

Moving in the margins: A qualitative study into the role of physical activity in marginalised communities

Ella Creagh^{1*}, Matthew Jenkins¹, Mark Huthwaite¹, Paul Skirrow¹

¹*Department of Psychological Medicine, University of Otago, Wellington, New Zealand*

ARTICLE INFO

Received: 14.07.2022

Accepted: 09.08.2022

Online: 02.03.2023

Keywords:

Physical activity

Qualitative

Mental health

Well-being

Psychological needs

Homelessness

Financial Insecurity

ABSTRACT

Regular physical activity is essential in maintaining health and well-being. However, people in marginalised communities who experience financial insecurity or housing insecurity often face significant barriers to physical activity. Using a qualitative approach, 12 semi-structured one-to-one interviews were conducted with clients of a local charitable organisation who had been supported in undertaking physical activity. Interview transcript data was analysed using thematic analysis. The key theme that we identified was that physical activity support resulted in participants actively shaping their health and well-being in four key areas: mental, physical, social and behavioural health. These results are closely aligned with two established frameworks that describe well-being outcomes: Self-Determination Theory and Te Whare Tapa Whā (Māori Model of Health). This research highlights the significance of physical activity in improving the well-being of people in some marginalised communities, and the importance of localised organisations that facilitate these initiatives.

1. Introduction

It is well established that regular physical activity (PA) is important for health and well-being (World Health Organisation, 2020). While perceived by many of the general population as leisurely pursuit, PA is actually a crucial aspect of leading a healthy life that has been identified as being a significant contributor to positive mental, physical, and social health (World Health Organisation, 2020). As such, PA is effectively a human right (Messing et al., 2021) and PA-related facilities, goods and services should be accessible to marginalised communities (Tobin & Barrett, 2020).

However, in marginalised and vulnerable communities that are characterised by high financial insecurity and housing instability, opportunities for PA can be difficult to access. For example, financial and related barriers to PA are frequently reported in terms of price, lack of childcare, lack of time and unpredictable lifestyles (Dawes, Sanders, & Allen, 2019; Withall, Jago, & Fox, 2011). In addition, financial barriers to PA in marginalised populations are often compounded by concurrent

and often chronic physical and mental health conditions (Gregg & Bedard, 2016).

Previous research has highlighted the potential benefits of PA for members of marginalised and vulnerable populations. For example, in a mixed methods study of homeless men in Canada, Gregg and Bedard (2016) found that the perceived benefits of PA included empowerment, social connection, transferable life skills, achieving a desired appearance, increased confidence and the opportunity to spend time outdoors and connect with nature. Also using a mixed methods approach, Withall et al. (2011) found that benefits such as social connection, increased confidence and enjoyment were the main motivators for members of a low socioeconomic population in the UK in continuing to undertake PA.

Such benefits of PA for marginalised and vulnerable populations can be achieved through initiatives that improve their accessibility to PA. For example, Dawes et al. (2019) discovered that homeless women in the UK who were provided with equipment such as running shoes and the opportunity to run in a group setting reported improvements in physical and mental health and well-being (e.g., fitness gains and pain reduction,

*Corresponding Author: Ella Creagh, Department of Psychological Medicine, University of Otago, Wellington, New Zealand, creaghella@gmail.com

increased confidence and positivity, reduced loneliness). Similarly, sporting events such as the Homeless World Cup – a sporting initiative in which homeless people represent their country in a football tournament - have been shown to promote social connection, increase confidence and self-esteem and result in reduced drug use, in addition to reducing societal stigma (Magee, 2011).

1.1. Frameworks of well-being outcomes

The outcomes of PA for marginalised communities can be seen from the perspectives of well-established frameworks that describe well-being. One such example is self-determination theory (SDT), which is a universal framework that describes the role of the social environment in fostering positive well-being outcomes and ongoing motivation for a given activity (Ryan & Deci, 2000). This theory posits that individuals have three basic psychological needs: competency, relatedness, and autonomy. Competency refers to feeling confident and capable in expressing oneself and being active about doing so; relatedness refers to having a sense of belonging within a community; and autonomy refers to the feeling of being in control of one's decisions and actions (Ryan & Deci, 2002). According to SDT, individual well-being is maximised when these psychological needs are met by the person's social environment.

