Curtin School of Allied Health

The impact and purpose the Cycling Without Age program has on service users and carers experiences

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This thesis is presented for the

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Signed: Portia Atkinson 

Dated: 11/10/2024

Signed: Ruby Staines 

Dated: 11/10/2024

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Letter to examiners

12/10/2024

Dear examiners,

The impact and purpose the Cycling Without Age program has on service users and carers experiences.

This research was approved by the Human Research Ethics Office on 04/04/2024 (approval number: HRE2024-0133.)

This project was supervised by:

- Dr Grace Zeng (Curtin University, School of Allied Health)
- Dr Barbara Blundell (Curtin University, School of Allied Health)

This submission is a qualitative study which includes:

- 2 tables
- 2 figures
- 72 references
- Word count: 5,986 words

No exemptions were asked for or granted regarding the use of extra figures, tables, or word counts for this submission.

Yours sincerely,

Portia Atkinson Ruby Staines Max Bittner

Acknowledgements

This study acknowledges the support received from the Cycling Without Age Programme staff and volunteers, particularly Karen O'Connor and Leanne Robb. This support has been fundamental in the development and planning of this research. Through attending research meetings, allowing access to our sample of participants, and providing feedback throughout, you have made this project possible.

We would also like to express gratitude to Grace Zeng and Barbara Blundell who supervised this research, assisting with the planning and execution of this study and providing valuable feedback over the 2 years. Their guidance not only assisted the development of this research, but also contributed to the personal growth of the research team members. The balance of providing direction and fostering independence allowed us to further develop our understanding and passion for qualitative research.

Thank you to the participants who chose to be involved in this study. Your contribution allowed us to gain diverse perspectives to deeply explore the true impact of the CWA programme. This research would not have been possible without you.

Finally, we would like to thank our family and friends who have supported us throughout the duration of our project.

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Abstract

Introduction: Community participation, accessible leisure activities and engagement with nature, are all crucial in enhancing social and emotional well-being for people with mobility challenges. Cycling Without Age (CWA) is a non-profit global program offering free trishaw rides to older adults and individuals living with disabilities. This study aimed to explore CWA service users' reasons for using the CWA program, the impact it has had on them, and the challenges they face when using the program. The research focussed on the experiences of service users and carers at Kent Street Weir in Perth, Western Australia. The current study aims to explore service users' purpose for using the CWA program, the impact the program has to them and challenges they face when using the program.

Method: Using a qualitative phenomenological approach, semi-structured interviews were conducted to explore the benefits and challenges experienced by 16 CWA service users, seven carers and nine passengers. Reflexive thematic analysis was used to analyse data.

Findings: Reasons for CWA program participation included convenience and increased accessibility. Beneficial impacts to participants encompassed increased socialisation and reminiscence. Challenged included the weather, inexperience with the program, and time restrictions. Findings have been framed through the lens of the Person-Environment-Occupation-Performance model.

Conclusion: The findings underscored the CWA program's value in enhancing the well-being of older adults and people living with disabilities through increased community engagement and connection to nature. Findings support the need for continued program funding and development. Future research is required to explore volunteer perspectives to ensure future sustainability.

1.0 Introduction

Australia is experiencing significant growth in the number of older adults and people with disability.[1-5] The Australian Institute of Health and Welfare[6] reported approximately 4.2 million Australians over 65 years old in 2020, with projections to increase to approximately 5.1 million by 2066. Other studies estimate that Australia's population over 80-years-old will increase more than 200% by 2050,[7] and Australia's average life expectancy is noted to be among the highest in the world.[5] Similarly, the number of individuals with a disability in Australia has risen from 4.4 million people in 2018 to 5.5 million in 2022,[4] with more than 411,000 individuals residing in Western Australia.[8] As these populations increase, there is an increased need for accessible leisure opportunities to support older adults and people with disability to engage with their community, and develop or maintain social skills, all of which contribute to their well-being.[9, 10]

Cycling Without Age (CWA) is a not-for-profit program that involves volunteers taking service users (SUs; older adults over 65 years old or people of any age with disability) on trishaw rides in the community.[11-14] The CWA program initially began offering rides in Copenhagen, Denmark in 2012 and has since expanded globally across 41 countries including Australia.[15] The rides are free and SUs sit in the front seats of a trishaw e-bike that is ridden by a volunteer pilot around selected scenic locations[14]. Carers of older adults and people with disability are also welcome to join the ride.[14] The program is non-discriminatory, accommodating individuals of various disability levels with wheel-chair friendly trishaw options, and both older adults receiving residential care or living in their own homes can join the rides.[10, 12, 13, 16]

Previous international studies have shown that the CWA program provides benefits to the well-being of SUs in numerous locations.[11-13] This research has outlined the benefits of the ride in enhancing mood, emotional well-being,[11, 13] mental health,[9, 10] and increasing self-reported quality of life for SUs.[13] As previous CWA program research was conducted in international settings or in other Australian states,[9-11, 13] questions could be raised about the generalisability of the existing findings to the Perth population. Notably, there are cultural, environmental and social factors unique to Perth that may influence the impact and experience of the program, and

not captured in extant research. In addition, there is insufficient research on the challenges experienced by SUs and carers when engaging with the program in the Australian context. This study aims to address this gap by providing a focused exploration of SUs and carers experiences using the CWA program in Perth's Kent Street Weir location. Kent Street Weir is a bush reserve and parklands situated in Wilson, Perth, which includes pavement trails and a pedestrian bridge over a narrow section of the Canning River.

Literature on the CWA program in the United States identified that the rides support social well-being by offering SUs opportunity to socialise.[10] Socialisation is a fundamental human need that can be defined as the process of interacting with other people to form connection and relationships.[17, 18] Socialisation has also been found in previous research to support social reminiscence in older adults which refers to the recollection of personal experiences from the past through conversation and interaction with others, and this contributes to emotional well-being.[19] Similarly, research found that socialisation benefits people with disability by boosting their interest in exploring their community, and encouraging them to have more diverse engagement in different communal activities, supporting their well-being and integration into society.[20] These existing findings are important in substantiating the value of socialisation for older adults and people with disability, particularly as these populations may face challenges accessing social occupations and exploring community environments.[4, 21-23]

Numerous studies highlight issues with mobility and inaccessible community environments as the primary barriers hindering these populations from accessing necessary occupational opportunities that support their well-being.[4, 21, 22, 24-26] Social occupations and ventures to connect with natural community environments have been notably obstructed due to barriers,[4] with limited literature offering solutions to enable individuals to achieve sufficient well-being outcomes. As Australia experiences substantial demographic change,[1-5] investigation into the impact of the CWA program as an avenue for increasing access to social opportunities and natural community environments is needed.

