FROM THE COUCH (FTC) AND BEYOND

A formative evaluation of *Brown Buttabean Motivation's FTC programme* in collaboration with Total Health Care

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JUST START. NO EXCUSES. NO JUDGEMENTS

Health New Zealand
Te Whatu Ora

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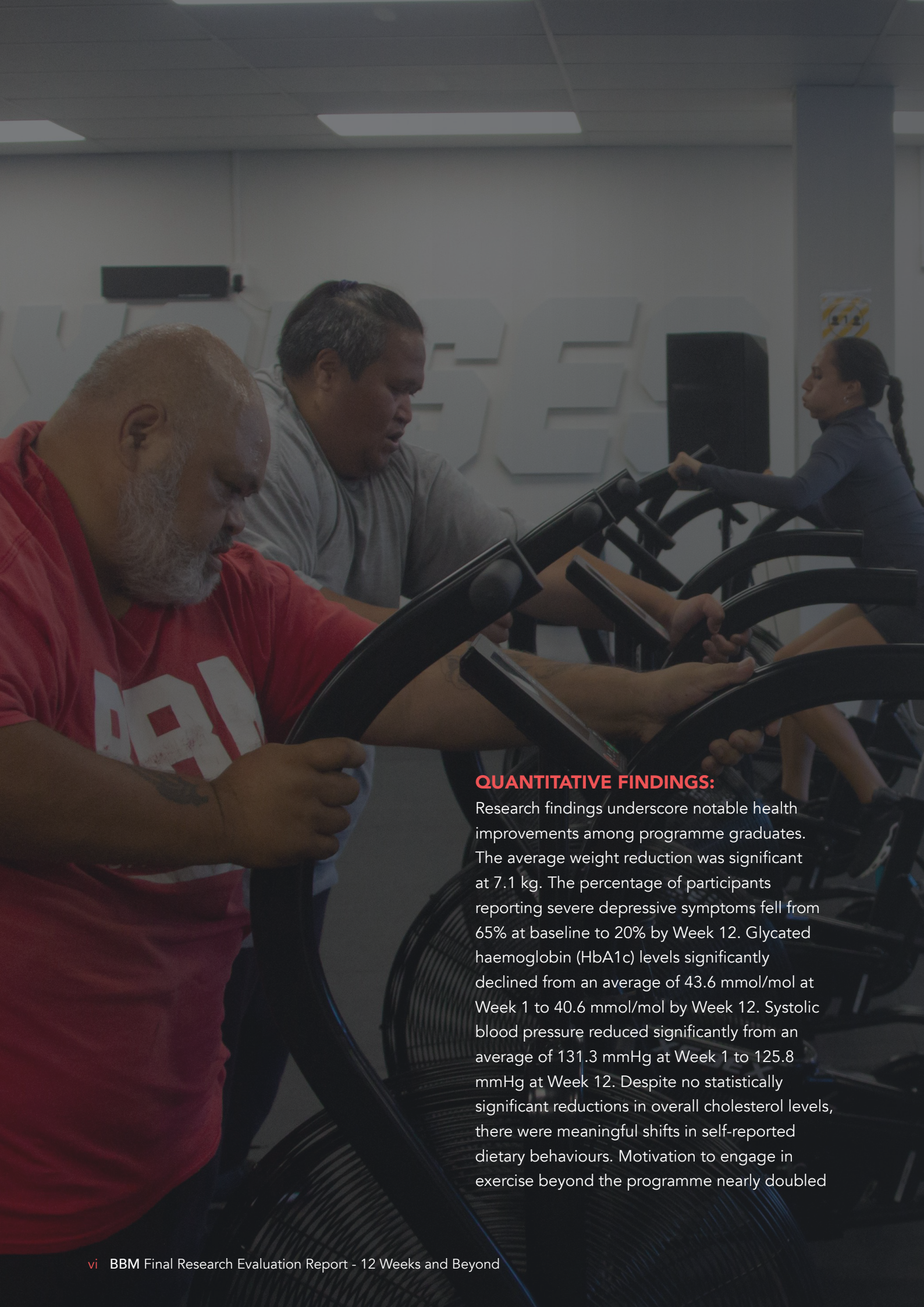
Executive Summary

BACKGROUND AND FOCUS:
Obesity is a growing problem, especially for economically disadvantaged Māori and Pacific communities. There are three primary strategies to reduce obesity: regulation of unhealthy foods; government and advertising strategies to teach and encourage healthy eating habits; and interventions to encourage healthier lifestyles and weight loss. While each has value, this report focuses on the third strategy in the form of an innovative community-based intervention.
Te Whatu Ora (Ministry of Health) and Total Health Care (a large Primary Health Organisation) were concerned about obesity reaching epidemic proportions, and the lack of effective remedies in Aotearoa New Zealand. These organisations collaborated to develop a proposal to fund Brown Buttabean Motivation (BBM) to provide its 12-week From the Couch (FTC) lifestyle-change and weight-loss programme for Māori and Pacific clientele in South and West Auckland. This report presents the bio-psycho-social impacts of the programme, supplemented by 11 participant cases.

PROGRAMME: BBM is a community-based healthy lifestyle-change organisation rooted in Pacific and Māori values. BBM engages cliental living with obesity in the obesogenic environments of South and West Auckland to support their adoption of healthier lifestyles. The free 12-week exercise and lifestyle-change programme is a community-led health initiative partnering BBM with health professionals from Total Health Care (THC). This programme involves 3 sessions a week: 2 in the gym focused on exercise, and one session involving nutrition education and practice.

PARTICIPANTS AND RESEARCH DESIGN: Through social media, BBM recruited 109 (predominantly Māori and Pacific) clients. This report presents the physical and mental health impacts of the programme for 3 client cohorts (Wave 2, n = 50; Wave 3, n = 29; Wave 4, n = 30). Health impacts were assessed by participants completing physical exams and matched entrance and exit surveys measuring bio-psycho-social markers of health and exercise. A total of 55 participants (Mage = 41.3 years, SDage = 10.1; 55% male) were retained for measurement of biological markers and 72 for the survey, for an overall retention rate of 57%. To better understand the programme's implications after the completion of the 12weeks, 11 experiential case studies were conducted: eight had completed FTC and continued to engage with the BBM follow-up programme, and three completed FTC but did not continue with BBM programmes.



QUANTITATIVE FINDINGS:

Research findings underscore notable health improvements among programme graduates. The average weight reduction was significant at 7.1 kg. The percentage of participants reporting severe depressive symptoms fell from 65% at baseline to 20% by Week 12. Glycated haemoglobin (HbA1c) levels significantly declined from an average of 43.6 mmol/mol at Week 1 to 40.6 mmol/mol by Week 12. Systolic blood pressure reduced significantly from an average of 131.3 mmHg at Week 1 to 125.8 mmHg at Week 12. Despite no statistically significant reductions in overall cholesterol levels, there were meaningful shifts in self-reported dietary behaviours. Motivation to engage in exercise beyond the programme nearly doubled

from an initial mean of 0.5 at Week 1 to 0.9 by Week 12. Those achieving the most substantial weight loss had higher session attendance (averaging 30 of 36 sessions), while those with minimal weight loss attended fewer sessions (average of 18). Moderate and high weight-loss groups displayed the most positive changes in diastolic blood pressure, total cholesterol, and systolic blood pressure.

QUALITATIVE FINDINGS: The 11 cases offer insights into how clients experienced the programme, its impacts, and why some graduates disengaged with BBM after completing the 12-weeks. Key themes considered across the cases were Personal Mortality, Transformation of Self and acts of service, Integration of THC Services, a No-Excuses Mindset, Whakamā, and Moving Towards Tino Rangatiratanga (self determination). Central to the success of this programme was the cultivation of a supportive, nonjudgmental, fun atmosphere, where trainers helped participants feel comfortable as part of the exercise community. All cases spoke to participants' relational orientations to health, lifestyle change, and the programme. Feeling healthier physically and psychologically was entwined with a greater sense of self-purpose and being able to support others. Participants appreciated how seamlessly THC professionals were integrated within the programme culturally, and how accessible healthcare became for them as a result. The mantra of "No Excuses" was consistently emphasised across the cases and was associated with many starting to grow healthy food. A key issue that functioned as a barrier to continued engagement with BBM in three cases was feelings of whakamā. Complexities also emerged around Tino Rangatiratanga and the transition for some towards less direct support from BBM for sustaining their lifestyle changes. For some people, extra guidance around self-determination at the end of the twelve weeks could be helpful to maintain lifestyle change.