In Aotearoa New Zealand, Māori are over-represented in statistics for low socio-economic status, homelessness (housing insecurity), and poor health (Amore, 2016; Reid, Taylor-Moore, & Varona, 2014). Therefore, an important framework through which we can understand well-being from the perspective of Māori is Mason Durie's influential Te Whare Tapa Whā model, which was originally developed to better reflect a Māori world view (Durie, 1985). This model depicts the wharenuī (house), which represents overall health and well-being. The wharenuī is supported by four pillars: taha tinana (physical), taha whānau (social), taha hinengaro (mental) and taha wairua (spiritual). Within this framework, optimal well-being is achieved when these four pillars are balanced. A number of studies in Aotearoa New Zealand have also conceptualised the benefits of physical activity and exercise programmes using the Te Whare Tapa Whā model. These studies indicate that physical activity contributes to improvements in physical, spiritual, mental and social health, thereby restoring balance to the wharenuī for a wide variety of populations, including cancer survivors, pregnant women trying to quit smoking and people with Parkinson disease (Roberts et al., 2017; Mulligan et al., 2018; Matapo-Kolisko, 2021).

The SDT and Te Whare Tapa Whā frameworks are complementary. SDT focuses on the importance of the social context in fostering well-being, while Te Whare Tapa Whā recognises and responds to indigenous concepts of well-being. We would expect people receiving support to do PA to experience benefits related to well-being, and these benefits can be explored at individual, community, and population levels using the SDT and Te Whare Tapa Whā frameworks.

In Aotearoa New Zealand, some charitable organisations support PA opportunities for marginalised communities that are characterised by financial insecurity and/or housing insecurity. For example, Wellington City Mission is a charitable organisation based in Wellington that helps to reduce financial barriers to PA

by providing clients with subsidised or free leisure club passes, memberships to recreational clubs, and sports equipment. However, the effects of such support for PA in marginalised communities have yet to be fully investigated in Aotearoa New Zealand. Therefore, the primary aim of this research project was to explore the outcomes that clients of Wellington City Mission clients have experienced as a result of support in undertaking PA from the organisation.

1.2. Research question

The primary research question was: What impact have physical activity subsidies had in terms of supporting the well-being of individuals in marginalised communities?

2. Methods

2.1. Study design

A qualitative methodology was used to obtain an in-depth insight into the experiences of members of the Wellington City Mission community in terms of the outcomes associated with supported PA opportunities. One-to-one interviews allowed the interviewer (EC) to build rapport with the participants and facilitate the participants in feeling safe and comfortable when discussing personal information. This study was approved by the University of Otago Ethics Committee (ref.: D21/328) and all participants provided written informed consent.

2.2. Participants

The participants for this study consisted of twelve clients of Wellington City Mission. The participants ranged in age from 30 to 64 with mean age of 47 years. Ethnicities included Māori (n = 2), Turkish (n = 1), Japanese (n = 1) and Pākehā (NZ European) (n = 1), with eight participants choosing not to disclose their ethnicity when asked. There were three female participants and nine male participants. All participants had received support from Wellington City Mission in undertaking PA in the form of leisure club passes, swimming passes, sports equipment or sports club memberships. Two participants had children or grandchildren in their care, seven participants disclosed they were currently in an unstable housing situation, and five participants had experience with self-diagnosed mental health conditions (including bipolar disorder, depression, anxiety, post-traumatic stress disorder, and bulimia). Pseudonyms were used during analysis and reporting (and throughout this article) in order to protect participants' anonymity.

2.3. Recruitment

Participants were recruited via a poster containing the study information, which was displayed at Tā Te Manawa (the Wellington City Mission Community Lounge). Social workers and staff at Wellington City Mission also helped with recruitment by providing clients with study information. The interviewer (EC) spent time at Tā Te Manawa getting to know the manuhiri (guests) and participants were also recruited this way. Participants were

offered a \$20 grocery or petrol voucher as remuneration for participation.

2.4. Data collection

EC conducted semi-structured interviews onsite at Wellington City Mission from November 2021 to January 2022. Interviews followed a pre-determined interview guide, with questions divided into three main areas: barriers experienced by participants in accessing PA and how they had been supported in overcoming these barriers; the outcomes of participants' PA; and what participants would like support with to continue PA in the future. For the purpose of answering our research question, the outcomes of PA were the primary focus of the interview. The interview guide was inductive in nature – that is, no *a priori* model was presented to participants regarding potential PA outcomes, and participants were left to interpret outcomes according to their own perspectives. Participants were offered the opportunity to have a social worker present during the interview, an option taken by five participants. Interviews were digitally recorded and the transcribed verbatim using Temi, a secure online transcription program. We anticipated that we would require twelve participants, with the potential for more if data saturation was not achieved by this point (Guest et al., 2006). Following the interview with Participant 10, two of the research team (EC, MJ) undertook a preliminary analysis. Following the subsequent analysis of interviews with Participants 11 and 12 the research team decided data saturation had been achieved and recruitment ended.

