

THE PINNAROO PROJECT

ART – COMMUNITY – HEALTH

Community Report
2021 - 2023



**Collaborative arts in health
project of Mallee Arts and
the Caring Futures Institute,
Flinders University**

Supported by



**Flinders
University**





Acknowledgements

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Acknowledgement of Country

The Pinnaroo Project was conducted on the traditional lands of the Ngarkat people (Pinnaroo) and the Kaurna people (Flinders University, Adelaide). We acknowledge and pay respects to the Ngarkat people as the traditional custodians of the lands of Pinnaroo and surrounding Mallee region and the Kaurna people as the traditional custodians of the lands of the Adelaide region.

We also acknowledge the deep feelings of attachment and the relationship of the Ngarkat & Kaurna peoples to their Place. We pay our respects to the ancestors and the current living Ngarkat & Kaurna peoples. We acknowledge that the Ngarkat & Kaurna peoples also have creative arts and cultural activities as an integral part of their daily life and culture.

Suggested Citation

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Introduction

ART

The making of art can be as important to your health as balanced nutrition, regular exercise, or meditation. Scientists globally have produced evidence detailing the value of arts to improve individual and community health. The Pinnaroo Project aimed to support this evidence by measuring the impact of art on the health and well-being of a regional town in South Australia. A series of workshops and events encouraged the community to take part in arts and create a connection with their health.

COMMUNITY

The Pinnaroo community has pro-active and ambitious residents – in relation to arts but also in relation to health and the local economy. Health and art already play a part through the community with the established Mallee Arts, Pinnaroo Community Inc and Pinnaroo Fitness, Health and Wellness. It does, however, like many other regional

areas, fall victim to the shortfalls of health services in rural and remote Australia. All of this makes Pinnaroo perfectly positioned and suited to bring this exciting research project to life.

HEALTH

The focus of the Pinnaroo Project was to address limited access to health services. The initiative aimed to improve the health and wellbeing of the Pinnaroo community. Participants in The Pinnaroo Project completed questionnaires about their health and lifestyle and undertook a brief set of clinical measurements. These were collected from the community throughout the 3-year evaluation period of the project. The Pinnaroo Project hoped to have significant improvements in the communities' health and wellbeing without medical interventions.



Figure 1: Pinnaroo township aerial photo

Arts in health

Although visual art that is witnessed through our sense of sight is most common, art can appeal to our other senses as well, such as our auditory or tactile perceptions, and so visual art expression can include, music, and other forms of creative expression, such as dance and writing. (2)

Some philosophers suggest that the purpose of art is to promote reflection and thinking. That is, the process of introspection and contemplation to generate the piece of art and to appreciate it, are more important than the artefact itself. (3)

Art can uplift, provoke, soothe, entertain, educate and is an important part of the human condition.

Arts in health (also sometimes referred to as arts in medicine or arts in healthcare) is a diverse, multidisciplinary field dedicated to transforming health and the healthcare experience through participation in the arts. (2) Art can enhance cognitive abilities and memory for people with serious brain disorders, such as dementia and Alzheimer's disease (4) and alleviate depression, improve quality of life and self-esteem. (5)



Figure 2: ANZAC Day welded poppies

Humanising and beautifying an environment through art can reduce anxiety and depression while improving general wellbeing. (2) Participation in art can assist people to express emotions that would otherwise be difficult to verbalise (6), which is especially relevant for children who may not have yet developed sophisticated communication skills (7). The arts

can also help make health professionals become more thoughtful and listen carefully to a patient's narrative of their symptoms, and this allows them to make a more informed diagnosis. (8) Open communication between health professionals and patients using art helps to understand the lived experience of patients when communication through language maybe difficult.

What is the evidence to support the effects of arts in health?

The use of art and cultural activities to improve, sustain and promote health has been widely scientifically tested in a variety of health settings globally for many decades. Studies show creative expression helps maintain our immune systems and that art is clinically proven to reduce stress, elevate mood, and lower blood pressure and heart rate. (9) Patients who are exposed to art during a hospital stay heal quicker and have a better overall experience. (10)



Figure 3: Pinnaroo hospital mural

A 2010 systematic review by Stuckey and Noble considered more than 100 studies and concluded that creative expression has a powerful impact on the health and wellbeing of various patient populations. (2) The majority of these studies found that participation and/or engagement in the arts has a variety of positive outcomes, including a decrease in depressive symptoms, an increase in

positive emotions, reduction in stress responses, and, in some cases, improvements in immune system functioning.

A study conducted in Western Australia during 2011 and 2012 investigated the relationship between arts engagement and mental well-being in the general population. (11) Seven hundred adults were randomly selected to participate in a 15-minute health assessment with the dependent variable being mental well-being, and the independent variable being hours engaged in arts in the preceding 12 months. Participants with an elevated level of arts engagement had higher average mental wellbeing scores than those who did not engage in the arts or who had low or medium levels of engagement, demonstrating an arts-mental health relationship.

Another study which was a randomized control trial conducted among people aged over 65 years in Washington DC found a significant difference between the arts group and non-arts groups in all measures. (12) The intervention consisted of weekly participation in a professionally conducted chorale (singing group) for 30 weeks. After 12 months, participants' general health, health services utilisation, mental health and social engagement were assessed.



Figure 4: Pinnaroo creative arts workshop

This study reported that people participating in the singing group had improved self-rated health overall, fewer GP visits, and fewer falls than the control group.

These research studies are examples that demonstrate that there is long standing, scientific evidence of the effectiveness of art to build health, wellbeing, and positive self-care practices through engaging in creative artistic experiences. (9-12)



Figure 5: Pinnaroo creative flower workshop

Art can uplift, provoke, soothe, entertain, educate and is an important part of the human condition.

Creative expression helps maintain our immune systems that art is clinically proven to reduce stress, elevate mood and lower blood pressure and heart rate.

