an introduction. Am Psychol. (2000) 55:5–14. doi: 10.1037//0003-066X.55.1.5

65. Ajzen I. The theory of planned behavior. *Organ Behav Hum Decis Process.* (1991) 50:179–211. doi: 10.1016/0749-5978(91)90020-T

66. Krieger N. Theories for social epidemiology in the 21st century: an ecosocial perspective. *Int J Epidemiol.* (2001) 30:668–77. doi: 10.1093/ije/30.4.668

67. Australia Council for the Arts. More Than Bums on Seats: Australian Participation in the Arts. Canberra: Australia Council for the Arts (2010).

68. Danaher PJ, Lee J, Kerbache L. Optimal internet media selection. Market Sci. (2010) 29:336-47. doi: 10.1287/mksc.1090.0507

69. Danaher P, Rust R. Determining the optimal return on investment for an advertising campaign. *Eur J Oper Res.* (1996) 95:511–21. doi: 10.1016/0377-2217(95)00319-3

70. Krugman E. Why Three Exposures May Be Enough. Consumer Behavior and Advertising Involvement: Selected Works of Herbert E Krugman. New York: Taylor & Francis Group (2008). p. 133–38.

71. Krugman H. Why three exposures may be enough. J Advert Res. (1972) 12:11-4.

72. Zanuddin H. Media impact: effectiveness of reach & frequency in media buying pattern and audience analysis. *Malays J Media Stud.* (2004) 6:25–37.

73. Agency Analytics. Cost per Reach Toronto, Canada: AA (2024). Available online at: https://agencyanalytics.com/kpi-definitions/cost-per-reach (accessed October 28, 2024).

74. Holman CDJ, Donovan RJ, Corti B, Jalleh G, Frizzell SK, Carroll AM. Evaluating projects funded by the western Australian health promotion foundation: first results. *Health Promot Int*. (1996) 11:75–88. doi: 10.1093/heapro/11.2.75

75. Morley B, Wakefield M, Dunlop S, Hill D. Impact of a mass media campaign linking abdominal obesity and cancer: a natural exposure evaluation. *Health Educ Res.* (2009) 24:1069–79. doi: 10.1093/her/cyp034

76. Pettigrew S, Pescud M, Rosenberg M, Ferguson R. Western Australian' Awareness of Health Messages and Their Related Behaviours. Crawley: Health Promotion Evaluation Unit, The University of Western Australia (2012).

77. Australian Bureau of Statistics. Western Australia - 2021 Census All persons QuickStats Belconnen ACT ABS. (2021). Available online at: https://www.abs.gov.au/ census/find-census-data/quickstats/2021/5 (accessed October 28, 2024).

78. Australian Bureau of Statistics. *Census data by topic Belconnen ACT: ABS.* (2021). Available online at: https://www.abs.gov.au/census/find-census-data/census-data-topic (accessed October 28, 2024).

79. Meta Business Help Centre. *Choose the Right Frequency Cap for Your Reach and Frequency Campaign California*. US: Meta (2024). Available online at: https://www.facebook.com/business/help/1461336133922536?id=842420845959022 (accessed November 24, 2024).

80. Maher C, Ryan J, Kernot J, Podsiadly J, Keenihan S. Social media and applications to health behavior. *Curr Opin Psychol.* (2016) 9:50–5. doi: 10.1016/j.copsyc.2015.10.021

81. Chiu Y, Tsai C, Liang J. Laypeople's online health information search strategies and use for health-related problems: cross-sectional survey. *J Med Internet Res.* (2022) 24:e29609. doi: 10.2196/29609

82. Ellison NB, Triệu P, Schoenebeck S, Brewer R, Israni A. Why we don't click: interrogating the relationship between viewing and clicking in social media contexts by exploring the "non-click". *J Comput Mediated Commun.* (2020) 25:402–26. doi: 10.1093/jcmc/zmaa013

83. Maibach E, Rothschild M, Novelli W. Social marketing. In: K. Glanz FRaFML, editor. *Health Behavior and Health Education*, 3rd Edn. St. Louis, MO: Mosby (2002). p. 437–61.

84. Donovan R, Owen N. Social marketing and population interventions. In: Dishman RK, editor. *Advances in Exercise Adherence*. Champaign, IL: Human Kinetics (1994). p. 249–90.

85. Common Cause Australia. Healthy persuasion: A message guide for health promotion practitioners. VicHealth. Victoria, Australia (2019). p. 1–24.

86. Australian Institute of health and Welfare. The health of Australia's males Canberra: AIHW (2023). Available online at: https://www.aihw.gov. au/reports/men-women/male-health/contents/how-healthy (accessed May 10, 2025).

87. Seaton CL, Bottorff JL, Caperchione CM, Johnson ST, Oliffe JL. The association between men's heath behaviors and interest in workplace health promotion. *Workplace Health Safety.* (2020) 68:226–35. doi: 10.1177/216507991988 5957

88. Duthie G, Reavley N, Wright J, Morgan A. The impact of media-based mental health campaigns on male help-seeking: a systematic review. *Health Promot Int.* (2024) 39:daae104. doi: 10.1093/heapro/daae104

89. Kite J, Grunseit A, Bohn-Goldbaum E, Bellew B, Carroll T, Bauman A. A systematic search and review of adult-targeted overweight and obesity prevention mass media campaigns and their evaluation: 2000-2017. J Health Commun. (2018) 23:207–32. doi: 10.1080/10810730.2018.1423651

90. McCarthy J. Basic Marketing. A Managerial Approach Homewood, IL: Irwin (1964).

91. Informed decisions. *Australia - Community profile Collingwood, VIC PEXA.* (2024). Available online at: https://profile.id.com.au/australia (accessed May 10, 2025).