2.5. Data analysis

Thematic Analysis (Braun & Clarke, 2006) was used to analyse the data. First, EC read through all the transcripts and identified quotes which were potentially relevant to the research questions. These quotes were then organised into a wide range of codes which were collated under the headings 'barriers to PA', 'facilitators of PA', 'outcomes of PA', 'praise for Wellington City Mission' and, 'the future'. These codes were discussed and refined by EC and MJ. Tables containing the codes and all the relevant quotes were then made by EC, allowing for overlap of quotes which were relevant to more than one code. EC and MJ then discussed how the codes could be arranged into themes and sub-themes and selected representative quotes for each sub-theme. The preliminary themes, sub-themes, quotes and codes were then shared with MH and PS and any discrepancies in analysis were discussed amongst the team until consensus was reached.

2.6. Member-checking

Member-checking was achieved by providing participants with a copy of the report. Participants were asked to respond within fourteen days if they had any concerns about the report, if they were not heard from it was assumed they were satisfied with our interpretation of the interview data. No participants responded.

2.7. Researcher self-reflection

In keeping with Thematic Analysis methodologies (Braun & Clarke, 2006), self-reflection was facilitated by notes made following each interview, and by discussion between the research team. This enabled the researchers to be made aware of their attitudes towards the outcomes of PA for marginalised communities and ensured that the influence of these attitudes on the process of analysis was minimised.

3. Results

3.1. Barriers

A summary of barriers is provided to contextualise the main study results. Participants reported key barriers to undertaking PA, of which accessibility was the most frequent. Other barriers included childcare obligations, mental and physical health conditions, and having to go through a clinical route to get support to do PA. These barriers and illustrative quotes can be seen in Table 1.

By helping their clients to overcome financial barriers in accessing PA, Wellington City Mission provided their clients the opportunity to actively and positively shape various aspects of their own health. These aspects included behavioural, mental, physical and social health; these interweaved and contributed to an overall improvement in health and well-being for the participants. A selection of these four key themes, sub-themes and illustrative quotes can be seen in Table 2, and a visual depiction of these themes can be seen in Figure 1.

3.2. Actively shaping mental health

This highlights the sub-theme of improvements in self-esteem and confidence, which fits into the theme of shaping mental health through PA. Eddie explains: "There's nothing like a bit of exercise to burn off some of the necessary worries and to feel good about your self-esteem". For Steven, improvements in self-esteem related to a healthier relationship with his body: "I don't hate seeing myself in a mirror...I genuinely would not go outside some days because I just didn't feel like being seen...but that's not stopping me anymore".

Another sub-theme of mental health was the idea that PA can help with emotional regulation via the expression of emotions. Participants liked having access to different types of PA which allowed them to express a range of emotions, for example Tracy described how she would "relax in the spa if that what it is and just chill or go to squash if you're angry and smash the ball". Steven also gained emotional regulation skills through PA which he was able to use in other areas of his life, "Where I work, we can have some pretty unfavourable people I have to remove...I don't get so anxious or stressed anymore...I don't have that temptation to fight anymore".

A prominent sub-theme of shaping mental health through PA was stress reduction. For Tracy, a mother of four children, this was about having time to herself which she did not normally get: "These are the sort of things that I don't put first in my life, but to...have something for me has been awesome". Sam said that

Table 1: Participants' barriers to physical activity.

Barrier	Sub-theme	Illustrative quote
Accessibility	Financial	"When you don't have a surplus on your income... it's just one of those things you have to go without"
	Geographical	"I had no vehicle so I would have had to bus all the way...or walk into town and that would have been no good for me cos you know once my anxiety hits, I freak out and I've got to go home"
Pain	Psychological	"I definitely was struggling (to undertake PA) when I was more depressed"
	Physical	"My back inhibits me a lot"
Family obligations		"Especially to re-spark that thing in me (playing squash) that I haven't been able to do due to... me having four kids"
Convoluting routes to PA support		"Unless a person can convince your doctor of a disability certificate...that you have a medical reason to exercise... not many people know how to do that...and not many doctors allow that"

Table 2: Key themes, sub-themes and illustrative quotes for the benefits of physical activity for clients of Wellington City Mission.