The Pinnaroo Arts in Health Project - About Pinnaroo

Pinnaroo is a town in the Murray Mallee region of South Australia, 243 km (approx. 3 hour drive) east of Adelaide, and 6.5 km from the Victorian border.

The town is situated on the traditional Lands of the Ngarkat people and was first settled by Europeans in 1869. At the 2021 census, the locality of Pinnaroo had a population of 768, with 575 living in and around its town centre, but with a larger surrounding total mallee community of 2,223 that includes Lameroo, Parilla, and Murrayville. (13) Pinnaroo is classified as a remote community under the Modified Monash Model Australian Statistical Geography Standard – Remoteness Areas (Category MM6). This indicates that the area has a small population and limited access to services. (14)

Pinnaroo is a farming community, a regional centre for the surrounding wheat, barley, sheep, and mixed farming area including turf and ancient grains. Potato production has been a large-scale primary output since the 1990s. The Pinnaroo Primary School is the only primary school within 30km of the town, and many people in the farming community frequent Pinnaroo for shopping, work, and sporting activities. As such, the catchment area for this study extended in a wide radius, including into Victoria.

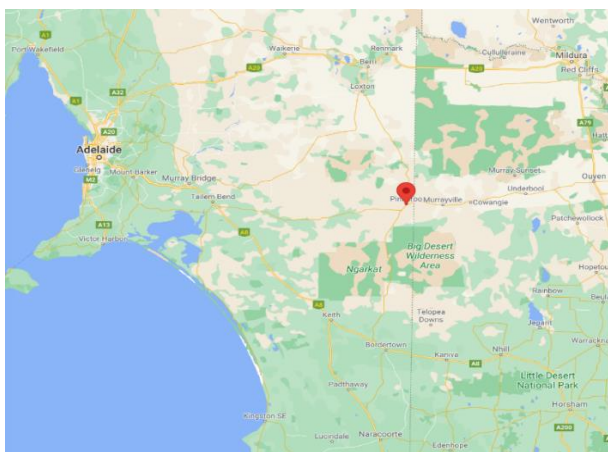


Figure 6: Map of Pinnaroo location

The town's name is derived from a word for "big man" in the Ngarkat peoples' language. Over the past two decades the town has experienced impact from drought, bushfire, external migration and more recently the COVID pandemic.

In 2020, Pinnaroo was named Ag-Town of the Year (15); an award driven by the town's collective capacity for creativity and innovation. Residents have conceived and managed several successful projects including the opening of a community gymnasium, development of a wetland near the town centre, and an upgrade to the main street and the Village Green Project.



Figure 7: Modern Pinnaroo farming family growing red lentils

Due to its remoteness, locally available health services are limited. A part-time General Practitioner consults at the Mallee Medical Practice, and a Victorian-based Nurse Practitioner provides clinical services, the Mallee Border Health Service. The Pinnaroo Soldiers Memorial Hospital which provides an emergency room and aged care facility is a nurse-run service, and the local Pharmacist is only available three half days per week. There are no regular specialist health services available locally.

The Pinnaroo Project

To reduce reliance on health services and to help improve the health and wellbeing of the wider community, residents, together with the Mallee Arts Group conceived the Pinnaroo Project, an arts and cultural engagement project to support health and wellbeing. Details and communication of the project to the community were established via a website and facebook.

The Pinnaroo Project website:
<https://thepinnaroo-project.com.au>

The Pinnaroo Project facebook page:
<https://www.facebook.com/thepinnaroo-project>

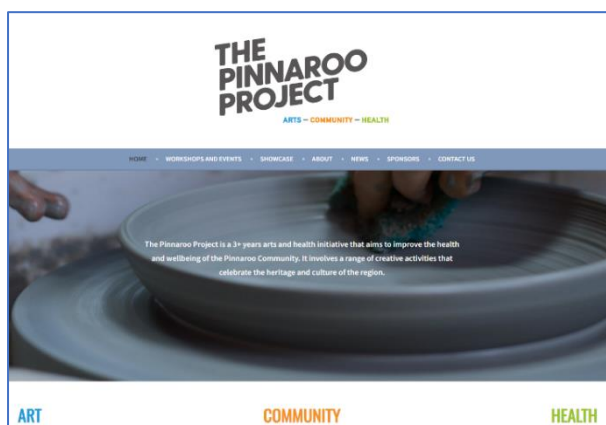


Figure 8: The Pinnaroo Project Website

In addition, The Pinnaroo Project partnered with experts in community art and cultural development (led by Maz McGann, Facilitator/Consultant/Adviser Arts, Culture, Heritage, and Community-Play Your Part) to build a professional framework for improving health in the context of limited access to health services. The partnership also included the Flinders University Caring Futures Institute to help measure the health outcomes of the project. A key outcome of The Pinnaroo Project was to develop a model that could be used in other communities to evaluate arts in health projects.

The Pinnaroo Project / Mallee Arts Committee

The project was managed by The Pinnaroo Project Association Inc Steering Group.

- Jullie Wallis (co-chair)
- Debrah Colwill (co-chair)
- Ali Krollig
- Rebecca Boseley
- Rebecca Niejalke
- Di Thornton
- Jill Nichols
- Caroline Forste

The Creative Committee of The Pinnaroo Project were responsible for program direction and activities. Members included the Steering Group plus the following:

- Maz McGann, Principal, Play Your Part
- Morrison Polkinghorne, co-coordinator Pinnaroo Hub
- Elise Kennedy, co-coordinator Pinnaroo Hub
- Tracey Daniel



Figure 9: Main street of the town of Pinnaroo (2023)

“Good way to learn new skills and connect with people in the community”. - Participant

Artistic Principles

Community Arts and Cultural Development was the core artistic principle for The Pinnaroo Project. This positioned art and cultural activity as a vehicle for improving health and wellbeing with the following artistic principles embedded within the project:

- **Quality** – the activities would maintain a high level of artistic integrity and the quality of the work produced across all art-forms would be of an exceptional standard.
- **Collaboration** – professional practicing artists and cultural workers would work collaboratively with the community.
- **Participation** – community members would be actively involved in the creation of art and the development of artistic skills from a participatory perspective.
- **Authenticity** – the activities would be aligned with the nature and identity of the Pinnaroo community.