CONCLUSIONS:

The quantitative trend line from start to completion of the 12-week FTC programme and improved health is substantive and robust. This research supports the conclusion that the supportive, nonjudgemental, and peer-based educational environment cultivated in the programme can motivate and guide a significant number of clients through weight loss, exercise, and dietary improvements. Programme funding should be scaled up to support higher numbers of clientele.

Introduction: Obesity, Research and Programmatic Responses

Globally, at least 2.8 million people die yearly as a result of obesity and/or weight-related complications (World Health Organization; WHO, 2023). The increasing level of obesity is a serious public health issue (Gortmaker et al., 2011; Jaacks et al., 2019), connected to class- and ethnicity-based inequalities that are global in scale The World Obesity Federation's Atlas (2023) stated that while not one country reported a decline in obesity over the last decade, in high income countries, it is typically lower income individuals who suffer more from obesity (Pampel et al., 2012). This is because they are more likely to live in obesogenic environments characterized by a plethora of fast-food outlets and relatively few grocery stores (Giskes et al., 2011; Pearce et al., 2007). Relatedly, in Aotearoa New Zealand, cardiovascular diseases of the heart and blood circulation are leading causes of years lost to premature mortality: particularly for Māori and Pacific peoples (Ministry of Health, 2022; Selak et al., 2020). The risk profiles of these groups are reflected in negative mortality data, with Māori experiencing earlier deaths at double the rate for European/Other, and Pacific peoples at 1.8 times that rate for European/Other (Te Whatu Ora, 2024). There are system-level features that contribute to obesity in societies such as ours today, including lower income persons living in more obesogenic environments (Giskes et al., 2011; Pampel et al., 2012; Pearce et al., 2007), with Aotearoa ranked 18th with an obesity rate of 31.07% (World Obesity Federation, 2023).

Despite calls for urgent interventions to achieve more equitable health outcomes for these population groups (Nelson, 2002; Thurow, 2022), literature reviews have reported mixed results (Mak et al., 2022; Seo & Saa, 2008; Tamayo et al., 2021). One reason even well-funded interventions (De Henauw et al., 2015) fail to reduce obesity and associated negative health outcomes is insufficient participant adherence to lessons from programme designers (Nickel & von dem Knesebeck, 2020). Relatedly, if obesity is a public health issue that disproportionately affects lower socioeconomic status (SES) people and ethnic minorities in wealthy societies, efforts aimed at individual weight loss and healthier lifestyles may be only one important approach in our collective efforts to address these issues. Also relevant is the need to work with communities in culturally competent ways with local leadership, rather than imposing generic interventions on them (Brach & Fraserirector, 2000; McElfish et al., 2018; McGregor et al., 2019; Truong et al., 2014). Kilbourne et al. (2006, p. 1118) have argued that programmes successful in reducing health disparities have two common features: they were customised a priori to address the origins of health disparities among their target population (i.e., individual, provider, and system-level factors within a vulnerable group), and they used state-of-the-art methods for implementation within specific vulnerable groups.

Customisation as a foundation of programme development can be by communities,

of communities, and for communities, whereby professional support flows through established community-based relationships. This orientation is important because expert advice and interventions from high-status professionals are often not trusted, nor is their advice always adhered to within underserved minority communities (Smirnoff et al., 2018). Evidence and experiences of African-American communities being underserved by their country's medical system are well-documented (Jaiswal & Halkitis, 2019; Kennedy et al., 2007), with racism (Hamed et al., 2022; Hammond, 2010) and poor communications (Cuevas et al., 2016; Sanders et al., 2019) being important mediating factors. These experiences of feeling marginalised and being underserved are experienced by economically disadvantaged minorities around the world (Gopalkrishnan, 2021), represented by Māori and Pacific peoples in Aotearoa in the present research (Ministry of Health, 2020).

While much has been written about community-based health promotion (Anderson et al., 2015; Nickel & von dem Knesebeck, 2020), rigorous longitudinal studies documenting effective lifestyle change and weight loss in underserved and ethnic-minority communities are few (Kaholokula et al., 2018; Mack et al., 2022). What available research there is tends to be focused on North American ethnic minorities, so research with diverse groups in other national contexts is urgently needed. Ameliorative efforts including clinical trials to address this situation have shown that nonsurgical weight-loss interventions can work (Appel et al., 2011), but meta-analytical reviews have sometimes found minimal effects (Booth et al., 2012). Reviews of commercial weight-loss programmes in the US have shown that intervention effect sizes are small (Gudzune, 2015) and noncumulative over time, with peak weight loss at 6 months following intervention, according to a review of impacts extending out to 48 months (Franz et al., 2007). Bariatric surgery has enduring effects because it is a physical change to the individual (Elder & Wolfe, 2007) resulting in long-term appetite loss, but this is a prohibitively expensive procedure available only to the rich in rich societies.

REDUCING HEALTH DISPARITIES FOR MĀORI AND PACIFIC PEOPLES IN NEW ZEALAND

New Zealand is a settler colonial state in the South Pacific with high levels of health inequality (Ministry of Health, 2020). Māori, the Indigenous peoples of this land and the largest ethnic minority, have on average, an 8-year shorter lifespan than NZ Europeans, the ethnic majority, while Pacific peoples, more recent immigrant groups from the South Pacific, have 6-year shorter lifespans (Te Whatu Ora, 2024). These groups also experience worse outcomes than NZ Europeans on all measures of health, from system access, to obesity, to manifestations of chronic disease (Ministry of Health, 2020). A number of studies have found that health disparities between Māori and Pacific and NZ Europeans are influenced by a nexus of economic disparities and discriminatory sociocultural structures (Gurney et al., 2020). Importantly, pre-colonisation, early European explorers of the Pacific noted the lean physique of Māori and Pacific peoples with observations stating that the average man was "…the size of the larger Europeans, stout, and active, fleshy but never fat" (Hawkins, 2021, p. 107). With more than 50% of rugby players in Aotearoa New Zealand being Māori and Pacific (Palenski, n.d.), it can be seen that the physiology of Māori and Pacific people thrives in environments that promote physical activity and wellbeing. In contrast, obesogenic environments can lead to detrimental health outcomes.

Successive generations of healthcare professionals have largely failed to close this gap, though not through lack of effort (Keene & Dalton, 2021). It is difficult to change health disparities embedded in the history and social structure of a society, especially if that history involves colonisation (Smith, 1999). In this context, progressive health funders and

some mainstream health providers are looking beyond top-down, expert-driven interventions to test the effectiveness of bottom-up efforts by communities. Mack et al. (2022) have emphasised the importance of such community-led initiatives in which services are organised by the people, for the people. Similarly, Kaholokula et al. (2018) and McElfish et al. (2018) concurred that community-based health initiatives can be effective for Pacific communities. The present study adds to this literature by documenting an effective community-based intervention for Māori and Pacific peoples living in less-affluent neighbourhoods in Auckland.

BROWN BUTTABEAN MOTIVATION AND ITS COMMUNITY ETHOS OF PRACTICE

Both the Long-Term Conditions Team in Te Whatu Ora and THC independently identified Brown Buttabean Motivation (BBM) as a community-based NGO equipped to lead transitions towards healthier lifestyles among underserved ethnic minorities (Nua, 2023). Te Whatu Ora agreed to seed-fund a collaboration whereby THC provided medical expertise to support BBM to extend its free healthy lifestyles programme to wider cohorts of underserved populations in South and West Auckland. Background regarding BBM and its programmes is available through preliminary reports published by Savila and colleagues (2021). These articulate the origins and ongoing practices of its organisational ethos, "as free community bootcamps offering exercise, motivation and nutritional advice, focused on enabling Pacific and Māori people to enact ongoing healthy and active lifestyles" (p. 636). Savila et al. (2022) have further reported qualitative findings showing that BBM's practices were consistent with holistic models of Māori and Pacific health, which focus on the familial foundations of relational, physical, mental, and spiritual wellbeing, as well as cultural factors (Alefaio-Tugia, 2022; Durie, 1984, 2001). These understandings emphasise how health is shaped by various entanglements spanning relational, psychological, spiritual, familial, and physical elements that are all interconnected and mutually reinforcing. BBM's FTC programme was evaluated in 2020 alongside other bootcamps the organisation offers, revealing that for every dollar invested, BBM delivers $13.50 of measurable good to Aotearoa New Zealand (Impact Lab, 2020). This return was measured by quantifying social values, such as improvements in physical and mental health which, in turn, reduce cardiovascular disease and diabetes. This evaluation was conducted between March 2019 and March 2020, before the THC partnership began which has more than likely elevated impacts that are yet to be fiscally measured.