Theme	Sub-theme	Illustrative quote
Behavioural	Lifestyle changes	"When you've got someone who's lost weight, quit smoking, wants to go back to work, their faculties all back and is inspired again to start working for herself, you've got a win"
	Improved behavioural choice	"It's (PA) lifted (me) up to the point where I've made other changes as well now...I bought myself a Nutribullet"
	Role modelling for tamariki (children)	"Not only for me, for my kids to see me doing something positive...you can't buy that"
Mental	Hedonic well-being	"I love the way I feel after exercise...the endorphins, serotonin, those ones that make you feel good...you actually start to crave it eh"
	Emotional regulation	"It's a good way to just process any like bad emotion that I've got going on"
	Improvements in self-esteem and confidence	"I don't hate seeing myself in a mirror...I genuinely would not go outside some days because I just didn't feel like being seen...but that's not stopping me anymore"
	Stress reduction	"Swimming is different. You're in your own little zone...puts your mind in a different space"
	Management of existing mental illness/addiction	"You just push yourself, 'right I'm going to the gym, I'm gonna do this'...and that sort of kick-starts you out of your depression"
Physical	Weight management	"I go through like bingeing and restricting cycles with my food...which I've managed to break out of...so now I'm like losing maybe half a kilo a week max...it feels sustainable and good"

	Improvements in fitness and strength	"Instead of walking once around the block, I could walk four times around because of the swimming and it increased my strength in the back...that's the best bit actually"
	Managing an aging body	"I'm glad I'm still this active at fifty...when I was thirty I thought when you're fifty it's time to die you know...but I still feel like a young fella"
	Negotiating chronic physical conditions	"Walking down to the swimming pool on the concrete...it's very painful, so when I get in the water it's a relief...swimming has been a Godsend"
Social	Sense of community	"That's (going to the gym) actually exercising that (connection with other people), um, which you don't have so much when you're on a long term, minimal income...because of that financial ceiling, you are separated from society...that's what the pass is for"
	Spending quality time with whānau (family)	"They're (children of the participant) absolutely happy... they love going to the pools, it's the thing that we can do together as a family, it's our special treat time"
	Making new friends	"I know for myself, meeting my friend, it's been good having someone else to talk to because I cut everyone out of my life that was in the drug scene"
	Breaking down perceived social barriers	"All of a sudden, you're talking away with someone you don't know, who has a completely different lifestyle...it takes you out of your world"
	Reciprocity	"Just to know that there's other people out there that actually care about that side of things... where the price tag doesn't mean anything it's your well-being that means the most, then it makes you like, woah, there are these people care, then you can pay it forward"
	Family values	"I want to be in her (his daughter's) life as long as I can...if I want to be in her life, I have to be healthy"