The structure of the project from an artistic perspective included two layers; 1) an artistic foundation that reflects the ambition and culture of the community, and 2) a series of individual activities underpinned and connected by the foundation but with shorter-term outcomes.

This structure enabled big picture, longer term thinking but for participants to enjoy shorter term results and the development of skills. Each of the individual initiatives fed into the artistic foundation, linked by shared themes and concepts, which were periodically celebrated and showcased throughout the project.

The themes that informed the artistic foundation were developed by the Artistic Director in collaboration with the community. For example, a series of song writing, and music workshops up-skilled community members, but with a local choir then established. Participants in the activities were encouraged to use their skills to write and perform songs that convey local stories and align with the thematic foundation, which then formed

part of a larger performance or community celebration. A range of workshops were conducted over the 3 years including lantern making, leather work, pottery and Indigenous weaving with experts coming from far and wide. Participants were recruited by signing up through the Art Studio (The Hub), Facebook and local paper.



Figure 10: Photography workshop

The Pinnaroo Project Evaluation (Flinders University)

Aim

To achieve the aims of The Pinnaroo Project, a team from the Flinders University Caring Futures Institute and Arts in Health Alliance, were engaged to evaluate the impact of art and health by co-developing with the community, a model for collecting and analysing data related to health and wellbeing risk factors, with a focus on cardiovascular and mental health. The research, combined with the development of an evaluation model, provided opportunities to influence funding, policy and program development across arts and health sectors internationally.

“Was feeling stressed on arrival and enjoyed the creativity & connection”. - Participant

Objectives

The Pinnaroo Project and Flinders University evaluation project (2021-2023) objectives were to:

1. Describe the attendance and participant reported experiences of a range of art and creative activities increasing the community's capacity for problem solving, innovation, and self-expression.
2. Measure the impact on the health and wellbeing within the community living in and around the town of Pinnaroo, including improved lifestyle choices, self-care, and reduced reliance on medical services.
3. Provide evidence to the Pinnaroo community about how participating in art can affect their health and offer opportunities to foster empowerment within the region. This study evaluated the association between participation in one or more art activities and changes in mental health and cardiovascular health, at community level.
4. To produce a robust model for evaluating community art projects and their impact on mental and physical health that can be applied to other, regional, remote, and metropolitan locations.
5. To evaluate the economic community value of the arts in health project including the economic footprint of the program in the region (i.e. the expenditure it creates in the region).

The Pinnaroo Project Flinders University Research team

Professor Robyn Clark was project lead. Prof Clark was the Mathew Flinders Professor of Acute Care & Cardiovascular Research, Flinders University Caring Futures Institute & Clinical Chair & Director of Nursing and Midwifery Research Southern Adelaide Health Network (SALHN) Robyn is a former Heart Foundation Future Leader Fellow and is internationally recognised for research

related to effective CVD management of Australia's most disadvantaged populations.

Project managers included Sara Noonan and Prof Jeffrey Fuller.

Sara Noonan (2021-2022) is a registered nurse and health researcher. Sara has a strong background in rheumatic heart disease research and public health.

Emeritus Prof Jeff Fuller (2023) is a registered nurse and health researcher. Jeff has a long background in community and public health with a focus on rural and mental health.

Rebecca Niejalke is a Pinnaroo Registered Nurse and Fitness Instructor, Farm manager, Mother and member of The Pinnaroo Project Arts in Health Team.

Dr Aarti Gulyani is a senior biostatistician with the Caring Futures Institute, College of Nursing & Health Sciences, Flinders University.



Figure 11: 2023 Flinders research team at the Pinnaroo Art Hub in the town centre

Megan Miranda was a third-year student in the Bachelor of Health Sciences, Flinders University. She completed a 1-month internship with the research team, assisting with the production of the final report and preparation of a manuscript for publication.

Dr Sean Williams is an award-winning, #1 *New York Times*-bestselling author of fifty novels and

over one hundred and twenty short stories for adults, young adults, and children. He is an affiliate of the J. M. Coetzee Centre for Creative Practice and has taught for Clarion South and other institutions.

Maz McGann led the Pinnaroo Project development; she oversees progress and provides advice relating to all aspects of the project. She has extensive experience consulting across a range of areas including cultural development, arts and health, tourism, and community development. Maz is a skilled facilitator and strategic planner who works with community groups to conceive, plan, and evaluate projects and research activities.

Professor Alex Brown is not only a passionate artist who strongly believes in the concepts presented in this project but has also established an important extensive research program centered on chronic disease in vulnerable communities, with a particular focus on outlining and overcoming health disparities.

Dr Matthew Wallen is a Senior Research Fellow in Cancer Survivorship, the Deputy Lead of the Cancer Survivorship Program, and a Senior Lecturer in Exercise Science and Clinical Exercise Physiology within the College of Nursing and Health Sciences at Flinders University. He has a particular interest in the different ways of delivering exercise using mobile health, telehealth and wearable technology.

Allied Health and Nursing Students from Flinders University helped with health and wellness screening as a clinical placement experience and community service.

Scientists from the Integrated Cardiac Clinical Network (ICNet SA Health) 2023. (See Table 1)

Prof Alison Kitson Vice-President and Executive Dean & Matthew Flinders Distinguished Professor College of Nursing and Health Sciences. Prof Kitson believes arts are powerful methods of

enhancing social engagement and well-being in older adulthood and evidence about arts utility in translating knowledge about ageing and related processes is emerging but poorly understood.