Figure 1
Brown Buttabean Motivation Return on Investment

Note. *Source: Impact Lab, 2020*

FTC involves BBM providing the venue and ethos of the programme and THC providing medical support, with Te Whatu Ora seed funding enabling the provision of the programme for free to clients. FTC reflects the ethos of BBM as a community-based organisation steeped in Māori and Pacific values, which emphasise relational understandings of socioeconomic and health issues. For BBM it is the trust that is cultivated between clients and the health team that is central to promoting lifestyle change with clients.

Specifically, FTC is a free exercise and lifestyle-change programme designed as a first step towards wellness for underserved populations struggling with obesity in South and West Auckland. The programme runs for 12 weeks, with three, 1-hour-long sessions per week.

In accord with the international literature (Hamman et al., 2010; Kirk et al., 2012), the programme includes different components, with the exercise component (2 days a week) designed to complement the diet and nutrition component (once a week). This is a peer-based exercise and dietary advice programme that involves the cultivation of a positive and self-reinforcing community of practice grounded in Māori and Pacific relational understandings of wellness (Savila et al., 2022). These necessary relationships are expediated by the trainers coming from similar backgrounds to, and working as role models for the programme participants, who reported being well-supported in their efforts towards lifestyle change (Finau, 2024). BBM trainers tailor the exercises to the abilities of the participants (e.g., some participants do push-ups vertically against a wall instead of horizontally) and work with clients to create a safe environment to support clients to engage in weight loss. There is less focus on the individualistic psychological factors like body image and self- or peer-esteem that are prevalent in Western bio-psycho-social models (Ricciardelli et al., 2003), and more focus on community participation and support.

The Present Study: Intent and Method

PROJECT INTENT

Given the current failures by mainstream health services to respond effectively to underserved minority communities and the lack of evaluative research with community-led initiatives, this research aimed to bridge the gap and evaluate the effectiveness of the response by a community-led organisation (BBM) partnered with a front-line medical services provider (THC). It was hypothesised that participation in BBM's FTC programme would be effective in improving a holistic suite of bio-psycho-social measures of participant wellbeing, including weight, blood pressure, diabetes risk, depressive symptoms, and self-reports of exercise and eating habits. In addition to the quantitative study outlined below, 11 experiential case studies were conducted to provide a qualitative understanding of how and why community-based health interventions work during the 12-week programme and beyond. This report is based on a mixed methods design including quantitative biometric and qualitative experiential components to assess the health impacts of participation in the From the Couch lifestyle programme.

INITIAL FIELDWORK AND PARTICIPANT RECRUITMENT

As part of this evaluation, three members of the Massey research team were on the ground at the BBM gym for considerable numbers of sessions with the first four client cohorts. Two wrote master's theses from their experiences, which were grounded in cultural participatory immersion, interviews, and talanoa (Finau, 2024; Nua, 2023). Two of these researchers then conducted 11 interviews with FTC graduates and attended the FTC 2.0 classes, which are classes available for graduates of FTC and act as a stepping stone to group fitness classes. Another PhD student was responsible for the quantitative analyses of the biometric and survey elements of this team research effort.

Participants were recruited via BBM's social media channels for the cohorts described here. BBM founder Dave Letele posted a video on BBM's various social media channels offering the programme to interested followers saying, "Transform your life with BBM. We have a free Health and Wellbeing programme designed for those with long-term health conditions…". No explicit inclusion or exclusion criteria were applied to the resulting self-selected sample who responded to this call. Some of the respondents who were physically fitter were assigned to a more advanced form of the programme (FTC 2.0), a more advanced lifestyle-

change programme. All remaining participants had body mass indices (BMI) >= 30 and formed an initial FTC programme cohort that was augmented by BBM staff calling people in the community who were known to be clinically obese and registered with THC. Of the 28 clients who agreed to join FTC on the telephone, only 4 turned up for the first session. The first cohort was hence treated as a pilot study (no results are reported here from this cohort).

Subsequently, a total of 109 participants across three cohorts (Wave 2, n = 50; Wave 3, n = 29; Wave 4, n = 30) signed up for FTC and completed an entrance survey measuring bio-psycho-social markers of health and exercise. Each cohort was assigned to do the prescribed activities together every week for 12 weeks. At the end, participants were instructed to complete an identical exit survey, and the same physical measurements were taken. A total of 55 participants were retained for measurement of biological markers (Mage = 41.3 years, SDage = 10.1; 55% male; see Table 1 for details), and 72 for the survey, for an overall retention rate of 57%. All measures were taken prior to the first session, and at 12 weeks, at the BBM gym. Results are reported for participants with both Week 1 and Week 12 data, to allow pre- and postintervention comparison of descriptive statistics of the sample across cohorts at Week 1 (N = 109).

The 12-week programme was completed by two-thirds of participants. The sample consisted of over 50% Māori and 25% Pacific. Those who completed showed improved mental and physical health outcomes. Those who continue to participate have made life changes benefiting them physically, mentally, socially and culturally.

TABLE 1
PARTICIPANT BIOGRAPHICAL MARKERS

ETHNICITY	N	AVERAGE STARTING WEIGHT IN KG (SD)	WEIGHT CHANGE (WEEK 12)	STARTING BMI	
				OVERLY OBESE (<35)	OBESE (30 - 35)
NZ Maori	29	189 (58)	-4.91	29	0
Cook Island Maori	21	184 (53)	-12.82	18	3
European/ Pakeha	19	138 (46)	-2.81	12	7
Pacific	26	220 (64)	-13.83	23	3
Southeast Asian	5	160 (84)	+1.34	3	2
Other Ethnicity	9	177 (32)	-11.1	7	2
Averages and Totals	109 55	178 (58)			

Note. Weight changes are based on the 55 participants that completed the 12-week objective measure; the starting weight reported above is based on N = 109.

Biometric data were collected from three cohorts of FTC from June 2022 to May 2023. It should be noted that some of the programme sessions for the cohorts had to go online because of COVID-19 restrictions. No differences were found between online and in-person participation, so this factor is not reported here. A subset of 11 graduates were also recruited as case exemplars to generate qualitative information regarding participant experiences of FTC.

ETHICS

In terms of ethics, the institutional review board at Massey University approved all study materials and procedures (Protocol NOR 21/73). All participants provided informed consent by reading an information sheet and then signing a consent form. Participants had the right to withdraw from the study at any time.

QUANTITATIVE MEASURES AND ANALYSIS

Weight. Participants' weights were recorded by THC nursing staff at three timepoints, Weeks 1, 6, and 12. For the purpose of this study, we focus on participants' changes in weight from the start of the programme (Week 1) to the completion of the programme (Week 12). All participants were obese or severely obese at the start of the programme (BMI >= 30, Mweight = 180.1 kg, SDweight = 57.5; see Table 1).

PATIENT HEALTH QUESTIONNAIRE-9 (PHQ-9). Participants' pre- and postintervention levels of depressive symptomology were assessed using the Patient Health Questionnaire (PHQ-9). Participants responded to either paper-and-pencil or online surveys with questions beginning "Over the last 2 weeks, how often have you been bothered by any of the following problems?" Responses were given on a scale from 0 (Not at all) to 3 (Nearly every day) to 9 items, such as "Little interest or pleasure in doing things," and "Feeling down, depressed, or hopeless." Scores were then summed for each participant to indicate severity of self-reported depressive symptomology, which formed a highly reliable scale ($\alpha = .89$, Mphq = 14.7, SDphq = 3.1). A THC nurse with clinical training was on-site to support participants who were showing signs of severe depression.

GLYCATED HAEMOGLOBIN (HBA1C). Participants' HbA1C levels were measured in blood drawn by THC nursing staff. HbA1c is a biomarker used to gauge an individual's average blood sugar levels over an extended period, typically the past 2 to 3 months (healthy levels of HbA1c = 40mmol/mol). This measurement offers valuable insights into the management of diabetes and glycaemic control (Starting HbA1c MHbA1c = 43.6, SDHbA1c = 19.2).

SYSTOLIC AND DIASTOLIC BLOOD PRESSURE (BP). Participants' systolic and diastolic blood pressures were recorded by THC nursing staff. Monitoring these measures allowed for an assessment of cardiovascular health (healthy BP = 120/80). Average starting systolic and diastolic BP were as follows: Msystolic = 131.3, SDsystolic = 11.2 and Mdiastolic = 81.8, SDdiastolic = 7.6.