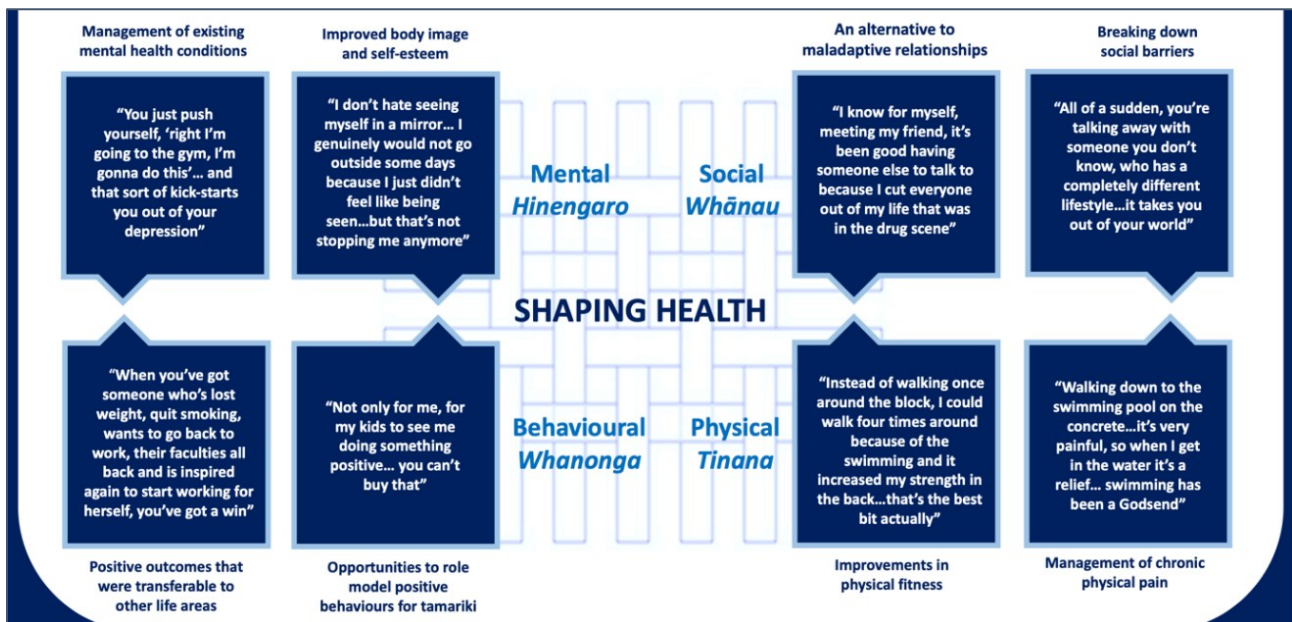


Figure 1: Key themes, sub-themes and illustrative quotes for the benefits of physical activity.

after exercising at the gym it feels like “a burden’s taken off my shoulders”, while Nathan stated that following an exercise session, he liked to sit in the sauna and get “rid of the baggage...release it with the vapour”. Participants also found that PA helped to clear their mind. For Fiona, swimming helped her achieve this, “You’re in your own little zone, the everyday traffic life’s not happening around you...puts your mind in a different space, almost hypnotic...maybe it comes back to being in the womb”.

3.3. *Actively shaping physical health*

PA also helped participants to positively shape their physical health in a variety of ways. A number of participants noticed improvements in their fitness and strength. Ethan noted his endurance improved: “I can ride to the top of the hill in one go without stopping, whereas a year ago there’s no chance of doing that”. Not only did improvements in fitness enable participants to be better at their preferred PA, but the benefits also extended to other PA they did in their everyday lives as Oliver explains: “Instead of walking once around the block, I could walk four times around because of the swimming and it increased my strength in the back...that’s the best bit actually”. For many participants, PA had contributed to weight loss which they were proud of. For example, Eddie stated: “I’m trying to lift my overall well-being and to keep just an aura of health and shed weight, and the more I shed the better I feel”. For Steven, PA helped him to reach a place of stability with his eating and weight: “I go through binging and restricting cycles with my food...which I’ve managed to break out of...now I’m losing maybe half a kilo a week max...it feels sustainable and good”.

Participants Eddie and Ethan highlighted a sub-theme of shaping physical health: using PA as a way to manage their bodies as they age, as Eddie explains “The better I can prepare myself (by doing PA) going into that age group...the better the outcome will be”.

For many participants, PA was also a way for them to negotiate chronic physical conditions. Tom experienced diabetic neuropathy and swimming was a form of PA he could actually undertake, and indeed provided pain relief for him: “Walking down to the swimming pool on the concrete...it’s very painful, so when I get in the water it’s a relief...swimming has been a Godsend”. Oliver had suffered back pain for years and the gym enabled him to strengthen other parts of his body to compensate for that pain: “When I first injured my back, I did a lot of weights and that strengthened my legs...because the back was always painful”.

3.4. *Actively shaping social health*

Participants were able to positively shape their social health through PA. Access to PA fostered an increased sense of community. For some, this came from doing group sports where they had other people looking out for them as Steven explains: “The community aspect of it has been really important to me...you’ve got people holding you accountable and also checking in on you if you don’t turn up”. Nathan felt his low income prevented him from socialising and the leisure pass enabled him to overcome this barrier: “because of that financial

ceiling, you are separated from society”. Several participants expressed that they had met people who led different lives to their own, as highlighted by Fiona: “I’ve learned all about his culture... I would never have known if I hadn’t met him at the pools”. Eddie expressed empathy and understanding towards other people in transitional housing whom he had met through sports days organised by Wellington City Mission, “It’s a lovely social thing to do...we’re all in the same boat, we have our own stories, we have different stories and we shouldn’t pre-judge people because they’ve got their own battles going on”. Breaking down these social barriers not only enabled participants to learn about, and appreciate, other’s lives but also to make new friends. For Fiona this was particularly important because she felt isolated after having removed herself from her prior, unhealthy social circle: “I know for myself, meeting my friend, it’s been good having someone else to talk to because I cut everyone out of my life that was in the drug scene”.

For two participants with children and grandchildren, the swimming passes and zoo passes were particularly valuable as they enabled them to spend quality active time as a family, something they couldn’t achieve without financial support, as described by Fiona: “Just listening to them conversing and socialising and you know laughing their heads off...it was really cool”. For Terry, it was not only important to share PA with his family, but to do PA himself to stay healthy so he could support his family “I want to be in her (his daughter’s) life as long as I can...if I want to be in her life, I have to be healthy”.