To comprehensively analyse the experiences of older adults and people with disabilities participating in the CWA program, this study has employed the Person-Environment-Occupation-Performance (PEOP) model as a theoretical framework.[27] The PEOP model, widely used in occupational therapy, offers a structured approach to understanding the complex interplay between individual, environmental, and occupational factors that influence participation and well-being.[27] This model is particularly relevant to the current study as it allows examination of how various factors hinder or enable occupational performance, which describes an individual's ability to engage with their occupations, tasks or activities, in their given environment.[27] The framework enables consideration of 'intrinsic' person factors that consider the impact of an individual's physical, cognitive, spiritual, physiological and psychological experiences on occupational performance.[28] These intrinsic factors can be analysed in conjunction with 'extrinsic' environmental factors, the contextual elements explaining a person's social, cultural, institutional and physical (natural and built) environments.[29] Through consideration of both intrinsic person factors and extrinsic environment factors of CWA SUs, the PEOP framework enables systematic exploration of how the program enables and challenges their occupational performance,[28, 29] highlighting insights for enhancing program delivery and addressing potential barriers to participation.[27]

Guided by the PEOP model, this study aimed to explore the purpose of the CWA program from the perspectives of SUs and carers, identify the beneficial impacts of the CWA program to them, and to ascertain the challenges they experience when using the CWA program.

2.0 Methods

2.1 Research Design

This study's research question lent itself to an interpretivist paradigm, making a qualitative approach suitable. This study adopted a phenomenological design, promoting a focus on human experience that could reflect participant populations. This allowed in-depth exploration of how carers and SUs perceived their experiences of the CWA program.[30-32] In-depth interviews with open ended questions were conducted to explore carers and SUs experiences of the CWA program, which was essential for producing high-level validity data to achieve the aim of this study.[33, 34]

2.2 Participants and Recruitment

Inclusion criteria were that participants must have completed at least one CWA ride and could understand and speak English. Participants could be an older adult over 65 years old, of any age but living with a disability, or a carer of a SU who had utilised the CWA program at least once. Participants were excluded if they were non-verbal, had a diagnosis of dementia, or were deaf and/or blind, as participants were required to sign a form providing informed consent.

Participants were recruited purposively through snowball and word-of-mouth sampling.[35] An electronic flyer was included in the CWA newsletter inviting participation in the study. Potential participants were also asked in-person by CWA volunteers and members of the research team if they were interested in participating after completion of their ride at Kent Street Weir, where the research team visited over several weeks. Sixteen participants were recruited, including nine SUs and seven carers, with their demographics displayed below in Table 1 and Table 2 respectively. Participants received a $10 gift card for a nearby café to thank them for their participation. Recruitment concluded when data saturation was reached. The literature suggests a minimum of 12 interviews is required to achieve saturation.[36, 37] The sample represented diversity and variation which enabled a wide range of perspectives and experiences crucial for addressing the complexity of the research question.[38]

Table 1

Service User Demographics

	Frequency
Gender (n=9)	
Male	3
Female	6
Age (n=9), years	
60-69	1
70-79	0
80-89	5
90-99	3
Country of birth* (n=8)	
England	3
Australia	2
Scotland	1
Poland	1
Netherlands	1
Frequency of rides* (n=8)	
Once a week	1
Four times in last six months	1
Twice in last six months	2
Once in last six months	4

*Note. ** used to indicate where information was not collected from all participants

Table 2

Carer Demographics

	Frequency
Gender (n=7)	
Male	4
Female	3
Age (n=7), years	
20-29	2
30-39	1
40-49	1
50-59	3
Country of birth (n=7)	
2x Australia	2
2x South Africa	2
1x England	1
1x China	1
1x New Zealand	1
Frequency of rides (n=7)	
1-2 times a week	1
Four times in last six months	1
Twice in last six months	1
Once in last six months	4

2.3 Materials

A flyer (appendix A) was created by the research team and was electronically distributed with the CWA email newsletter to attract potential participants. An information sheet (appendix B) and a consent form (appendix C) were provided to participants prior to participation. The research team collaborated with CWA staff and volunteers to develop the interview guide to cover the purpose, impact and challenges experienced (appendix D). The purpose of creating an interview guide was to give the researchers structure to cover all areas required to address the research question, whilst allowing them to probe further based on participant responses; exploring new information throughout the interview.[39] Interviews were recorded with a recording device, and were transcribed using Microsoft Word online transcription function.[40] NVivo software was used to analyse the qualitative data.[41]

2.4 Data collection

This data collection took place over a 4-month period, from 02/05/2024 to 09/08/2024 at the Kent Street Weir in Perth, Western Australia. CWA volunteers were present on each data collection day as well as the research team consisting of two female and one male occupational therapy students. Participants were asked to read the participant information sheet and sign the consent form prior to taking part in an interview. Interviews were conducted by the research team (MB, PA, RS), and were structured according to the interview guide. Interviews took approximately 10 minutes each and were audio recorded for later transcription. Signed consent forms were scanned and uploaded to the Curtin N drive with the audio recordings, and all items were de-identified using participant codes. Recordings were transcribed and uploaded to the Curtin N drive. Transcripts were not returned to participants for comment or correction.

2.5 Data analysis

Braun and Clarke's[42] thematic analysis was used to analyse the qualitative interview data. This approach allowed focus on the lived experience of participants and extraction of rich data about the phenomenon whilst also providing a systematic process to maintain consistency. The thematic analysis involved a six-phase process including identifying themes within the data, coding, conceptualising, reviewing, defining, and reporting on the findings.[42] Two members of the research team (MB, PA) were involved in data analysis utilising NVivo version 14 software.[41]

Data familiarisation occurred through listening to interview recordings, being immersed in the data, and writing transcriptions. Coding was then initiated, where key themes from the transcripts were highlighted within NVivo.[41, 42] Codes were then combined to identify broader themes. Investigator triangulation was undertaken through cross-coding of themes, where research team members (MB, PA) reviewed all codes and themes to ensure consistency.[42] Themes were defined and named to clearly represent core ideas drawn from the data. Finally, themes were compiled and analysed in relation to the research objectives, as reported in the research findings.[42] Findings were not provided to participants for feedback.

To establish trustworthiness, all group members (MB, PA, RS) engaged in reflexive journalling after each day of data collection, whether interviews were conducted or not. This process ensured confirmability of the data found and assisted in processing procedural and ethical challenges.[37, 43] Theoretical triangulation occurred through reading existing literature about the CWA program to compare and contrast interpretations across various theoretical perspectives. This enabled the research team to develop a comprehensive understanding of the data to improve the credibility and validity of the study.[44] Investigator triangulation was adopted to reduce bias and promote a greater interpretation of results by involving multiple researchers in the data analysis process.[44] The researchers utilised and reported on participant quotes from transcripts to ensure that themes stay grounded in participants lived experiences and that readers can trust the credibility of the research findings.[45]