Figure 12: Health assessments at Pinnaroo football club (2021)

Barry Burgan Health_Economic Research Consultant, and Professor of Management, Associate Dean Development, MBA Director BBT MBA at Bond University. While working broadly in infrastructure economics (transport, energy, property), Barry has a specific interest in evaluation, investment, financing and management as it applies to cultural infrastructure - including the arts and sports sectors - and has worked closely with groups like the Screen Producers Association of Aust, Aust Film Television Radio School, South Australian Film Commission and the Australian Music Association.

The impact of art and health by co-developing with the community was evaluated using a model for collecting and analysing data related to health and wellbeing risk factors, with a focus on cardiovascular and mental health.

Table 1: Flinders University research teams

	2021	2022	2023
Academic & Health Service Staff	Prof Robyn Clark RN Sara Noonan Dr Matthew Wallen Dr Matthew Ankers	Prof Robyn Clark RN Sara Noonan Prof Jeroen Hendricks Dr Vincent Pearson Dr Shabnam Kashef	Prof Robyn Clark Prof (Emeritus) Jeff Fuller Edbert Lim (ICCN Net SA Health) Stuart Cassidy (ICCN Net SA Health) Julia Romano (ICCN Net SA Health) Igor Ferreira (ICCN Net SA Health)
Student Volunteers	Jamie Culross Felicity Ellis Heidi Freund	Jamie Culross Felicity Ellis Orathai Suebkinorn	Kaleah Dollman Orathai Suebkinorn

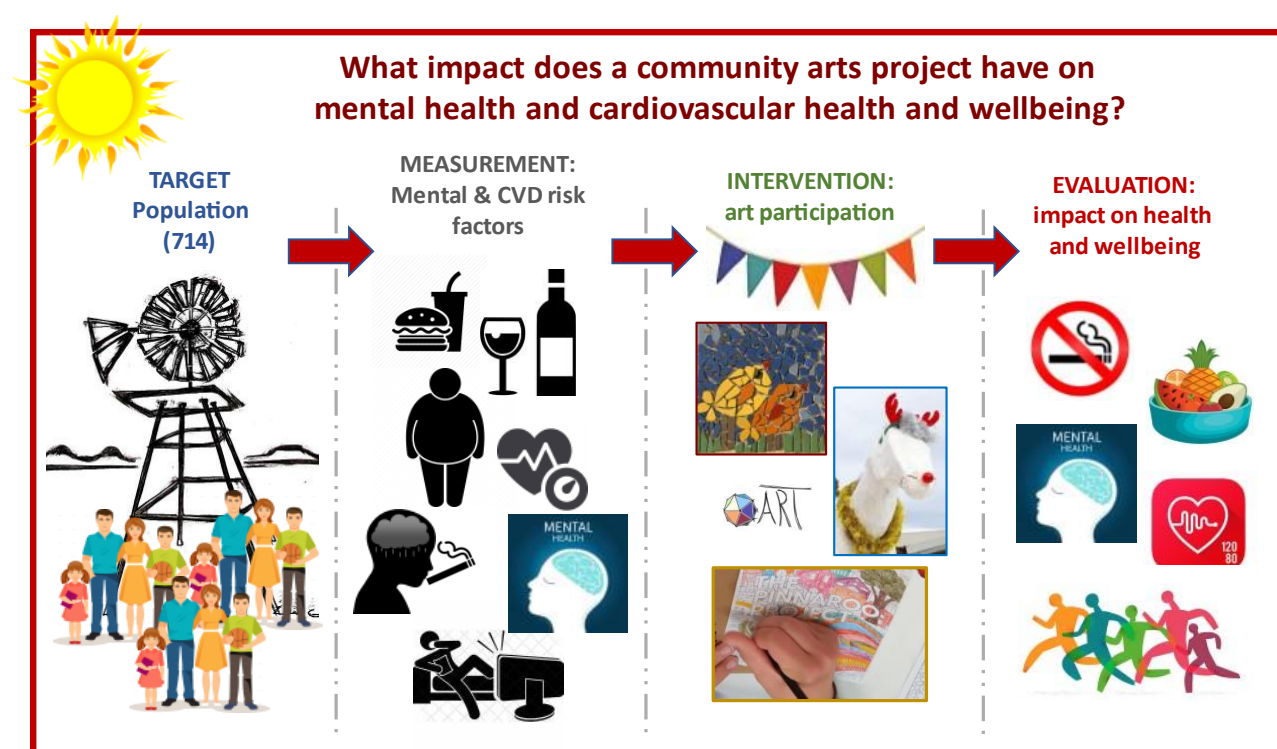


Figure 13: Infographic of the steps in the research process

Methods

Study Design

This study used a prospective longitudinal, cross sectional observational design.

Setting

As described, Pinnaroo is a town in the Murray Mallee region of South Australia, near the border with Victoria, 243 km (approx. 3 hour drive) east of Adelaide.

At the 2021 census, the locality of Pinnaroo had a population of 768, with 575 living in and around its town centre, but with a larger surrounding total mallee community of 2,223 that includes Lameroo, Parilla and Murrayville. Pinnaroo is classified as a remote community under the Modified Monash Model Australian Statistical Geography Standard – Remoteness Areas. Data was collected in person, over 3 years usually in 3 visits from August to October between lockdowns, school holidays and harvest.

Participants, Recruitment and Consent

All residents living in and around Pinnaroo or the Mallee district aged eight years and over were eligible to participate in the health assessment on a voluntary basis, regardless of their involvement in the arts projects.

Eight years was the limit for children as art activities for children were focused to this age group and above.