Many participants expressed gratitude for the opportunity to undertake PA. For some participants this helped to positively shape their social health by initiating reciprocity of kindness as Tracy explains: “Just to know that there’s other people out there that actually care about that side of things, where the price tag doesn’t mean anything it’s your well-being that means the most, then it makes you like, woah, there are these people (that) care, then you can pay it forward”.

3.5. *Actively shaping health behaviours*

PA contributed to healthy, holistic lifestyle changes participants made, as expressed by Tracy: “Having those positive things (squash and swimming) it brings everything else up to par...doing these things improves our whole lifestyle”. A number of participants expressed that they were motivated to improve their lives instead of killing time until they found accommodation, as Eddie explains: “I want to get into a good sort of work, back into the rhythm of life again...so I’m utilising this time as much as I can to benefit myself in order to go forward”.

Other participants found that PA helped them to quit unhealthy habits and developing healthy ones. Fiona credited swimming as helping her to quit smoking: “I did the (quit) smoking program, I tried everything, I could not quit these cigarettes...I never went ‘I’m going to swim to quit smoking’...it just started happening as a natural process”. Fiona had also made a number of other positive lifestyle changes since starting swimming which she was proud of, “When you’ve got someone who’s lost weight, quit smoking, wants to go back to work and their faculties all back and is inspired again to start working for herself, you’ve got a win”. Some participants had made healthy changes to their diet since starting PA, for example Eddie said he

now enjoyed making smoothies for breakfast: “It’s (PA) lifted (me) up to the point where I’ve made other changes as well now...I actually bought myself a Nutribullet”.

For those participants with children and grandchildren, them doing PA was a way for them to model making healthy behaviour choices, as Tracy explains: “It lets them know that hopefully when they get older, they’re able to do these sorts of things (PA) as well...just having that foundation set in place for them”. Tracy expressed that this was very important to her because she didn’t have these kinds of positive things in her life when she was a child: “Just having that place to go you know like I was a kid that didn’t have anywhere to go... it’s huge...without the help that I’ve gotten, I wouldn’t have been able to provide that for them”.

3.6. Gratitude

One significant cross-cutting theme that emerged in the data was the theme of gratitude. Participants were grateful for the opportunity to do PA, as Tracy explains: “Just to get that other side of life you that I probably took for granted at a young age and now just being able to do it (PA) means so much”. For another participant, Eddie, him making the most out of his pass was his way of expressing gratitude: “I feel happier because I knew it’s something I had to do and it’s been provided for me on a plate... I’ve got all the help that I need...that’s the spark that motivates me because it’s been gifted to me”. By being given the opportunity to do PA, participants not only received benefits for their health, but also experienced what it is like to be shown kindness.

4. Discussion

The aim of this research was to explore the outcomes of doing PA for marginalised and vulnerable members of the Wellington community. We collected the stories of twelve members of this population who had been supported to undertake PA by receiving leisure club passes, sports club memberships, and sports equipment from Wellington City Mission. In supporting their clients to overcome financial barriers to accessing PA, Wellington City Mission provided their clients with the tools to positively and actively shape their health and well-being. Participants described improvements in aspects of their physical, social, mental and behavioural health and these contributed to an overall improvement in the well-being of participants.

Our results can be interpreted within the framework of Te Whare Tapa Whā, which describes how hauora (well-being) consists of four pillars - taha tinana (physical), taha whānau (social), taha hinengaro (mental) and taha wairua (spiritual) (Durie, 1985). Improvements in three of these four cornerstones were reported by participants. Taha tinana was strengthened by participants improving their management of their fitness, weight, injuries and illness. Taha whānau was strengthened by participants sharing PA with whānau (family) and new friends and feeling a sense of community. Taha hinengaro was strengthened by participants improving their self-esteem and management of mental health symptoms. Thus, by providing access to PA, Wellington City Mission enabled participants to strengthen these three pillars, which in turn contributed to an overall improved well-being.

The fourth pillar of Te Whare Tapa Whā – taha wairua – was not explicitly reported by participants. However, this is not to suggest that outcomes related to wairua were not experienced by participants, but it could be argued that spiritual aspects of health are conceptually more difficult to verbalise and discuss as opposed to physical, mental and social aspects of health.