2.6 Ethical considerations

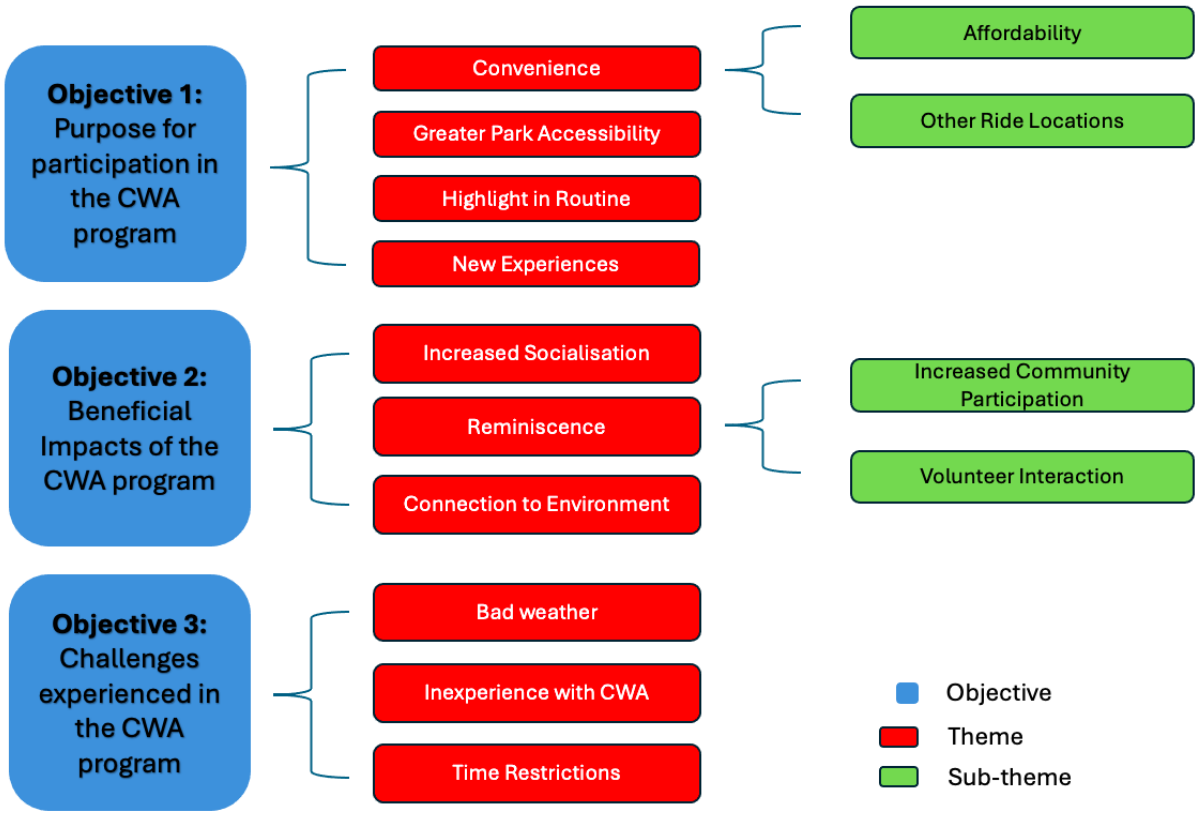
Ethics approval was granted by the Human Research Ethics Committee at Curtin University in April 2024 (approval number: HRE2024-0133.) Participation was voluntary, with participants informed of their right to withdraw at any stage. Informed consent was obtained prior to data collection through written consent. No relationship was established between participants and the research team prior to the study, however participants were informed of the research teams' reason for conducting the study as this was listed on the information sheet. To ensure confidentiality was upheld, all data was stored in Curtin's N Drive and was de-identified using participant codes, for example FC1 = formal carer #1. Only researchers had access to the data, which will be deleted seven years post-study.

3.0 Findings

Ten themes emerged from thematic analysis of interview transcripts that aligned with the three objectives, three in the purpose of participation, four in the beneficial impacts, and three in the challenges experienced with the CWA program, along with several sub-themes. These findings are represented below, in Figure 1.

Figure 1

Objectives, themes, and sub-themes of findings from data analysis



3.1 Purpose of participation in the CWA program

The reason for participation varied between SUs and carers, with the main themes for engaging in their rides being convenience, greater park accessibility, the CWA ride being perceived as a highlight in routine and creating a new experience.

3.1.1 Convenience

The convenience of participating in the program was found to be due to affordability and other available locations.

3.1.1a Affordability

The affordability of the program, as a free activity, was found to attract carers to bring their clients to engage in the program. One carer stated “because a lot of the guys [clients] don't have money, so we just look for free events yeah, and this is one of the better free events that we found.” (Carer 5).

3.1.1b Other ride locations

The number of different ride locations available was found to attract both SUs and carers, as the location options provided geographical convenience. Carer 3 said, “Our local one is probably like South Beach or Point Walter... Other than [that], we go to the one in Woodbridge.” Additionally, multiple locations offered a scenic variety to explore different parts of different communities. Carer 2 stated, “The last couple of times we went to, like, Cottesloe it was really good, like, cycling on the beachside.”

3.1.2 Greater park accessibility

The majority of SUs have issues with their mobility. Many carers mentioned that the program increased SUs access to the entirety of the park:

Yes! Yes, and it's amazing, I didn't realise how big this area if you follow all the footpath, because I usually just go to the bridge, there is a little lookout point and I usually don't walk far. Going on the bike, you see a lot more (Carer 4).

3.1.3 Highlight in routine

Participating in the CWA program was identified as an event that both SUs and carers looked forward to. SU 7 mentioned, "It's the highlight of my fortnight and today was the highlight of the highlights." The ride also has a social aspect of engaging with the volunteer rider, with SU 6 adding, "Well you know, it's something I look forward to every week, as much as the ride, to the guys who are dealing with it."

3.1.4 New experiences

SUs mentioned that the ride provided them with the opportunity to explore a new experience within a community environment. Carers also verbalised how they had used the program as a segway to achieve client goals. Many carers additionally stated that they felt enjoyment from seeing the happiness on their client's face from this new experience:

It is definitely an opportunity for them to experience something that they wouldn't ordinarily experience, and I think that's what we are trying to achieve - a stated goal, to get them to experience as many areas of society and experience as many facets of life as they can, despite their disability (Carer 5).

Carer 6 spoke about using a CWA ride to assess how her client would cope with using a transport mode other than a car. It was a step towards the client's goal of using the train for transport: *"*This was the first time I have put her on something like that, so I wasn't really sure how she was going to go.*"*

3.2 Beneficial impacts of the CWA program

SUs and carers identified multiple beneficial impacts of the program, including increased opportunity for socialisation, reminiscence and connection to the environment.

3.2.1 Reminiscence

For SUs who were older adults, riding along Kent Street Weir extracted memories from their past. Many participants spoke about how the ride evoked memories of Kent St Weir when they were younger or other memories unrelated to the ride location from earlier in their life. SU 3 said, “Oh well, you see, we used to come here when my children were little. And we had lovely, lovely times up here.”

3.2.2 Increased socialisation

Some participants described the rides as increasing their socialisation by offering opportunities for community participation and enabling volunteer interaction.

3.2.2a Improved community participation

SUs identified that the rides offered them a chance to interact with various types of people within the community including families, kids, older adults, and others their own age when passing them on the bike. Carer 9 mentioned, “I think a big part of it is the interaction with other people like, so you know when we’re riding past all those people you're waving and having a quick chat.”