All participants consented (Electronic or Paper) to participate, and for the aggregation of their data to be used in analysis of the community outcomes of the study. Children aged less than 18 years participated with parental consent. Recruitment for this study was conducted by local Pinnaroo Project Steering Committee members through

local advertising and social media. Recruitment sought to stratify recruitment to match the demographic profile of the community in line with the ABS data 2021. Recruitment sites included workplaces, community centres, schools, library, health services, sporting, and social clubs.

Aboriginal and Torres Strait Islander Residents and Project Support

In 2021 the ABS Reported 4 persons who identified as an Aboriginal and Torres Islanders. The Team was honoured to be invited to the home of a local elder where the student volunteers were introduced and details of the health assessment for the Arts in Health Project were presented. The team was also privileged to be shown some of the amazing private art collect of Auntie Eileen's son. The project was given endorsement, and the project leader gave the assurance the any Aboriginal people who participated would have their information protected by aggregating with the communities' data.

Variables

The primary outcome of The Pinnaroo Project was determined by the community for this project. The community consensus was to determine whether the art and cultural activities would have a positive impact on mental health and wellness.

Secondary outcomes included improved community-wide impact on health risk factors, improvement in quality of life and reduction in healthcare utilisation and attendance and participant reported experiences (satisfaction) with art and creative activities.

Data sources / Measurements

Co-design and Face Validity Testing

Questionnaires and data collection measures were co-designed with the community, research team, university experts and The Pinnaroo Project Steering Group. Feedback about the time to complete, sensitivity and appropriateness of some questionnaires was given. Demographic, clinical history, anthropometric measures and questionnaires measuring health and wellness were face validity tested in the community by volunteers from the council, Turf Farm and at the primary school prior to the project commencing.

Three age-appropriate questionnaires and assessment models were developed; for children aged eight to 13 years, teens aged 14 to 17 years, and adults aged 18 years and over. The final set health assessment tools were presented on paper or in a Qualtrics App™ on iPad.

Data were uploaded to the secure health assessment platform within the Flinders University Fire Wall. Time to completion for participants including children was on average 7-11 minutes. Screening time for each participation was designed to last no longer than 15-30 minutes.

The following validated research tools were used for this study.

Adult questionnaires

- PHQ 2 & 9 (depression scores)
- The Adherence in Chronic Diseases Scale (medication adherence)
- BRIEF: Health Literacy Screening Tool
- International Physical Activity Questionnaire (short form)
- EQ-5D-5L (quality of life measure)

Data were also collected on the following:

- Demographic factors including time lived in the Mallee region

- Family and personal medical history
- Current medications
- Anthropometric measurements (e.g., girth, BMI, BP, cholesterol, BSL)
- Alcohol, smoking, illegal drug use and nutrition taken from validated questionnaires and Heart Foundation recommendations
- Physical activity
- Healthy eating
- Health service utilisation.

Teen and child questionnaires

- Strengths and difficulties questionnaire (mental health)
- Physical activity and healthy eating taken from validated paediatric questionnaires.



Figure 14: Happy locals having a health check

Ethics

Ethics approval was received from the Flinders University Human Research Ethics Committee ID:4224 on 14th July 2020. The research team visited Pinnaroo each year to collect data directly from participants in person.

All data from this project were de-identified and only ever presented as aggregate results, with sub-group analysis of male vs. female and adults and children. All data is stored securely on a password protected firewalled server at Flinders University.

Results

Participants – Outcome Data

Attendance and participant reported experiences

- In the first 3 years of The Pinnaroo Project evaluation period, the Mallee Art committee bought a wide range of creative arts workshops and cultural activities and leading artists to the region.
- Over the 3 years with more than 120 workshops and events were conducted from 2021-2023. The median hours of art activities per Mallee Community Members who participated increased over 2022 & 2023, both within the project, as well as in wider arts involvement.
- Over the 3 years, 616 feedback forms were collected. Satisfaction was very high (mean 90%) and participant comments showed the benefit of learning new skills, social engagement, and a reduction in stress.

The Pinnaroo Project creative arts workshops and cultural activities (2021-2023)

Workshop lead and dates of an example range of workshops over the 3 years are listed below.

2021-2022

1. Mosaic Pavers #1 & #2 (with Chris Jenzen; Nov-Dec 2021, Feb-Mar 2022)
2. Dabble Days #1 & #2 (with Stephanie Michel; Nov & Dec 2021, Jan 2022)
3. Digital Drawing (with Laura Wills; November 2021)
4. Silver Clay & Mens' Leather Workshops (with Tania Kunze; October 2021)
5. Lego T shirts @ Pinnaroo Show (with Deb Twining; October 2021)
6. Paper Lanterns #1 & # 2 (with Tony Hannan; September & October 2021, Sept 2022)
7. Lego Printing (with Deb Twining; September 2021)
8. Aboriginal Basket Weaving (September 2021)
9. Comedy Night (with The Beautiful Bogan, September 2021)
10. Ceramics Workshops (with Tania Kunze; June & August 2021)
11. Silk Scarves (with Helen Moon; June 2021)
12. Paint Your Own Christmas Ornament (Drop-in session with Elise & Morrison; December 2022)
13. Wrap me up, tie me down (Workshop with Morrison Polkinghorne; December 2022)
14. Potato Stamping (Drop-in session with Morrison; December 2022)
15. Mini Christmas Arrangements (Drop-in session with Elise; Nov 2022)
16. Paint & Sip (with Jo Greathead; November 2022)
17. Spring Flowers (with Jetty Baks; November 2022)
18. Silhouette painting (Drop-in session with Elise; October 2022)
19. Papier-mache T-Cup (Drop-in session with Morrison Polkinghorne; October 2022)
20. Book folding - letters (Drop-in session with Morrison Polkinghorne; October 2022)
21. Coffee & Create (Drop-in sessions; September 2022)
22. "Euphoria" movie sessions (Country Arts SA; August 2022)
23. Collect & Create Floral Workshops (with Rachel Crocket; July 2022)
24. Sound Relaxation (with Heather Frahn, including Primary School sessions; July 2022)
25. Pots of Fun (Studio Drop-in school holiday sessions; July 2022)
26. Cyanotype Printing (with Donna Gordge; June 2022)
27. Mindfulness In May (Guided mindfulness sessions; Teen Chocolate session & Studio Drop-in; May 2022)
28. Lego Creations (Studio Drop-in; April 2022)
29. Metal Poppies (with Melinda Oster & Studio Drop-in sessions; April 2022)