CHOLESTEROL. Participants' cholesterol levels were assessed using blood tests performed by THC nursing staff. The blood cholesterol test measured different types of lipids in the bloodstream, specifically low-density lipoprotein (LDL) cholesterol, high-density lipoprotein (HDL) cholesterol, and total cholesterol, with healthy levels considered to be under 4.0 mmol/L. This measurement aids in evaluating cardiovascular health and the impact of the intervention on lipid profiles (Mcholesterol = 4.5, SDcholesterol = 0.9).

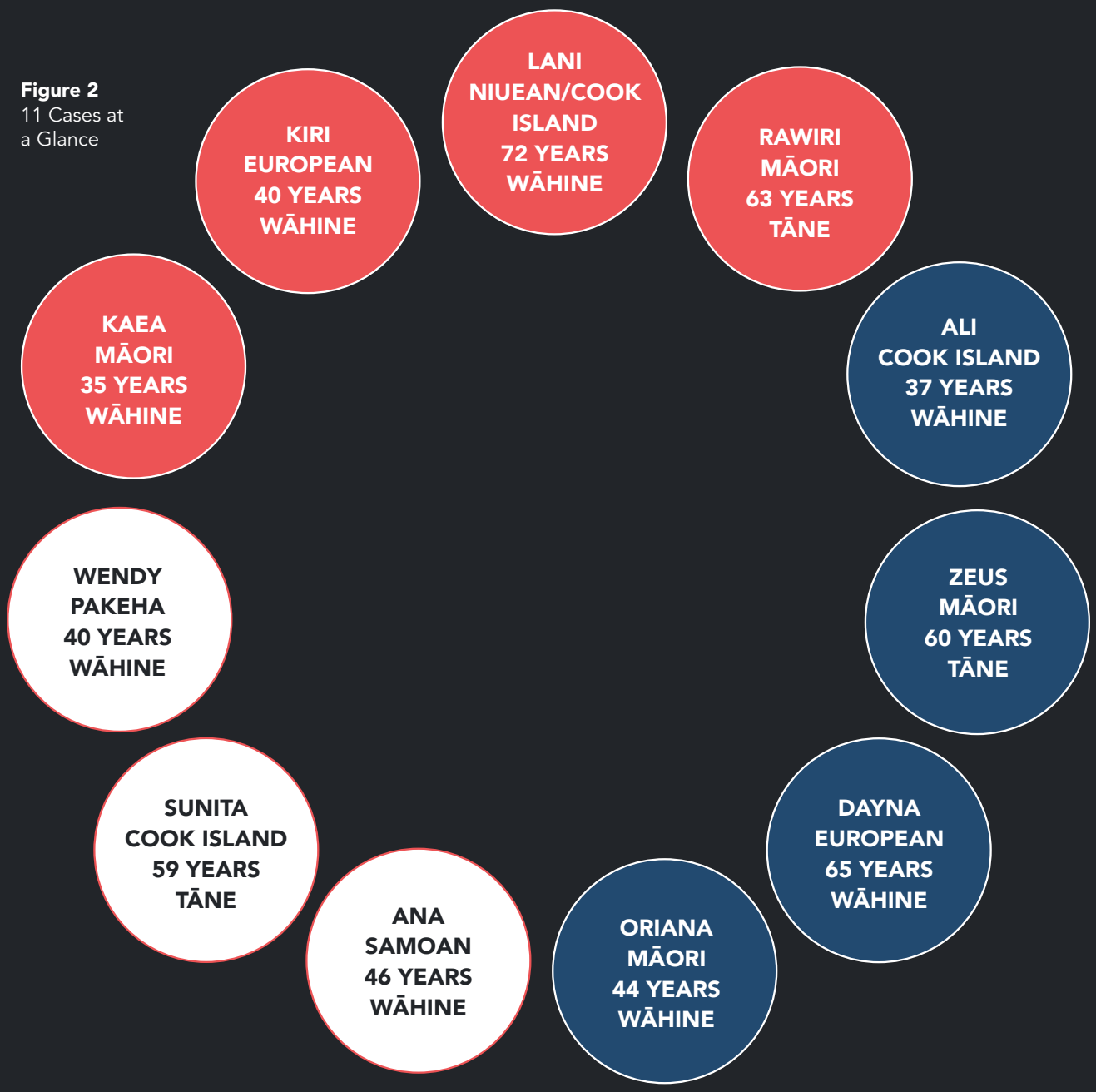
SELF-REPORTED LIFESTYLE CHANGES. Participants' lifestyle changes were assessed through surveys administered at entrance (Week 1) and exit (Week 12). Participants indicated how many times in an average day or week they would do a given activity. The items were: "How many times a day do you eat sweets (like chocolates, candy, cookies, etc.)," "How many times did you eat bread/carbs this week," "How many times did you eat takeaways or fast food this week," "How many times did you have fizzy drinks (soda) this week," and "How many times did you work out on your own this week?" Average intakes at the start of FTC were: for sweets, Msweets = 2.2, SDsweets = 2.2; carbs, Mcarbs = 7.2, SDcarbs = 6.1; takeaways/fast food, Mfastfood = 2.6, SDfastfood = 2.3), sodas, Msoftdrinks = 4.6, SDsoftdrinks = 5.6; and exercise (Mexercise = .4, SDexercise = 0.5). Quantitative data were analysed using a series of mixed-effects repeated-measures analysis of variance (ANOVA) tests with Satterthwaite's approximation using the lme4 package in r statistical software for each of the following variables: weight loss; self-reported depressive symptoms; HbA1c; systolic and diastolic blood pressure; cholesterol levels; and finally, self-reported lifestyle modifications. Doing so allowed us to assess the effectiveness of BBM's

comprehensive lifestyle change programme using a combination of bio-psycho-social indicators as markers of general health and wellbeing over time.

QUALITATIVE CASES AND ANALYSIS

The qualitative case component consisted of two members of the research team conducting one-on-one interviews with 11 participants who had completed FTC within the past year (including those engaged in BBM and those no longer engaged): eight (8) participants identified as wāhine, and three (3) as tāne; five (5) identified as Māori, two (2) as Cook Island, two (2) as Cook Island/Niuean, one (1) as Samoan, and two (2) as Pākeha. Four (4) participants continued on to attend the extension program, FTC 2.0 in South Auckland. Four (4) participants continued on to attend FTC 2.0 in West Auckland. Three (3) participants no longer attend BBM in any capacity.

Figure 2
11 Cases at a Glance



SOUTH AKL 2.0 CLASSES

WEST AKL 2.0 CLASSES

NO LONGER ATTEND BBM

Contacted 3 participants who no longer attend
1 participant did not return calls and texts
1 participant was in hospital
1 participant was unable to commit due to work

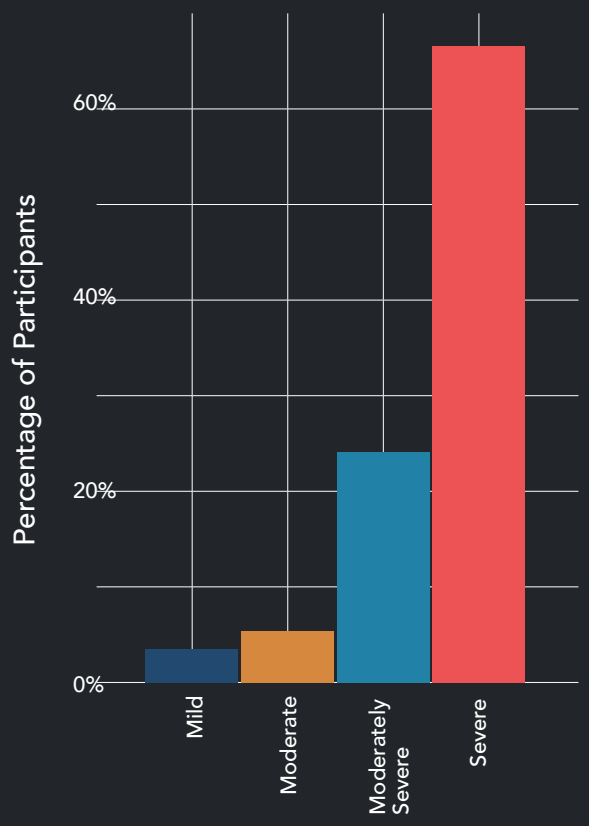
The foci of these case studies were What kept people going? and Why did people stop engaging? Transcripts of the interviews were subjected to thematic style analysis (Braun & Clarke, 2022). This involved two of the authors of this report reviewing the interview transcripts and associated notes, establishing common thematic issues, and developing 11 cases, each with a unique focus. All participants were assigned pseudonyms to ensure confidentiality and protect their identities.