3.2.2b Volunteer interaction

The majority of the participants enjoyed their conversation with the volunteer rider and mentioned talking about interests and identifying things they usually see in the park:

> *I think because it's something my client enjoys so much and she's built some, like, friendships with some of the riders, which is nice. I think it probably is more rewarding now. Just because we know the people more that we're seeing* (Carer 3).

SU 7, who lived alone, explained that “I just come down as much as anything and have a chat.”

3.2.3 Connection to environment

Some participants mentioned that the program allows them to view different sights along the Canning River and see animals that they ordinarily would not see every day. SU 2 said, “Well, I enjoyed the environment, I enjoyed the nature, you know. So, I like going on these sort of trips.”

More than half of the SUs and carers identified that the CWA program offered them an opportunity to enjoy the good weather:

> “*It’s a case of the weather is really nice, we thought it was going to rain all day and then I would have to keep my client inside all day and while it’s beautiful, we can take the opportunity to enjoy the day”* (Carer 4).

3.3 Challenges with the CWA program

The majority of participants expressed no problems with the program, however, those that did indicated some challenges with bad weather, inexperience with the CWA program, and time restrictions acting as a barrier to their participation.

3.3.1 Bad weather

Some SUs and carers spoke about the weather occasionally impacting their enjoyment of the ride. Carer 1 spoke about Perth’s heat: *“*There was a ride I did a while ago and it was just really, really hot. That was probably the most unpleasant.”

Another carer articulated that the unpredictable winter weather and rain was a barrier to them and their client participating in a ride: “We thought it was going to rain all day and then I would have to keep my client inside all day” (Carer 4).

3.3.2 Inexperience with the CWA program

The majority of the participants interviewed had been on less than three rides and described that they felt as if they were not fully informed about how the CWA program operated. One participant did not realise that there was an online booking program on the CWA website: “I

guess you could have a pre-booking system, but I mean that all costs money to build up the infrastructure" (Carer 5).

Another carer mentioned that their client was hesitant to have a ride since it was a new activity, and he was not familiar with the volunteers or how it operated:

> *"I think when we first came, [their client] wasn't sure if he wanted to go on, then we got our little [Augmentative and Articulative Communication] device out and [their client] decided yes, so it was just that little bit of indecision at the start"* (Carer 6).

SU 7 also admitted that he did not realise how busy the program could be on some days.

3.3.3 Time restrictions

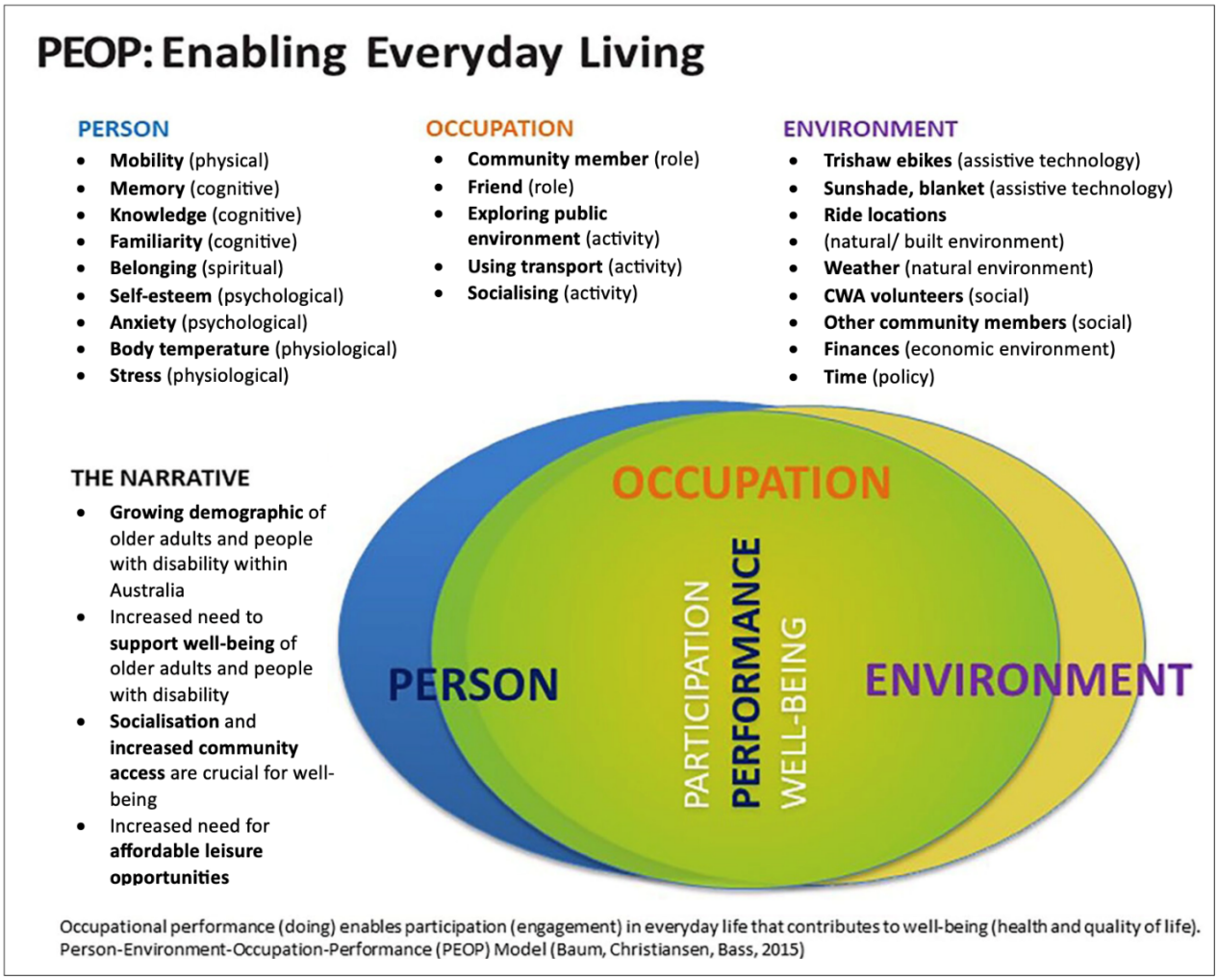
One carer noted that they had only 10 free minutes, therefore a 20-minute ride was too long for them, so they only participated in a shortened ride: "We do come down here every Thursday... but we weren't sort of prepared cause I only have a set amount of time" (Carer 7).

4.0 Discussion

The current study set out to explore the purpose and impact the CWA program has on SUs and carers through their experiences, and to understand the challenges they face when engaging with the program. This research provided insight into the experiences of SUs at CWA's Kent Street Weir location and revealed several key findings. When viewed through the lens of the PEOP model, findings revealed a complex interplay of factors influencing participants experiences and well-being.[27] The PEOP model displayed in Figure 2 reflects the person, environment and occupation factors impacting participants' performance and enabling a contextual illustration of their experiences. With support from this model, this section will address the primary purposes SUs and carers used the CWA program, the program's impact, and challenges that hindered SUs engagement with the program.