From a motivational perspective, our results demonstrated how participants experienced feelings of self-determination and autonomy, as described within the framework of SDT. Within SDT, Deci and Ryan (1985) described how psychological well-being and ongoing motivation is maximised when an individual’s social environment fosters social connection and autonomy. In the current study participants expressed that their three psychological needs (competency, relatedness, autonomy) were supported in the context of PA. PA improved participants’ relatedness by facilitating new friendships and quality time with whānau (family) and breaking down social barriers. Participants reported improved confidence, fitness and management of their physical and mental health conditions, all of which contribute to increased perceived competency. PA encouraged autonomy within participants by allowing them to take control of their health, make healthy behavioural choices and make the most of the situation they were in. Wellington City Mission facilitated clients’ autonomy as they were not instructing their clients about what to do for their health, but rather provided them with the opportunity to improve their health in ways that were meaningful to them and that were characterised by choice. Hence, participants felt a sense of achievement and autonomy at having undertaken PA, and reaped the benefits that come with PA. As an organisation, Wellington City Mission supported the psychological needs of their clients by providing them with access to PA. With these needs supported, members of marginalised communities can be empowered and motivated to continue to do PA, and make and maintain other healthy life choices, contributing to an overall improved state of well-being.

4.1. Limitations and strengths

A limitation of this study was that the participants were self-selecting. We did not interview anyone who had negatives experiences with PA and/or Wellington City Mission, and as such we must acknowledge the potential for positive-experience bias in this study.

With regards to study strength, to our knowledge this study is the first to explore the outcomes resulting from PA support for people in marginalised and vulnerable communities within Aotearoa New Zealand. Therefore, the study offered a population that is often unheard the opportunity to share their voice, thereby providing an important insight into the lives of people in these communities and how we can best support them in improving and maintaining their health through PA.

4.2. Future research

Quantitative data for the effects of PA subsidies might be used to complement the rich qualitative data obtained here, in the form of surveys or intervention. Questionnaires exist that align with the frameworks described here. For example, in the framework of SDT, general motivation questionnaires and those specifically in the context of PA exist (Behavioural Regulation for Exercise;

Markland & Tobin, 2010), as do questionnaires that assess perceptions of psychological need support (Healthcare Climate Questionnaire; Williams & Deci, 2001) and satisfaction (PNSE-PA; Gunnell et al., 2012). Likewise, tools are available that can be used to quantify Māori well-being across the domains of Te Whare Tapa Whā (Mason & Kingi, 2000).

It would be valuable to explore the ongoing barriers that members of this population face in accessing PA. As demonstrated in this article, Wellington City Mission has provided support to overcome the major barrier of financial accessibility, however other barriers may still exist for participants such as family obligations and geographical accessibility. Investigating these ongoing barriers would add to the value of the work done here, enabling community services and organisations to further support these people in maintaining healthy behaviours.

Further, it would be useful to ascertain the cost-effectiveness of providing PA subsidies to marginalised communities. For example, researchers have used frameworks such as the human capital model (HCM) to explain how PA can be a platform for societal and individual gains across capitals relating to physical, mental, social and – in some cases – financial capital. At present, funding for such subsidies is an ongoing issue in the not-for-profit sector. Considering the potential for increased capital supported by such programmes, providing an argument for continuous funding would be of great benefit to funders, organisations, and beneficiaries alike.

5. Conclusion

Our findings suggest that providing marginalised communities with opportunities to do PA facilitates them in positively and actively shaping their health and well-being and highlights the importance of providing support for PA in the community. This is important for community organisations such as Wellington City Mission in terms of seeking ongoing funding, which can be strengthened in future research by incorporating quantifiable cost-effectiveness analyses. The research also highlights the importance of local organisations as local champions who are key in providing the practical, financial and emotional support that their clients require in order to do PA. Importantly, the study gave members of marginalised and vulnerable communities a voice; by expressing their thoughts and needs, the research has also supported them in further shaping their health in the hope that Wellington City Mission and other services will respond accordingly. Overall, this study demonstrates the multi-faceted benefits that PA can provide and reminds us why PA is considered to be a human right and crucial to leading a healthy life.

Conflict of Interest

The authors declare no conflict of interests.

Acknowledgment

We acknowledge the participants of this research, and the people at Wellington City Mission for both their work in the community and for supporting this research. We also acknowledge the University of Otago for funding this research.