Quantitative Analysis

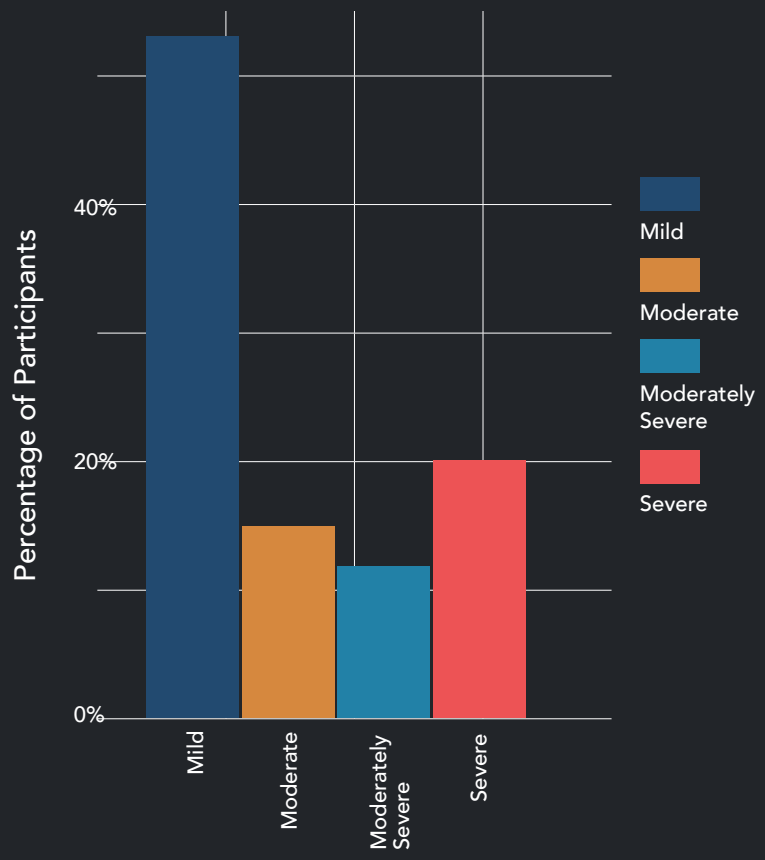
Figure 3 - Experience of Depressive Symptomology (Pre- Vs. Post-BBM)

PATIENT HEALTH QUESTIONNAIRE (PHQ-9)

Experience of Depressive Symptoms - Wave 1



Experience of Depressive Symptoms - Wave 1



At the time of this analysis, From the Couch had been delivered in collaboration with Total Health Care and Te Whatu Ora for over two and half years. Ten cohorts had completed the programme with similar success stories as documented below. Due to data access and manpower restrictions, we were only able to present data from three cohorts.

Our analysis began by examining changes in participants' weights and depressive symptoms. Among the 55 participants who completed the programme, the average weight loss was 7.1 kg, representing a 3.9% reduction in body weight on average. A statistically significant decrease was observed from the beginning of the programme (Week 1, M = 180.1 kg) to its completion (Week 12, M = 172.9 kg). Regarding depressive symptoms, a substantial portion of participants (n = 72) displayed elevated levels before beginning BBM's programme, as shown by their PHQ-9 scores at Week 1 (M = 14.7). By Week 12, these scores had significantly decreased (M = 8.5). Initially, 65% of participants reported severe depressive symptoms, but this rate fell to just 20% by the programme's end (refer to Figure 3 for mental health changes and Table 2 for statistical analyses).

TABLE 2
REPEATED MEASURES ANOVA TESTS USING SATTERTHWAITE'S APPROXIMATION FOR VARIABLES OF INTEREST: WEEK 1 VS. WEEK 12

VARIABLE	SUM OF SQUARES	MEAN SQUARE	DF	F	P	ηP2	ηP2 95% CI [LL, UL]
Weight	1115.02	1115.02	1	5.89	.02*	.08	.01, .93
Depressive Symptoms	523.21	523.21	1	17.31	<.001**	.36	.15, .83
HbA1c	324.02	324.02	1	6.08	.02*	.09	.01, .91
Systolic BP	888.23	888.23	1	12.49	<.001**	.15	.04, .80
Diastolic BP	80.27	80.27	1	1.69	.19	.02	.00, 1.00
Cholesterol	.001	.001	1	.006	.93	.01	.00, 1.00
Carbs	285.44	285.44	1	13.61	<.001**	.22	.09, .87
Takeaways	58.56	58.56	1	18.69	<.001**	.30	.12, .92
Sweets	16.94	16.94	1	6.25	.02*	.15	.03, .78
Soda	195.32	195.32	1	10.98	.002**	.27	.07, .91
	AIC	**BIC**	**Estimate**	**F**	**P**	**SE**	**Z**
Exercise	75.8	82.6	2.94	10.87	.002**	.98	3.01

Note. LL and UL represent the lower limit and upper limit of the partial eta squared (ηp2) confidence interval, respectively. BP = Blood pressure. Exercise is coded as a dichotomous variable with a generalised linear mixed model fit by maximum likelihood (Laplace approximation) using binomial (logits). Sum and mean square = 10.8

Next, we examined several physical health markers influenced by personal lifestyle factors (Booth et al., 2012). The FTC programme led to significant reductions in participants' glycated haemoglobin (HbA1c) levels, decreasing from M = 43.6 in Week 1 to M = 40.6 in Week 12. Participants also experienced significant drops in systolic blood pressure, from an average of 131.3 mmHg at the start of the programme to 125.8 mmHg by Week 12. While diastolic blood pressure showed a favourable downward trend (from M = 81.8 to M = 80.3), this change was not statistically significant. Additionally, there were no significant reductions observed in overall cholesterol levels (refer to Table 2).

Note. LL and UL represent the lower limit and upper limit of the partial eta squared (ηp2) confidence interval, respectively. BP = Blood pressure. Exercise is coded as a dichotomous variable with a generalised linear mixed

model fit by maximum likelihood (Laplace approximation) using binomial (logits). Sum and mean square = 10.8

The bio-psychological improvements observed were accompanied by positive changes in a range of self-reported dietary habits. Notably, participants reported significant decreases in carbohydrate intake (from an average of 7.2 to 3.1 times per week), takeaway/fast-food consumption (reduced from 2.6 to 0.9 times per week), soft drink consumption (from 4.6 to 1.2 times per week), and sweets consumption (from 2.0 to 1.0 times per day). Additionally, participants showed an increase in motivation to engage in physical activity beyond BBM's fitness classes, as indicated by an increase from Week 1 (M = 0.5) to Week 12 (M = 0.9).

To further explore potential mediating factors, participants were categorised into three weight loss groups: those who lost less than 2% of their body weight (considered insufficient for health improvement; GBD 2015 Obesity Collaborators, 2017), those who achieved moderate weight losses of 2-5%, and those who experienced significant weight losses of 5% or more. Participants in the highest weight-loss group also attended the most sessions on average (M = 30 out of a possible 36), while those in the lowest weight-loss group attended the fewest sessions (M = 18). Significant differences were found across the three weight-loss categories in diastolic blood pressure, $F(2, 53) = 5.51$, $p = .006$, $\eta 2 = .12$; total cholesterol, $F(2, 53) = 3.23$, $p = .04$, $\eta 2 = .06$; and systolic blood pressure, $F(2, 53) = 14.72$, $p = .008$, $\eta 2 = .10$; with the 2-5% and > 5% weight-loss groups showing the most substantial changes compared to the < 2% group. Although differences in HbA1c and PHQ-9 scores were not statistically significant, both metrics showed trends in the anticipated direction (refer to Table 3).

TABLE 3

WEIGHT-LOSS CATEGORIES AND EFFECTS ON OVERALL HEALTH

OVERALL WEIGHT LOSS (%)	N	SESSIONS ATTENDED	AGE	WEEK	HBA1C	DIASTOLIC BP	SYSTOLIC BP	CHOLESTEROL	PHQ-9
<2%	20	18	42	Week 1	42.9	82.0	130.0	4.9	Moderate (14)
				Week 12	41.0	82.5	129.8	4.9	Mild (9)
2-5%	18	24	41	Week 1	41.9	86.2	133.7	4.2	Moderate (14)
				Week 12	38.7	81.8	124.8	4.1	Mild (8)
>5%	17	30	39	Week 1	45.8	78.3	129.1	4.6	Moderate (13)
				Week 12	41.8	76.5	122.4	4.5	Mild (7)

Note. HbA1c = $F(2, 53) = .20$, $p = .82$; diastolic blood pressure, $F(2, 53) = 5.51$, $p = .006$, $\eta 2 = .12$; systolic blood pressure, $F(2, 53) = 14.72$, $p = .008$, $\eta 2 = .10$; total cholesterol, $F(2, 53) = 3.23$, $p = .04$, $\eta 2 = .06$; PHQ-9 = $F(2,53) = .06$, $p = .94$.