Figure 2

Person-Environment-Occupation-Performance (PEOP) Model



Note. The model reflects the person, occupation, environment and narrative factors relevant to participants of the current study. Adapted from "Promoting Occupational Performance, Participation, and Well-being and Placing Focus on Everyday Life," by C.H. Christiansen, J. Bass, and C.M. Bass, in C.H. Christiansen, J. Bass, and C.M. Bass (Eds.), *Occupational Therapy: Performance, Participation, and Well-Being* (4, p. 1-110), 2014, Routledge (10.4324/9781003522997-1). Copyright 2015 by Taylor & Francis Group.

4.1 Purpose for participation in the CWA program

The present study identified convenience and greater park accessibility as the primary motivations for SUs and carers participating in the CWA program.

This study identified the program's affordability and availability in multiple Perth locations to contribute to the convenience of using the CWA program. Finances were identified as an extrinsic environmental barrier for older adults and individuals with disability. This barrier may hinder individuals from fulfilling their occupational role as community members in leisure activities that are essential for their social and emotional well-being. Existing studies revealed that at least 154,000 Australians with disability who require psychosocial support do not currently receive funding from the National Disability Insurance Scheme or other state-wide programs,[46] meaning that any formal or leisure supports that would benefit their psychosocial well-being is at a financial cost to them. Further research contributed that free or subsidised leisure activities were most important to carers, as finances significantly impacted activity choices for their clients.[20] The findings of the current study align with existing research as carers were found to be attracted to the CWA program as it was a re-usable free-of-charge activity, and they expressed consciousness for the limited funds their clients had for leisure activities. These findings are significant as existing literature emphasises the importance of engagement in community leisure activities to support emotional, mental, and social well-being,[47] therefore the findings of the current study confirm the need for affordable opportunities such as the CWA program.

The convenience of multiple locations found in the current study corroborates research indicating that people with disabilities and older adults are more willing to travel to local destinations with short travel commutes.[48, 49] Scenic variety across Perth CWA locations was also noted to motivate SU participation, highlighting the re-usability of the program as different locations offered new experiences. These findings affirm the operationalisation of CWA in multiple locations and suggests that further expansion of this program will support occupational

participation. In addition, the importance of disability-friendly transport options for participants,[48] suggests the need to explore the repertoire of wheelchair-accessible ride options.

Participants identified greater accessibility to community environments to be another purpose for their participation. In reviewing prior literature, there was a common theme describing mobility limitations and inaccessible environments to be barriers for older adults and people with disability when participating in the outdoor community.[22, 24, 25, 50-53] Natural environments with badly maintained or unpaved pathways were also found to restrict individuals from accessing and engaging with the environment. This interplay between personal and environmental barriers is significant, as studies have shown that inaccessibility contributes to diminished confidence, social withdrawal, and increased feelings of isolation for participant populations.[26, 54-56] Interestingly, the findings of the current study suggested that CWA's use of trishaw bikes, as an extrinsic form of assistive technology, enabled the natural environment of Kent Street Weir to be more accessible to participants than if they approached the location independently. Hence, it is probable that the program was able to increase SUs participation in accessing community and natural environments.

Another notable finding in the current study was that some carers used the CWA program as a step towards achieving more challenging goals with their clients. One carer mentioned using the ride as a new experience for their client to aid their long-term integration into the community, with another carer using the program with their client as an introduction to public transport. This unanticipated finding is vaguely supported by existing literature that highlights using short-term goals with graded challenge to support long-term goal achievement,[57, 58] however further research is needed to corroborate the effectiveness of CWA rides achieving broader community goals.

4.2 Beneficial impacts of the CWA program

The present study identified socialisation, reminiscence and connection to the environment to be the main impacts on SUs and carers participating in the CWA program.

This study identified that the CWA program benefited SUs by offering greater community socialisation opportunities. Drawing on the PEOP model, individuals assume occupational roles to fulfil their intrinsic well-being, including roles as a community member and a friend.[27] The fulfilment of these roles is contingent upon their social environment, which cultivates a sense of belonging within the community, subsequently enhancing intrinsic well-being and sense of self.[28, 29] Existing research supports that interaction with social environments improves psychological health,[13, 59] increasing self-confidence and morale, whilst reducing feelings of loneliness and social isolation.[12, 13, 19, 20, 60] As loneliness and social isolation are extremely prevalent experiences of older adults and people with disability,[22, 25, 60-62] opportunity to support socialisation within the community is crucial. The current findings therefore hold significant value, proposing the CWA program as an appropriate avenue for SUs to achieve their occupational roles. Numerous participants of this study mentioned their enjoyment when conversing with CWA's volunteer pilots, with other participants mentioning the opportunity that CWA gave them to wave and talk to strangers throughout their ride. Furthermore, the exposure to passing pedestrians could provide SUs the opportunity to socialise with people of various demographics that they may not otherwise interact with. These findings are corroborated by existing research that emphasised the CWA program in Queensland, Australia to have offered a meaningful experience for older adults living in residential care, enabling them to feel involved in the community.[11]

Perhaps one of the most interesting findings of the current study was the chance for participants to engage in social reminiscence during their ride. Older adult participants of this study stated that they conversed with their pilots and reflected on previous experiences at Kent Street Weir, as well as unrelated memories from their past. A study by McNiel and Westphal[10] corroborates that CWA in the United States has had similar affects in encouraging memories from early childhood, youth and young adult years. The role of reminiscence for older adults is significant, with social reminiscence playing a crucial role in enhancing well-being. Social reminiscence has been found to decelerate cognitive decline, diminish mental health conditions, and foster feelings of self-worth and connection to identity.[63] These existing conclusions are

significant as research suggests that care homes provide insufficient opportunity for residents to engage in social reminiscence, increasing the prevalence of depressive emotions as individuals become more likely to ruminate on bitter memories when reminiscing individually.[13, 64] Notably, the present and existing findings are compelling when analysed through the PEOP model. As independent reminiscence has been shown to evoke negative memories, thereby failing to support emotional and cognitive well-being, the influence of social environments is crucial in enhancing well-being by steering reminiscence toward more positive recollections. Therefore, the current study is significant in exploring the CWA program as a potentially effective activity for enhancing the emotional well-being of older adults through the promotion of positive social reminiscence.

As the current study was conducted in a park environment, participants noted an increased sense of connection to the natural environment, describing enjoyment when viewing the natural landscapes and being outdoors in good weather. Informed by the PEOP model, these findings describe a clear influence of natural environmental factors on occupational performance and participant. Existing literature supports the significance of connection to the environment, indicating that for older adults, increased connection reduces the prevalence of mental health disorders and stress.[65, 66] It also offers valuable sensory stimulation that enhances feelings of belonging and provides a sense of freedom,[67, 68] corroborating the intrinsic impacts to participants. Similarly, previous research suggested that people with disability had increased confidence and self-esteem when accessing nature,[56] and identified that being in outdoor community environments supported them to be more open to socialisation.[69] As existing literature corroborates the value of connection to nature for older adults and people with disability, the current study reveals potential for CWA to produce similar benefits.