2023

30. Shoulder to Shoulder (Sept 2023)
31. Scarf Painting (Helen Moon August 2023)
32. Felt Scarf making (Helen Moon August 2023)
33. Clay drop in (Ali Krollig August 2023)
34. Create with clay (Ali Krollig July &/or May 2023)
35. Riverland Youth Theatre (July &/or January 2023)
36. Cookie decorating (Heidi van Kalcken July 2023)
37. Singing workshop (Sarah Penicka-Smith June &/or April 2023)
38. Postcards from Pinnaroo (Karenza Ebejer May 2023)
39. Miru – selfie photography (Hannah Robinson & Melanie Muddle May 2023)
40. Drop in (Morrison April 2023)
41. Beer & Boerewors – men's event (German Charlie Brewery & South African/ Jacques April 2023)
42. Watercolour painting – art therapy (Jo Greathead March 2023)
43. Calligraphy (Elise & Morrison February 2023)
44. Paint with Tea DIY Diary (Elise & Morrison February 2023)
45. Wrap your School Books (Morrison January 2023)
46. Paint Pens (Elise & Morrison January 2023)

Hours participating in arts and cultural activities.

The median hours of adult participation in art activities increased over 2022 and 2023, both within the project (12.5 hours -37 hours), as well as in wider arts involvement (11 hours – 23.25 hours). However, the proactive engagement benefit of The Pinnaroo Project is shown in a three time increase which was statistically significant. $*(p<0.05)$.

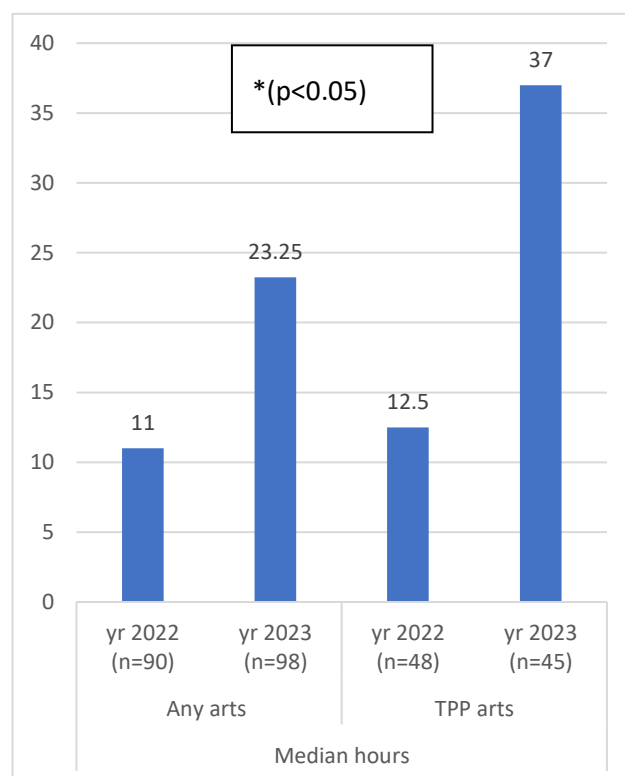


Figure 15: The Pinnaroo Project adult participation in median hours per year per participant

Creative Arts Workshops participant feedback

Over the 3 years, 616 participant feedback forms were collected. Satisfaction was very high (90% happy with their experiences) and participant comments show the benefit of learning new skills, social engagement, and reduction in stress and many participants indicating they would become regular attendees.

One Rural Community - More than 120 workshops held – 564 health screenings conducted - 616 participation in arts feedback forms - 3 years of data collected – 90% satisfaction rate.