Qualitative Experiential Cases

We present the qualitative case analyses in two parts. The first focuses on key themes recurring across the 11 cases. These include Personal Mortality, Transformation of Self and Acts of Service, Integration of THC Services, No-Excuses Mindset, Whakamā, and Moving Towards Tino Rangatiratanga (self determination). The second part addresses a key limitation of composite or thematic-style analyses that present general categorical findings that lose sight of the actual persons involved. We present summaries of all 11 qualitative cases; each with a unique focus that speaks to the participant's experience of the programme and its impact on their lives.

THEMATIC ANALYSIS

Looking more holistically across the emergent themes from the 11 cases, key concerns speak to the fundamentally relational aspects of participants' culturally relational orientations towards health, lifestyle change, and experiences of the efficacy of the FTC programme. Even when considering issues of their own mortality and need for change, participants linked these imperatives to being there to help and support (serve the needs of) significant others in their lives. Feeling healthier physically and psychologically was entwined with a greater sense of self-purpose as someone who was able to be there and support others. Participants also appreciated how seamlessly THC services were integrated within the programme, and how accessible healthcare became for them as a result.

The mantra of "No Excuses" was consistently followed by all cases and presented as a useful form of personal and relational accountability. For some it was linked to personal initiatives such as growing their own healthy food.

A key issue that functioned as a barrier to continued engagement and a demotivational factor for some participants was feeling whakamā: particularly so for the three cases who disengaged from BBM. Complexities also emerged around Tino Rangatiratanga and the transition from BBM-supported change to sustainable and self-driven change, suggesting that more work can be done with these cases to sustain their transitions to healthier lifestyles.

PERSONAL MORTALITY

Concerns about the links between obesity and personal mortality came through prominently in the 11 cases. Personal mortality was a key concern and motivator for many participants attending the programme. For example, Rawiri reflected on being admitted to hospital in 2018 weighing 263 kilograms. At the time personal mortality came to the fore when his pregnant mokopuna asked him if he could stay alive to meet his great-granddaughter. This instance exemplifies key anchoring points for participants' motivations to change their lifestyles. Another 60-year-old tāne, Zeus, talked about his concerns regarding his tangihanga and his sisters having to carry his weight in a coffin. Zeus then spoke of not wanting to burden whānau with such a task, and this motivated him to make lifestyle changes. Lani, in her 70's, with three narrowed heart arteries was considered too high risk for heart surgery and so now has to take life "day-by-day" with the thought of her own death a constant companion because she knows that death can come at any time. Oriana, a 45-year-

old wahine, spoke about only four of her 10 siblings still being alive. This prompted her to focus on her health. These stories showcased forward thinking about their own deaths and how the consequences for whānau motivated participants to engage with FTC.

TRANSFORMATION OF SELF AND ACTS OF SERVICE

Beyond concerns about mortality, FTC gave participants a new lease on life. The programme was reported to help participants feel better about themselves physically, psychologically, and in relation to others. This improved affect was accompanied with an increased sense of self-purpose and passion to improve their health so as to remain alive to help others. Helping or service to others was explained in the context of mentoring, teaching others to swim, sharing nutrition information with others, advocating for Pacific rights, advocating for women's health, and even participating in these interviews to tell their cautionary tales. Rawiri, who often helps out at FTC 2.0 classes, stated *"I've got a lot to give, I don't know what it is but I know that it's coming"*, while 72-year-old Lani prepares and distributes her own flowers at graduation from the FTC programme. She stated, *"I'd do anything to support this programme because umm…you feel safe"*. Participants stated that they just wanted to give back what BBM has given them.

INTEGRATION OF TOTAL HEALTH CARE SERVICES

Given the intimate experiences participants have with chronic health issues, hospital visits, and death, many spoke positively about the integration of support from THC in the programme. Important here was the culturally safe setting cultivated by BBM within which accessing medical support and advice from THC was made less affronting and more empowering. All participants spoke positively about having physical measurements taken to monitor their health and progress, and to predict and prevent further illness. Participants appreciated the ways in which different health professionals and BBM trainers worked together to create a welcoming, nonthreatening, and health-enhancing environment. For instance, Rawiri stated that the THC nurse had been liaising with broader health practitioners to advocate for a medical procedure:

> *I like working with [the THC nurse]. So I've got umm...my nurse [through his own health services]...umm they're emailing each other now [the THC nurse and the external nurse]. So they turned down my operation [for panniculectomy surgery] because of my mental health and my heart. So I'm working hard on that.*

Similarly, Kiri shared how as part of her preventative care, the THC nurse was available to explain her blood results, also outlining what preventive steps might be appropriate for her:

> *There were a couple of things that I wasn't aware of that I needed to work on...they werent bad results but they were heading that way...so like make these changes so you don't get this.*

NO-EXCUSES MENTALITY

BBM often uses motivational mantras, including "No Excuses" and "No Judgement." These are foundational to the FTC programme, and were repeated constantly whenever the participants entered the building. Participants spoke about changes to their physical health and nutrition, but a main reoccurring theme was the "No Excuses" mantra. Again, there were many ways

we saw this play out in the programme, including with Ana who used the mantra to help her when undergoing chemo- and radiotherapies. She stated:

> *I feel like if I didn't do BBM, the whole mindset of you know..."no excuses," "no judgement" and stuff like that, and as I was halfway through [radiotherapy] and everyone kept saying "you're so upbeat about it", and I think BBM was a part of that, you know? Secretly, not knowing, umm...BBM was a part of my mindset at that stage.*

Wendy mentioned that she had notes around the house with the "No Excuses" mantra, helping her get through some tough times with her whānau. Dayna, Rawiri and Kiri all reported growing and maintaining vegetable gardens in response to the economic climate, with Kiri stating:

> *It took a while to get it going, to get the resources...but I'm just inspired by the fact that veges keep going up in price and we need to eat them right? Sounds hard but it's not...If I can do it, you can too.*

The "No Excuses" mantra appears to have penetrated the minds of participants, helping them stay on track with positive lifestyle changes.

WHAKAMĀ

The term whakamā can be translated as shame, embarrassment, and shyness. This is a Māori relational concept that can motivate and demotivate people to engage in lifestyle change. There were aspects of whakamā in the accounts of all three participants who no longer attended BBM programmes. When Sunita first moved onto FTC 2.0, he felt as though the physical requirements of the 2.0 classes were a big "step up", and he was not as fit as others in the class and was whakamā about holding up other programme participants. Several research participants also voiced a sense of guilt and uncertainty about what people would say and think about them not continuing with FTC 2.0. For instance, Ana stated, "Man, I did the programme and did so well and stuff... and the guilt of like you know, of leaving and not returning sort of thing". Reflecting on the potential for reengagement, these participants all expressed the desire to return to BBM but felt that they had been away too long.

TOWARDS TINO RANGATIRATANGA

The core intention of FTC is, as the name suggests, to get people off the couch and support them into more independent, active, and sustainable lifestyles with the tools to govern their own wellness. FTC 2.0 is designed to gently shift participants away from the dependence that the FTC programme fosters. Staff are less involved in FTC 2.0 because there are no nutrition sessions and measurements are not tracked in the routine manner of FTC. There were examples of expressions of Tino Rangatiratanga across the cases. For example, Kaea now exercises at another gym every second day and with her family at the netball courts, Zeus started swimming, and several participants started their own vegetable gardens. While BBM are doing all they can to encourage people in the direction of independent lifestyle change, there was some disappointment expressed by some participants, in that they felt as though they were no longer part of the BBM whānau once FTC finished. For instance, Wendy did not return to BBM after FTC due to a cascade of upsetting and complex whānau situations. However, Wendy did remain hopeful that someone would reach out to check on her

and reengage her, as she felt too whakamā to do so herself.