4.3 Challenges experienced in the CWA program

The primary challenges experienced by SUs and carers when engaging with the CWA program were bad weather, unfamiliarity with the program, and time restrictions.

This study found that Perth's climate, with hot summers and unpredictable winters, was an environmental barrier hindering some participants' enjoyment of the ride, and sometimes causing them not to participate at all. Previous research on CWA similarly stated that weather conditions had the ability to determine if a person had a "good" or "bad" experience,[16] which supported broader research that found weather conditions to be a general barrier to participation in outdoor leisure activities.[70] Another existing CWA study highlighted that rain and low temperatures prevented SUs from participating in rides.[12] The deterrence of participation as a result of bad weather is significant as it interferes with SUs access to the program and its benefits. Difficulty accessing the community to socially engage leads to withdrawal and can be detrimental to ones wellbeing.[13, 60] Another study found that most SUs were sensitive to weather conditions and preferred to participate when the weather was warm and calm, with some participants using the trishaw hoods to block out the sun or a blanket to stay warm in the cold[10] This allowed for greater engagement in the occupation as it reduced the impact of the weather conditions.[10] Drawing from concepts of the PEOP model, there is a distinct interplay between the weather as an environmental factor intervening with intrinsic enjoyment of the SUs during the CWA rides and thus their participation. As previous studies outlined the effective use of blankets and sunshades as a form of assistive technology to address the weather conditions,[10] CWA may consider future provision of umbrellas and blankets for its SUs, as well as more protected ride routes.

Inexperience with knowing what the CWA program offered and how it operated was also noted as a barrier to SU and carer participation. One participant appeared to be unaware of the online booking system used to schedule rides, suggesting a gap in knowledge of the CWA program operations. This may represent an intrinsic cognitive barrier, arising from inadequate information about the CWA program being provided to SUs. Regarding the booking system, there is a lack of existing literature on its effectiveness in facilitating participation in leisure activities. Only one study has noted that the absence or misuse of the CWA booking system could potentially heighten stress levels and diminish the enjoyment of SUs on ride days.[11] Therefore, further research is required to understand how knowledge of the booking system

would impact SUs use of the CWA program. Despite the gap in research, CWA may choose to further promote the online booking system through word of mouth, stating it in their newsletter, and advertising on social media.

Another participant in the current study mentioned that the unfamiliarity of how the program operated caused his client to be hesitant to participate. Existing research supported that when individuals are unfamiliar with how an event operates, they could be subject to feelings of insecurity and anxiety about their safety, resulting in withdrawal.[71] An additional study on the CWA program highlighted the importance of communication between carers and CWA staff or volunteers to ensure effective operation of the program.[11] Therefore, it is recommended that CWA enhance their communication with SUs and carers to provide them with sufficient information about how the program operates, which could alleviate SUs feelings of unease.

Time constraints were verbalised by one participant as a challenge restricting their participation with the CWA program. The participant expressed that they and their client had not planned to go on a CWA ride during the carer's allocated shift hours, therefore restricting their ability to complete a full ride. The experiences of this participant illustrate time as an environmental barrier to participation, which was similarly reflected in another CWA study with carers expressing that going on a CWA ride takes extra time to prepare the client which sometimes impacted their schedule.[11] Further existing research offers interesting insight into how time restrictions have been combatted in CWA programs operating in the United States.[10] The research conducted by McNiel and Westphal[10] emphasised the advantages of providing SUs with choice and control over their experiences through offering option to select their preferred route and adjust the ride duration to less than the standard 20 minutes if desired.[10] Additionally, SUs were given the opportunity to make brief stops along the way, allowing them to tailor their ride for optimal enjoyment while adhering to time constraints.[10] With consideration to this existing research, recommendations could be made to the CWA program operating in Perth to promote the option of shortened rides with autonomy to make short stops. A more coordinated approach to servicing regular SUs may also be achieved through

further promotion of the booking system to encourage pre-planned engagement with the CWA program.

4.4 Strengths and Limitations of the Study

Gathering the perspectives from the SUs and carers was a strength as we were able to understand their purposes for engaging with the CWA program, and the impacts they had experienced. The diversity between SUs with disabilities and older adults was also a strength to represent perspectives from both groups. Reflexive journalling used also enabled researchers to be aware of their perspectives, thus minimising bias and assumptions in data interpretation.

A key strength of this study was the inclusion of both SUs and carers as participants, which enabled rich data on multiple perspectives to be considered, thereby enhancing credibility of the findings. The diversity of SUs, including both older adults and people with disability, further strengthened the study by capturing experiences of CWA users who may have different needs. The study had limitations in its generalisability. With recruitment of participants only from the Kent Street Weir location, the perspectives of participants may not be diverse enough to appropriately reflect broader populations across Australia. Additionally, the study predominantly included short-term CWA, with only one long-term SU therefore limiting the depth of insight into the impacts of sustained participation. Another limitation was environmental factors such as weather conditions that delayed data collection as rides were cancelled.

4.5 Suggestions for Future Research

Future research with inclusion of volunteer perspectives may offer a deeper understanding of the program's effectiveness from multiple viewpoints. Additionally, broadening recruitment to include SUs and carers from multiple Perth-based CWA locations would strengthen the generalisability of the findings to Australia-wide populations. Conducting a longitudinal study on the program's impact may substantiate the value of CWA as a means for carers to facilitate long-term goal achievement with their clients.

5.0 Conclusion

This study explored the purpose, impact and challenges experienced by SUs and carers when engaging with the CWA program. The program's primary purpose was found to relate to convenience and increased park accessibility for SUs, with the CWA program offering SUs and carers increased opportunity to socialise, engage in social reminiscence and connect with the environment. Several challenges experienced by SUs and carers included weather conditions, unfamiliarity with the CWA program and time restrictions to produce the biggest challenge. The findings, viewed through the lens of the PEOP model, provided valuable insights into how the CWA program effectively supports the well-being and occupational participation of its SUs. Overall, this study provides important research on the crucial role of the CWA program in supporting the well-being of Australia's growing population of older adults and people with disability.

Key Findings for Occupational Therapy

- For service users and carers, the purpose of participation in CWA was convenience, greater park accessibility, being a highlight in routine and new experience.
- Benefits of the program were reminiscence, increased socialisation, and environmental connections.
- Challenges of bad weather, time restrictions and inexperience with the program were faced by some.

Appendices

Appendix A. Flyer for participant recruitment

Appendix B. Participant information sheet

Participant Information Sheet: Passengers

HREC Project Number:	79595		
Project Title:	The experience and purpose of service users and volunteers of the Cycling Without Age program.		
Principal Investigator:	Dr Grace Zeng, Curtin School of Allied Health		
Co-investigators:	Dr Barbara Blundell, Curtin School of Allied Health		
Student Investigators:	Ruby Staines, Portia Atkinson and Max Bittner (Occupational Therapy Honours Students)		
Version Number:	1	**Version Date:**	15/1/2024

Purpose of the Study:

Cycling Without Age (CWA) is an international not-for-profit organisation that provides older adults and people with disabilities with trishaw rides in the community. CWA is run and serviced by volunteers. Volunteer programs such as CWA are known to enhance the mental health and well-being of both service users and volunteers. However, little is known beyond these benefits about the challenges for service users, volunteers, and carers alike.