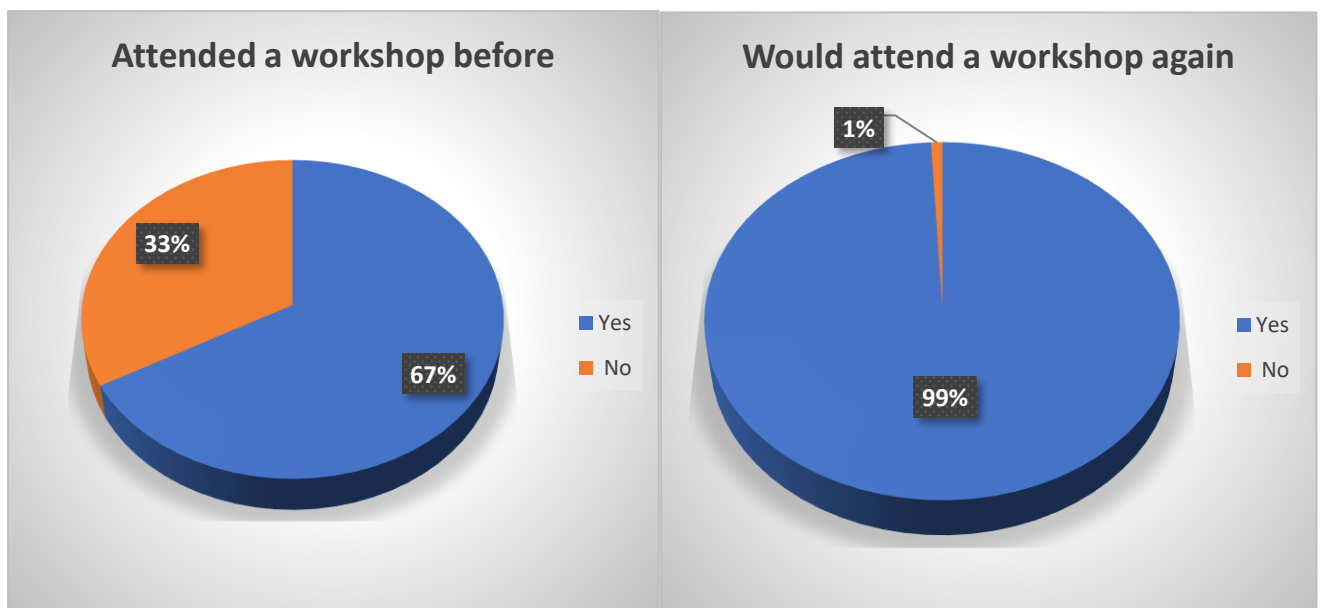


Figure 16: The Pinnaroo Project participant feedback on attendance (return customers)

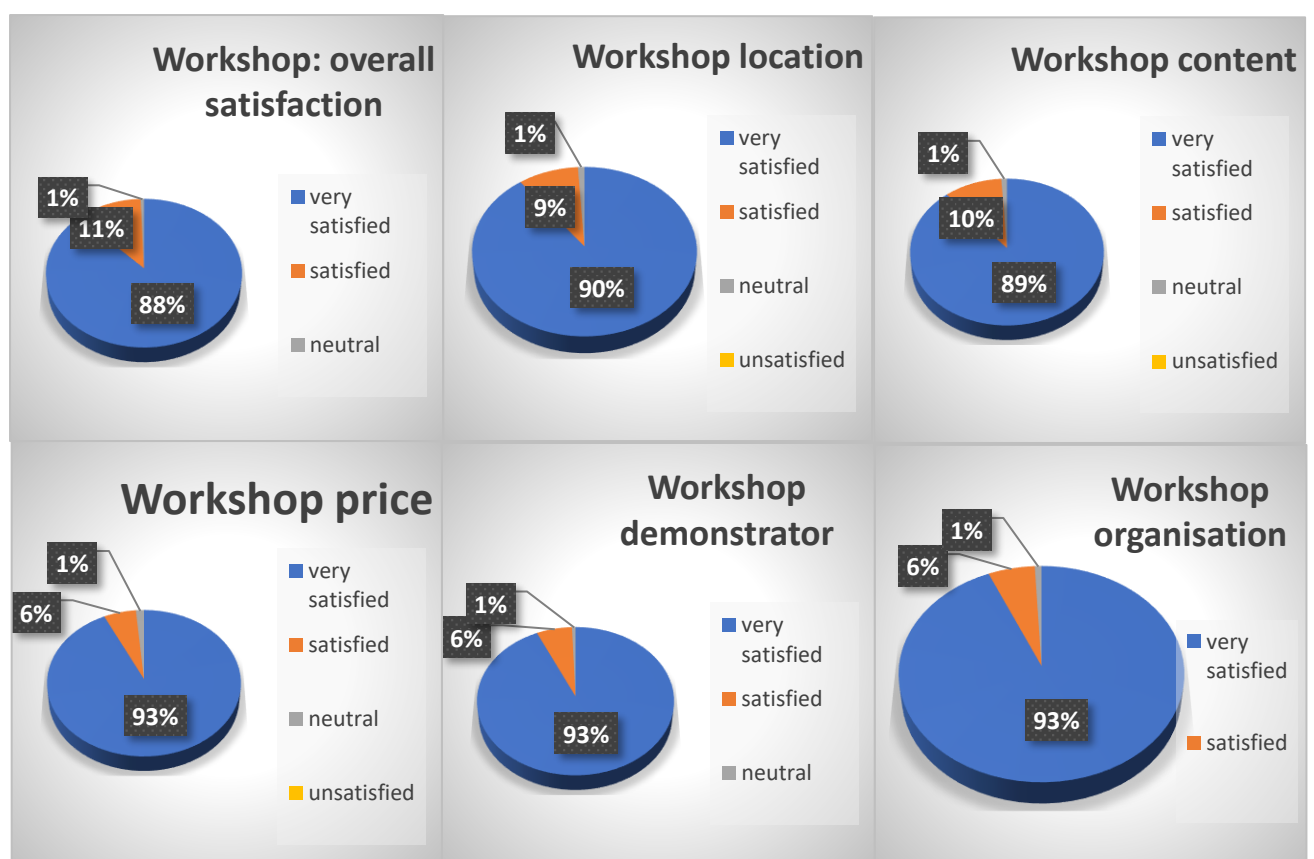


Figure 17: The Pinnaroo Project workshop feedback and satisfaction

Participants Quotes

The participant health assessment also records extremely positive experiences of participants.

- ♥ Feeling 100%... really enjoyed decorating the cups because I love doing art in school and that's why it made me happy. I really enjoy this, and I would love to do this again.
- ♥ Awesome activity, Teacher is great with encouraging you to 'let go'/be creative.
- ♥ Good way to learn new skill & connect with people in the community.
- ♥ Was feeling stressed on arrival and enjoyed the creativity & connection.
- ♥ Amazing, loved it/Fantastic, amazing, fabulous/ Loved it being in Pinnaroo, so easy to attend. To make the time it's always harder to travel. Family normally comes first...
- ♥ Really enjoyed these sessions. Great project for the community. Great sessions for catching up with others. Can't wait to see the poppies on ANZAC Day!
- ♥ This workshop has been very enjoyable & relaxing - great for community mixing with people you don't normally mix with.