Briefly, many participants framed FTC as the first step towards a healthier lifestyle in which they could establish more independent ways of managing their own health. This was not only for themselves, but also for the benefit of significant others in their lives. What was also apparent was how the completion of the initial programme could leave some participants with a void. They remained hopeful that BBM would continue to reach out and provide the continued support they felt was necessary for them to continue on this journey. A key issue here was that these participants became dependent on the support of the programme and discontinuation was upsetting. BBM do all they can to help with this transition beyond FTC to more autonomous positive lifestyle change. However, this transition is experienced by some as an abrupt ending to a supportive relationship. Considerations around this paradox are encouraged.

Qualitative Case Analysis

IN THIS SECOND PART OF THE QUALITATIVE ANALYSIS, WE HAVE CLUSTERED THE 11 CASES INTO THE WEST AND SOUTH AUCKLAND COHORTS OF PEOPLE CONTINUING WITH FTC 2.0, AND THE THREE CASES THAT HAVE NOT CONTINUED THEIR INVOLVEMENT WITH BBM, TO PROVIDE MORE NUANCED INSIGHT TO PARTICIPANT EXPERIENCES.

FROM THE COUCH OUT WEST COHORT

ALI IS A 37-YEAR-OLD PERSON OF COOK ISLAND DESCENT.

Ali joined the first West Auckland FTC cohort in early 2023. Ali was diagnosed with cancer in 2010 while living in Australia and was given the prognosis of 3 years life expectancy. This encouraged her to return to Aotearoa to be with her family for support as she went through chemotherapy and radiotherapy and learnt to walk again post-treatment. This context explained why Ali joined the BBM programme and she spoke primarily to the thematic issues of Personal Mortality, and No Excuses.

Ali first heard of BBM via social media. She was convinced to join FTC by her brother who had completed another 8-week restart programme at BBM. Her brother went so far as to talk to BBM leadership about Ali's circumstances. Ali talked about how the programme helped her physically and mentally:

> *BBM has helped me a lot, especially mentally. I've been stuck at home for the past 10 years. My body wasn't the same since the diagnosis [cancer] cos I had radiation, chemo for 2 years and my body wasn't the same and I had to learn how to walk again. And coming to BBM has helped me a lot. My mental [health] has been really good. The strength in my legs has been really good.*

During Week 5 of the programme, Ali's diagnosis progressed to Stage 3 cancer. She underwent chemotherapy and radiation while still attending weekly. There were moments that she felt she wanted to give up. However, she reported pushing through and despite having a legitimate excuse to stop Ali embodied the "No Excuses" mantra:

> *…I just felt like I've been stuck at home for the past 10 years plus years. And I didn't want that to carry on, cos I know if I were to stay home I wouldn't have come to class. I would've just blocked everyone out and I would've just stayed home. I just told myself that I couldn't do that. I needed to go whether I was in pain. I still made it to class.*

Also evident here is how the programme served as a space for social support and engagement for participants.

Ali also reported difficulty in maintaining the nutrition components of the programme due to the rising cost of living. However, she adopted the practice of purchasing food in bulk and preparing her meals in advance to help manage costs and to comply as much as possible with

programme advice. Ali managed these practical issues while also helping to raise her two younger siblings and dealing with her cancer progression. She still achieved weight loss, and her account speaks to how participants often managed a number of complex issues whilst being motivated by, persisting with, and valuing the programme:

> *So when I started BBM I was 210 kg, I am now 186 kg. But that's in and out of classes with appointments, radiation and all that. I have to…I don't want to go back where I was 10 years ago…cos if I stay away for like 2 days, man I go crazy. Like I need to go [to] class, I need to go to class! If I have appointments and things like that, then I wouldn't want to come to class. I'll take like 2-3 days. No! I have to go to class. I have to go to class.*

It could be that BBM is a space of life for Ali as she is constantly faced with the reality of death. She chooses every day to live despite having "many excuses" to opt out of the program. Her account also speaks to the motivational and social support aspects of FTC, which constitutes a community of practice for many participants.

DAYNA IS 65 YEARS OF AGE AND OF EUROPEAN DESCENT

Dayna joined the second West Auckland FTC cohort in 2023 after seeing BBM on social media. Key themes for this case include No Excuses, Personal Mortality, and Transformation of Self. Dayna stated she has always had weight issues, where she *"piles on the weight"* if she stops exercising. She spoke about being very fit when her children were young and she attended aerobics five times a week. Since starting at BBM she has encouraged her sister and niece to join and supported her niece's participation in FTC, which Dayna also enjoys as a *"refresher"*. Dayna stated that BBM has allowed her to *"live her life instead of just existing"*. While the programme can get hard, she keeps going due to her adoption of the No Excuses mindset: *Being big is hard and coming here is hard sometimes but this is the better hard.* Since joining BBM Dayna has created boundaries in her relationships to maintain a strong focus on her health and getting her life back by putting herself first so she can look after her family:

> *So that's 3 days [at BBM] and mum has clubs [social clubs]. Actually she [mum] had to adjust, she has one [social club] on a Tuesday and I normally would pick her up at midday and when I'm doing my thing [BBM] from 11:30 am to 12:30 pm she has to wait for me and that was something [the BBM trainer] helped me with, she said, "You're helping her, she's not running your life", that was a big help... Aww OK that's great, I just needed to hear that.*

Dayna spoke about improved confidence and attending other health-enhancing community events such as communal gardening and a budgeting course:

> *They [Westhub] do courses, so I went down and learnt how to make a, I cut up a big barrel and made a garden out of you know a barrel container, so I got a few of those so I have umm lettuces, tomatoes, spring onions and stuff… I did a budgeting course…lots of their courses are free.*

Dayna keeps active at home by gardening, planting fresh vegetables and herbs, and taking her dogs on walks.

ORIANA IS 44 YEARS OLD AND OF MĀORI DESCENT

Oriana heard about FTC from extended whānau who had completed the programme. She joined to support her partner who suffers from sleep apnoea and other health complications. Oriana suffers from sciatica and hearing impairment following a car crash. The key themes raised in Oriana' case were Personal Mortality and Transformation of Self.

Oriana is the youngest of 11 siblings with four of them still alive. In the past year the deaths of her siblings have changed Oriana's outlook on life and motivated her to focus on her own health and living longer:

> *Every year my siblings have died…so there's like 11 of us and there's only 4 of us left, and I'm the only girl umm in my family that's alive and that's my "why". So yeah, my two sisters have always been my rock and I'm the youngest of the 11 so yeah…I'm the baby… My why is my family... and being the only girl is my why…yeah to live... That's it, to live longer.*

Oriana stated that she struggles with anxiety and prefers one-on-one interactions over group settings. She stated that BBM has helped her come out of her shell and that she feels more confident in herself through participating in the programme. Oriana described BBM as her new family, elaborating that she and her partner have formed close bonds with three other participants from the programme. They often work out together outside of BBM and share their love for tattoos:

> *So, we got this little group, so (partner) takes them for training, could be boxing, could be exercise, or just go for a walk with the dogs and the five of us are real close.*

Given the grief Oriana has experienced with the loss of her siblings, it appeared to be comforting to establish new "family-like" relationships within BBM. Relatedly, this case also speaks to Māori relational understandings of health and the importance of social support factors for enabling persistence in the programme and lifestyle changes.

ZEUS IS 60 YEARS OF AGE AND OF MĀORI (NGĀ PUHI) DESCENT

Zeus joined the first West Auckland cohort of FTC in 2023. Before starting, Zeus faced significant physical and mental health challenges, including heart failure. He was on a "cocktail of medication", including 30 pills in total, that kept him at home bedridden, due to high dosages and constant urination. Key themes exemplified in this case include Personal Mortality, Transformation of Self, and Acts of Service.

In contextualising his decision to join the programme, Zeus reflected on a key moment of being depressed, dramatically overweight, housebound and counting tiles to pass the time, and realising the need for change:

> *My bedroom window looks out to the neighbour's house next door. Their white, beautiful house, old-fashioned tiles, palm trees waving, and the sun is there in the afternoon… At the time when I was feeling depressed… I knew every tile on that house. I counted every tile and I just focused [on] counting and rechecking. I got to 296 tiles and I told them they got tiles broken, they're on the right corner… I didn't have thoughts about doing anything myself. It's just… I had no thought of direction, of how can I? I couldn't move. I couldn't get off the bed.*

What is striking about this reflective account is the way in which Zeus appears to have lost meaning in life. He was fixated on how, due to his weight, the only view he could attain was from his bed.