References

- Ahmed, F., Zuk, A. M., & Tsuji, L. J. S. (2021). The impact of land-based physical activity interventions on self-reported health and well-being of indigenous adults: A systematic review. *International Journal of Environmental Research and Public Health*, *18*(13), 7099. <https://doi.org/10.3390/ijerph18137099>
- Amore, L. (2016). Maori homelessness: Basic statistics. *Parity*, *29*(8). <https://search.informit.org/doi/10.3316/informit.451829364265689>
- Bailey, R., Hillman, C., Arent, S., & Petitpas, A. (2013). Physical activity: An underestimated investment in human capital? *Journal of Physical Activity and Health*, *10*(3), 289-308.
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77-101.
- Dawes, J., Sanders, C., & Allen, R. (2019). “A Mile in Her Shoes”: A qualitative exploration of the perceived benefits of volunteer led running groups for homeless women. *Health & Social Care in the Community*, *27*(5), 1232-1240.
- Durie, M. H. (1985). A Māori perspective of health. *Social Science & Medicine*, *20*(5), 483-486.
- Durie, M. H., & Kingi, Te K. R. (2000). *Hua Oranga: A Māori measure of mental health outcomes*. Ministry of Health. [http://www.moh.govt.nz/NoteBook/nbbooks.nsf/0/2E3845581DC2CF9DCC257F070007CD17/\\$file/Hua Oranga Kingi & Durie 2000.pdf](http://www.moh.govt.nz/NoteBook/nbbooks.nsf/0/2E3845581DC2CF9DCC257F070007CD17/$file/Hua%20Oranga%20Kingi%202000.pdf)
- Gregg, M. J., & Bedard, A. (2016). Mission impossible? Physical activity programming for individuals experiencing homelessness. *Research Quarterly for Exercise and Sport*, *87*(4), 376-381.
- Guest, G., Bunce, A., & Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. *Field Methods*, *18*(1), 59-82.
- Gunnell, K. E., Crocker, P. R., Wilson, P. M., Mack, D. E., & Zumbo, B. D. (2013). Psychological need satisfaction and thwarting: A test of basic psychological needs theory in physical activity contexts. *Psychology of Sport and Exercise*, *14*(5), 599-607.
- Kolt, G. S., Paterson, J. E., & Cheung, V. Y. M. (2006). Barriers to physical activity participation in older Tongan adults living in New Zealand. *Australasian Journal on Ageing*, *25*(3), 119-125.
- Magee, J. (2011). Disengagement, de-motivation, vulnerable groups and sporting inclusion: a case study of the Homeless World Cup. *Soccer & Society*, *12*(2), 159-173.
- Markland, D., & Tobin, V. J. (2010). Need support and behavioural regulations for exercise among exercise referral scheme clients: The mediating role of psychological need satisfaction. *Psychology of Sport and Exercise*, *11*(2), 91-99.
- Matapo-Kolisko, M. (2021). Experiences of physical activity and exercise in cancer patients and survivors using Te Whare Tapa Whā [Master's thesis, Otago Polytechnic] <https://www.op.ac.nz/assets/OPRES/SEH-Matapo-Kolisko-2021-Thesis-redacted.pdf>
- Messing, S., Krennerich, M., Abu-Omar, K., Ferschl, S., & Gelius, P. (2021). Physical activity as a human right? *Health and Human Rights*, *23*(2), 201-211.

- Mulligan, H., Armstrong, A., Francis, R., Hitchcock, H., Hughes, E., Thompson, J., Wilkinson, A., & Hale, L. (2018). Engagement in exercise for people with Parkinson's: What is meaningful? *New Zealand Journal of Physiotherapy, 46*(1), 19-28.
- Reid, J., Taylor-Moore, K., & Varona, G. (2014). Towards a social-structural model for understanding current disparities in Māori health and well-being. *Journal of Loss and Trauma, 19*(6), 514-536.
- Roberts, V., Glover, M., McCowan, L., Walker, N., Ussher, M., Heke, I., & Maddison, R. (2017, 2017/11/01). Exercise to support indigenous pregnant women to stop smoking: acceptability to Māori. *Maternal and Child Health Journal, 21*(11), 2040-2051.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist, 55*(1), 68-78.
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic dialectical perspective. *Handbook of Self-determination Research, 2*, 3-33.
- Tobin, J., & Barrett, D. (2020). The right to health and health-related human rights. In L. O. Gostin, & B. M. Meier (Eds.), *Foundations of Global Health and Human Rights*. (pp. 67-88) New York: Oxford University Press.
- Williams, G. C., & Deci, E. L. (2001). Activating patients for smoking cessation through physician autonomy support. *Medical Care, 39*, 813-823.
- Withall, J., Jago, R., & Fox, K. R. (2011). Why some do but most don't. Barriers and enablers to engaging low-income groups in physical activity programmes: a mixed methods study. *BMC Public Health, 11*(1), 507. <https://doi.org/10.1186/1471-2458-11-507>
- World Health Organization. (2020). Physical activity. Retrieved from <https://www.who.int/news-room/factsheets/detail/physical-activity>