The purpose of the study is to find out more about the experiences of service users and volunteers of the Cycling Without Age program in Perth (WA) using interviews with service users and focus groups with volunteers. It is anticipated that this research will assist in highlighting

the impact and challenges of this program for both service users and volunteers and assist in making recommendations for program improvements to make sure it is sustainable. This project is being undertaken by Ruby Staines, Portia Atkinson and Max Bittner and will assist in meeting the requirements of a Bachelor of Science (Occupational Therapy) Honours degree. This project will be supervised by both Graze Zeng and Barbbara Blundell.

Why am I being asked to take part and what will I have to do?

You have been asked to take part in this study because you attend the CWA program as a service user or care for someone who does. You are asked if you would like to complete a short semi-structured interview (approximately 30 minutes) to discuss your experiences of CWA. The interview will be audio recorded and later transcribed which will allow us to analyse the data and reduce the need for notetaking during the interview.

Are there any benefits and/or risks to being in the research project?

Overall, the data gathered from you and other participants will contribute to the ongoing research about the CWA program. Taking part in this study could be beneficial in allowing you to share your experiences and perspectives. Your input may yield helpful recommendations to shape the future of CWA to ensure its continued benefits for service users and volunteers and its sustainability.

While the questions are not anticipated to be distressing, if any make you uncomfortable, you are not obligated to answer them. If the questions provoke concern or discomfort, you can cease participation at any point. If additional support is needed, feel free to discuss your concerns with us, and we can assist you in accessing counselling support through your regular support services or services such as Beyond Blue (1300 22 4636).

A series of precautions will be put in place to minimise the risk of COVID-19 amongst participants of this study. These precautions are as recommended by the Department of Health WA guidelines:

1 – Screening: Interviewers will ensure they are not Covid19 positive or symptomatic prior to the interview

2 – Masks: masks will be available to wear for both the interviewer and the participant and used if requested or if necessary.

3 – Physical distancing: 1.5m distancing will take place during interviews.

4 – Well ventilated spaces: data collection will aim to take place in locations with good ventilation to mitigate the risk of exposure.

5 – hygiene practices: hand sanitiser will be available to researchers and participants throughout the data collection process. If participants or researchers feel unwell, they will be asked to stay home and not attend interviews.

URL: https://www.healthywa.wa.gov.au/Articals/A_E/Coronavirus/Staying-safe

How will information be protected?

Electronic data will be password-protected and hard copy data (including video and audio recordings) will be kept in locked storage. It will only be accessible by members of the research team. The information collected in the study will be kept under secure conditions at Curtin University for 7 years after the research is published and then it will be destroyed. Members of the research team will not disclose any of your information. Information collected in the study will be re-identifiable in case someone wants to withdraw from the study and to check accuracy of information provided. However, when reports and articles are written about the study, information will be presented de-identified so that the reader cannot identify who the

information is about. Any video and voice recordings will be destroyed from the device once transcribed. If you withdraw from the study for any reason, your data will be destroyed.

The information collected from both the surveys/questionnaires and the interviews in this study will be re-identifiable.

Will you tell me the results of the research?

Upon the completion of the research, you will have the option to receive information regarding the findings. It's important to note that these findings will be generalised and not specific to you individually, as they will be derived from the collective information gathered from all participants in the study.

Do I have to take part in the research project?

Participation is entirely optional, and the decision to engage or not is entirely yours. If you initially choose to participate and later change your mind, it is completely fine; you can withdraw from the project at any time. No specific reason needs to be provided and it will not impact your relationship with CWA; simply inform us of your decision to stop.

What happens next and who can I contact about the research?

If you choose to participate in this study, we ask that you to sign the consent form. Your consent confirms your understanding of the information provided and the discussions held. By signing the consent form, you express your agreement to be part of the research project. Take the necessary time to ask any questions you may have before making your decision. A copy of this information and the consent form will be provided to you for your records.

To thank you for your participation, we would like to offer you a voucher for use at the Canning River Café.

For more information, please contact Grace Zeng by phone 08 ********, or email Grace.Zeng@curtin.edu.au

If you choose to participate, you can provide your contact details to Grace. If you choose to participate, you can provide your contact details to Grace. The research team will then then contact you to arrange a time and location for an interview.

Curtin University Human Research Ethics Committee (HREC) has approved this study (HREC number ********). Should you wish to discuss the study with someone not directly involved, in particular, any matters concerning the conduct of the study or your rights as a participant, or you wish to make a confidential complaint, you may contact the Ethics Officer on (08) 9266 9223 or the Manager, Research Integrity on (08) 9266 7093 or email hrec@curtin.edu.au.

Appendix C. Participant consent form for interviews

Consent form: CWA Service User Interviews

HREC Project Number:	79595
Project Title:	The experience and purpose of service users and volunteers of the Cycling Without Age programme.
Principal Investigator:	Dr Barbara Blundell, Curtin School of Allied Health
Co-investigator:	Dr Grace Zeng, Curtin School of Allied Health
Student Researchers:	Max Bitner, Portia Atkinson, Ruby Staines (Occupational Therapy Honours Students)
Version Number:	2
Version Date:	14/03/2024

I have read the information statement version listed above, and I understand its contents	☐ Yes	☐ No
I believe I understand the purpose, extent, and possible risks of my involvement in this project.	☐ Yes	☐ No
I have had an opportunity to ask questions, and I am satisfied with the answers I have received.	☐ Yes	☐ No
I voluntarily consent for audio recordings to be taken during the interview and for those recordings to be transcribed.	☐ Yes	☐ No
I understand that I can withdraw from the research process at any point, and it will not impact my relationship with Cycling Without Age.	☐ Yes	☐ No

I understand that this project has been approved by Curtin University Human Research Ethics Committee and will be carried out in line with the National Statement on Ethical Conduct in Human Research (2007).	☐ Yes	☐ No
I understand I will receive a copy of the Information Statement and Consent Form.	☐ Yes	☐ No

I voluntarily consent to participate in this research study under the terms described above.

Participant Consent:

Name:

Signature: _____

Date: _____

_____

Support Person Consent (if applicable)

Name:

Signature: _____

Date: _____

_____

Declaration by researcher: I have provided a Consent Form and Information Sheet to the participant who has signed above, and believe that they understand the purpose, extent, and possible risks of their involvement in this project.

Researcher's

Name:

Signature: _____

Date: _____

_____

Appendix D. Interview guide

The Cycling Without Age Project

Service User (Passenger) Interview Protocol and Questions

This protocol has been tailored to align with the terms used by our partner organisation.