Media exposure

The Project has an active Facebook presence, activities were regularly featured in the Pinnaroo Times and the overall project was the subject of an ABC Backroads feature. See all details and links on The Pinnaroo Website at <https://thepinnarooproject.com.au/blog/>

The Pinnaroo Project Art in Health Evaluation Model for evaluating community art projects and the impact on mental and physical health that can be applied to other, regional, remote, and metropolitan locations.

An evaluation method (Pinnaroo Model) was co-designed with The Pinnaroo Project Steering Committee and community, local businesses and the Flinders University research team including a panel of health experts. The health assessment questionnaires were based on international published and validated research tools and these were piloted tested with community members and modified based on feedback (too long / not relevant/ not comfortable answering these questions / not users friendly before use). Flinders University Caring Futures Experts provided advice on the most appropriate tools.



Figure 18: Painting Workshop at the Hub

Discussion

In the 3-year period of evaluation, The Pinnaroo Project was able to conduct a total of 564 health screenings and over 616 feedback forms were received from community members who participated in creative arts activities. This overwhelming commitment to the project means that the project has achieved the required sample size to make the results generalisable.

Importantly the findings also do demonstrate that the health risk factors of the Pinnaroo people were comparable, and some were better than the national average, such as on child nutrition and physical activity. The results of this project is consistent with other international research which showed that engagement with arts and cultural activities reduces health risks, particularly for mental health and other risks directly influenced by the existence of social networks. (2-13). Arts and cultural engagement have been shown to enhance social inclusion; reduce loneliness; increase confidence; and improve feelings of self-worth. The quotes collected from The Pinnaroo Project participants support this outcome. These outcomes, in turn, have a direct and positive impact on both physical and mental health and we have also demonstrated this in the project.



Figure 19: Mallee Arts studio in 'The Hub'

In 2016 Australian researchers produced the first dose-response-style study of arts and mental health, showing that two-hour “doses” of creative activities per week could enhance mental wellbeing in a general population. Arts and cultural tools have also been successfully used to improve outcomes in terms of both prevention and treatment of physical illness and disease. Internationally proven strategies for improving health and wellbeing through arts and culture arts and cultural tools are already being used in clinical and wellbeing settings across Australia, including in leading hospitals. While the benefits generated can be indirect, they are identifiable and measurable. Participants in The Pinnaroo Project also strongly engaged and supported creative activity and demonstrated on many measures better health outcomes than non-participants.



Figure 20: Sound Relaxation workshop

Feeling 100%... really enjoyed decorating the cups because I love doing art in school and that's why it made me happy. I really enjoy this, and I would love to do this again.

Pinnaroo and the Mallee Resilience- Drought, COVID and Climate Change

In times of crisis, arts and culture are critical. As the world changed in 2020 with COVID, The Pinnaroo Project, and the evidence about the impacts of arts and culture are more relevant than ever. During and following major crises such as health emergencies or natural disasters, effective arts and cultural activities are those that aim to reconnect affected communities, reduce feelings of isolation, strengthen people's connection to place, provide opportunities for reflection and commemoration, and foster a shared sense of hope and optimism. Arts and cultural activity can also increase a nation's soft power potential, a critical resource during a period of global disruption. During COVID the Pinnaroo and Mallee Community only strengthened their famed reliance as prior to COVID there was a seven-year drought and after COVID devastating bushfires and unseasonal rain due to climate change. (13)



Figure 21: Singing workshop

Study limitations and Recommendations

The study recruited residents who volunteered to take part in a health screening. Matching of the resident's health assessment to the ABS population profile showed the health assessments to be a higher proportion of females, less teens and more in full time employment. This is part explained by the recruitment targeting of worksites. Future development of the model could seek to target art and creative activities towards men and the isolated.



Figure 22: Bloke's burger night

Arts and cultural engagement have been shown to enhance social inclusion; reduce loneliness; increase confidence; and improve feelings of self-worth.

Conclusion

As demonstrated by the outcomes, there was overwhelming commitment from the community to this project. In the 3-year period of evaluation, The Pinnaroo Project was able to conduct a total of 564 health screenings and over 616 recorded participations in various creative arts activities. This was from a Pinnaroo population of 768, with a larger surrounding total mallee community of 2,223 that includes Lameroo, Parilla and Murrayville.

The project was highly successful in developing a range of artistic and cultural activities, with very high levels of participant satisfaction (90%) and now has a legacy of a model of evaluation for any community to adapt to measure the success of art in health.



Figure 23: Native spring florals workshop

During the evaluation period overall, the health of the Pinnaroo community improved including:

- ✓ Lower adult depression
- ✓ Higher older adult physical activity
- ✓ Less adult alcohol drinking days
- ✓ Less adult smoking
- ✓ Less adult hypertension
- ✓ High child fruit and vegetable consumption
- ✓ High child physical activity
- ✓ Better overall self-rated health in both adults and children

For those who added art into their lives there was a:

- ✓ Reduction in depression
- ✓ Lower smoking rates
- ✓ More healthy eating (higher adult and child fruit and vegetable consumption).
- ✓ Better overall self-rated health in The Pinnaroo Project arts group in both adults 2022 and 2023 and children in 2023
- ✓ Economic value - of net benefits for the program for the Pinnaroo community estimated/modelled at around \$650,000. \$2.30 for every \$1 invested in the project.

Finally, it is important to emphasise that this project was inspired and lead by a team from a rural community whose strength and commitment and incredible hard work drove the project to success over approximately five years. This was during a period where the community and the world were facing challenges never seen in rural Australia for 100 years. The Flinders University Caring Futures Institute Team and Cybec were proud and honoured to be invited to support the evaluation as The Pinnaroo Project which also enabled a special group of student and academic volunteers a life changing clinical research field trip experience that provided them with an opportunity to contribute to Australian rural health.

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