Ensure the passenger understands what the study entails and sign the consent form.

Before the interview, ask if the passenger would be comfortable to be interviewed on their own or they would like to have their carer with them.

Ask if they would be happy to be interviewed in a quiet place in the park.

“Thank you for participating in this interview. This interview (as you know) will be audio recorded and should take no more than half an hour. We will start by asking you a few questions about you and your involvement in Cycling without Age. If you don’t feel comfortable answering the question, or you can’t think of anything to say, please feel free to pass. If you have any examples to give, please do! I’d love to hear specific stories you may have about your experiences if you’re happy to share them. If you don’t feel up to it, feel free to stop the interview at any time.“

(Seek acknowledgement from passenger)

If the carer is present with the passenger, tailor the questions to include the carer, where appropriate.

To begin with, perhaps tell me a bit about yourself.

- Name
- Age
- Gender
- Place of origin

How long you've been a passenger with CWA?

How often have you ridden over the last six months?

How did you find out about the trishaw rides/Cycling Without Age?

What led you to participate in the trishaw rides offered by Cycling Without Age?

Description of experience/ rides. "What are your experiences with Cycling without Age? We are interested in general and specific stories that you may have if you can share them!"

Prompts:

- Can you describe your rides?
- What goes on during the ride?
- Do you interact with your rider or does the rider interact with you? How? What do you talk about?
- Any rides that stand out to you? Why?
- Can you provide us with some stories/examples?

Benefits of CWA to participants. "What does participating in the rides mean to you?" What's good about it for you?

Prompts:

- Is this something you'd like to continue doing? Why/ why not?
- Can you describe how the rides have benefited you?
- Have there been any changes that you noticed before and after the ride? (Ask for examples where appropriate)

- Changes over time participating in the trishaw rides? (Ask for examples where appropriate)
- Difference it makes to your quality of life overall? (Ask for examples where appropriate)

(Ask if not covered) Can you describe how the rides have

- Changed your personal outlook? (Ask for examples)
- Impacted your sense of belonging to your local community? (Ask for examples)
- Impacted your connection to nature/ the environment around you? (Ask for examples)

Challenges of CWA to Participants. Is there anything that you have found difficult in riding the trishaw? If so, could you tell us more about this?

- Perhaps:
    - Before the ride?
    - During the ride?
    - After the ride?

I think that's about all I wanted to ask. Is there anything you (your carer, if present) would like to add?

Appendix E. Consolidated criteria for reporting qualitative studies (COREQ): 32-item checklist[7]

COREQ (COnsolidated criteria for REporting Qualitative research) Checklist

A checklist of items that should be included in reports of qualitative research. You must report the page number in your manuscript where you consider each of the items listed in this checklist. If you have not included this information, either revise your manuscript accordingly before submitting or note N/A.

Topic	Item No.	Guide Questions/Description	Reported on Page No.
Domain 1: Research team and reflexivity			
Personal characteristics			
Interviewer/facilitator	1	Which author/s conducted the interview or focus group?	16
Credentials	2	What were the researcher's credentials? E.g. PhD, MD	N/A
Occupation	3	What was their occupation at the time of the study?	16
Gender	4	Was the researcher male or female?	16
Experience and training	5	What experience or training did the researcher have?	N/A
Relationship with participants			
Relationship established	6	Was a relationship established prior to study commencement?	17
Participant knowledge of the interviewer	7	What did the participants know about the researcher? e.g. personal goals, reasons for doing the research	17
Interviewer characteristics	8	What characteristics were reported about the inter viewer/facilitator? e.g. Bias, assumptions, reasons and interests in the research topic	31
Domain 2: Study design			
Theoretical framework			
Methodological orientation and Theory	9	What methodological orientation was stated to underpin the study? e.g. grounded theory, discourse analysis, ethnography, phenomenology, content analysis	12
Participant selection			
Sampling	10	How were participants selected? e.g. purposive, convenience, consecutive, snowball	12
Method of approach	11	How were participants approached? e.g. face-to-face, telephone, mail, email	12
Sample size	12	How many participants were in the study?	13
Non-participation	13	How many people refused to participate or dropped out? Reasons?	N/A
Setting			
Setting of data collection	14	Where was the data collected? e.g. home, clinic, workplace	16
Presence of non-participants	15	Was anyone else present besides the participants and researchers?	16
Description of sample	16	What are the important characteristics of the sample? e.g. demographic data, date	14, 15
Data collection			
Interview guide	17	Were questions, prompts, guides provided by the authors? Was it pilot tested?	15, 16
Repeat interviews	18	Were repeat inter views carried out? If yes, how many?	N/A
Audio/visual recording	19	Did the research use audio or visual recording to collect the data?	15, 16
Field notes	20	Were field notes made during and/or after the inter view or focus group?	17, 31
Duration	21	What was the duration of the inter views or focus group?	16
Data saturation	22	Was data saturation discussed?	13
Transcripts returned	23	Were transcripts returned to participants for comment and/or	16

Topic	Item No.	Guide Questions/Description	Reported on Page No.
		correction?	
Domain 3: analysis and findings			
Data analysis			
Number of data coders	24	How many data coders coded the data?	16
Description of the coding tree	25	Did authors provide a description of the coding tree?	16, 17
Derivation of themes	26	Were themes identified in advance or derived from the data?	16
Software	27	What software, if applicable, was used to manage the data?	16, 17
Participant checking	28	Did participants provide feedback on the findings?	16
Reporting			
Quotations presented	29	Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? e.g. participant number	19-23
Data and findings consistent	30	Was there consistency between the data presented and the findings?	18-23
Clarity of major themes	31	Were major themes clearly presented in the findings?	19
Clarity of minor themes	32	Is there a description of diverse cases or discussion of minor themes?	29, 30

Developed from: Tong A, Sainsbury P, Craig J. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*. 2007. Volume 19, Number 6: pp. 349 – 357

Statement of contributors

The nature and extent of the intellectual input by the candidates has been validated by all authors and the following contributions are outlined below:

Name	Contribution
Ruby Staines	Conceptualisation (33%) Data curation (0%) Formal analysis (0%) Investigation (37.5%) Methodology (33%) Project administration (33%) Resources (10%) Software (50%) Validation (33%) Visualisation (30%) Writing – original draft preparation (33%) Writing review & editing (75%)
Max Bittner	Conceptualisation (33%) Data curation (40%) Formal analysis (60%) Investigation (50%) Methodology (33%) Project administration (33%) Resources (45%) Software (25%) Validation (33%) Visualisation (50%) Writing – original draft preparation (33%)

	Writing review & editing (5%)
Portia Atkinson	Conceptualisation (33%) Data curation (60%) Formal analysis (40%) Investigation (12.5%) Methodology (33%) Project administration (33%) Resources (45%) Software (25%) Validation (33%) Visualisation (20%) Writing – original draft preparation (33%) Writing review & editing (20%)

Signed		Portia Atkinson	11/10/2024
Signed		Ruby Staines	11/10/2024
Signed		Max Bittner	11/10/2024

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