During this time Zeus came across a YouTube video featuring BBM and the FTC programme. This inspired him to start attending the programme and he was encouraged by staff to reflect on why he was there and his motivation for improving his health. Again, reflecting a relational understanding of health, Zeus realised that he did not want his sisters to have to carry their overweight brother in a coffin. He felt it was unfair for his siblings to carry that metaphoric and real burden in that he had realised that if he did not change, he might well die:

> *My "why" was I didn't want my sisters to have to carry me at a heavy weight, that I was overweight, their brother, cause I know they would but they wouldn't be able to, I didn't think they should, so I had to make a change and that was my "why"... It was reality, the way I was feeling at that time... My "why" was, that to be carried in a coffin by them [sisters], the weight of me, and I didn't think it was fair on them.*

While such thoughts can be hard to grapple with, planning for tangihanga and how whānau will be impacted are normal within Te Ao Māori. In Zeus's case, such thoughts provided motivation for him to improve his health.

Since joining, Zeus's love for swimming has been reignited; he swims not only for his own health, but also for the benefit of others. Also reflecting the fundamentally relational approach to health evident in the accounts of many participants, Zeus has taken on a swimming coach role with friends and family:

> *I've been helping others to teach them to swim... I've been helping [friend] for this triathlon. I go to Onehunga, to Jellicoe to help [friend/sister] train. I offered and I said Oh [friend], I'll be honoured if I could help you.*

Intertwined in Zeus's comment here is transformation of himself from a man who was counting his neighbours' roof tiles, to someone engaged in his own health as well as being of service to others. In addition to swimming, he now attends FTC 2.0 on a regular basis and acts as an advocate for BBM.

CASES FROM THE COUCH OUT SOUTH AUCKLAND COHORT

KAEA IS 35 YEARS OF AGE AND OF MĀORI DESCENT

Kaea grew up off-grid in a house with no electricity and caravans, with her six siblings who spent most of their time outdoors around the nearby river. She stated that the family did not have a lot growing up, but never went without warm, nourishing kai made by their māmā. At age 16, Kaea moved to Auckland with her sister. She joked that they all became obese when they moved to the city because they adapted to this new obesogenic environment, with takeaways on every corner. Core themes for this case include Transformation of Self and Tino Rangatiratanga. Kaea graduated from the FTC South Auckland cohort in December 2023 and now attends FTC 2.0 three times a week. She also completes her own workouts on alternative days. Kaea is a mother to seven tamariki, six of whom live with her and her husband in South Auckland. Her husband is in a wheelchair and does his best to help. It is Kaea who does most of the housework, cooking, school drop-offs, and driving to appointments for her children, her husband, and his mother. Kaea talked about

BBM as "her peace", and a space offering her some time for herself and a well-deserved break from the demands of household life:

> *This here is my time. I love coming here because I get that space away. Even though they [tamariki] go to school, I've still got my 3-year-old at home and my 11-month-old.*

Kaea reports how prior to participating in BBM programmes, she had low energy and often felt exhausted and overwhelmed at home where she holds multiple familial responsibilities. In this context, BBM is seen as an energising space for psychological respite that is crucial in supporting her psychological and physical health:

> *…It was my mental health when I first started, because I was so overloaded with what was going on at home. Overwhelmed!... I just felt like everything was falling on top of me. But when I came here it kind of put everything back into place for me mentally. Like decluttering stuff. I was like Yes! It wasn't really about losing the weight, it was about losing that weight, you know, what I mean? And now I'm way better, way better. Because before I sucked (laughs)… I felt like my energy was always low and it was just tiring. Exhausting to carry all the baggage that I carry in my brain, but when I go to BBM it just started like ummm… Not at once… But, you know, it just felt good.*

This account reflects how Kaea and other participants saw improvements in both psychological and physical health from participating in the programme. Kaea still struggles to eat well, with the cost of living and the reality of feeding six children on a low income. However, she knows her journey to better health has started and will be an ongoing process. This case also reflects how the positive impacts of the FTC programme extend from the participant to whānau. For example, Kaea also described how with her sister they take their tamariki to the netball courts with some gym equipment and conduct whanau workouts:

> *We've even been doing family workouts at the Browns Road netball courts. And we just send out texts like, "If you can be there at 12 come down and bring something that we can use". So, I bought the rope, my sister bought the kettlebells, my brother bought the I can't remember what he bought. And my cousin bought her stuff and her kids. So, all the kids are also seeing us work out and working out alongside us so it's like yeah! This is what we need. Whānau fitness. I'm like, "Why did it take us so long? Cause the kids love it. They love it.*

These sessions normalise participation in physical exercise within the whānau and in the community, highlighting the ways that FTC can impact whānau beyond their personalised classes.

KIRI IS 40 YEARS OF AGE AND OF EUROPEAN DESCENT

Kiri had previously participated in BBM bootcamps; she enjoyed the workouts and camaredrie, and so she joined the South Auckland FTC cohort in 2023. This was because she *"wanted to get back into it"* and reconnect with the *"vibe" and "energy"* of BBM. She elaborated on the vibe meaning "everyone is supporting each other and pushing each other". Kiri reported feeling more confident and happy after attending programme sessions. Core themes for this case include No Excuses, and Integration of THC Services.

Kiri found THC service supports within the programme incredibly convenient. She did not have to find extra time during the day to visit her GP or get a blood test:

> *It was good, I think it was really good to have them there because if we were sent off to do our bloods or go to the doctor for our blood pressure or whatever like no one's going to go like that's more time away that you have to find again so having them there was really good.*

She found the clinical team easy to engage with as part of her preventative care regime. The team was also available to explain her blood results and what they meant, also outlining prevention steps to improve her health.

After graduating from FTC, Kiri attended different BBM classes, including the "Mums and Bubs" and "Conga" sessions. However, the cost-of-living crisis required her to increase her work hours, and this has reduced the number of sessions she can attend. Additionally, Kiri was recovering from a car accident when we met with her. Despite all of these contextual factors, Kiri remained committed to remaining physically active, following the BBM training videos online, exercising on her breaks at work, and going for regular walks:

> *My job, part of it is quite phyiscal anyway umm and so sometimes I just do some random exercises at work as well. Like if I know I'm not going to have time after work, I'll just, I dont know, do a few and make sure no one's watching, But just yeah, I do like some random things throughout the day as well, especially when I know I won't have the time later.*

Kiri was enthusiastic in stating that her 3-year-old daughter would watch and copy her and now knows how to do burpees. Kiri has also implemented small changes in their diet by reading nutrition labels when she is out shopping, and chosing healthier food options when she can afford it.

Kiri shared that when she is faced with a daunting task, whether it is work-related or with whānau, she hears the BBM team's *"No Excuses"* mantra pop into her head. She stated it is effective as it short, simple, true, straight to the point, and relevant to all aspects of life. For instance, to combat the rising cost of living, Kiri and her whānau have started their own vegetable garden with brocolli, spring onions, bok choy, and lettuce. Kiri reflected that small positive lifestyle changes were more sustainable. She has learned from other programmes that going *"hardout"* and *"changing everything all at once"* was not sustainable. Now, Kiri focuses on small adjustments, like swapping white sugar for organic brown sugar. Kiri also keeps in contact with some FTC participants by phone, and they encourage each other virtually. However, she also expressed a longing to return to BBM in person when she was able to so.

LANI IS 72 YEARS OF AGE AND OF NIUEAN/COOK ISLAND DESCENT

Lani learnt about BBM through a friend who worked for a related health organisation.

She graduated from the FTC programme in December 2023 and now attends FTC 2.0 regularly. Core themes for this case include, Personal Mortality, Acts of Service, and No Excuses as well as intergenerational poverty, aging, and health complications.

Lani was born and raised in Niue and described her upbringing as tough due to financial hardship. Her parents did their best with what they could afford to support 13 children. Lani understood that *"…eating rubbish meat that pālangi sent over to the Islands"* was a means to feed many

hungry children. Lani believed that a lot of the problems her people face today is related to their childhood diets, which were the result of poverty. Lani eventually moved to New Zealand where her siblings and mokopuna now live. A biological parent of four, Lani has raised many more, including five of her mokopuna, after her son took his own life 17 years ago.

Lani has experienced emphysema for the past 4 years and in 2023 was diagnosed with heart complications, including three narrowed arteries. She has been advised that the hospital cannot operate as surgery will be too risky, and she now only does what she can to maintain her health knowing that may die at any time. Her siblings also have such health concerns. This is one reason why Lani advocates for Pacific-orientated responses to health inequities and she serves on the advisory board for the Pacific Island Women's Project. Lani had completed a diploma in Social Work and had strong critiques of Western approaches to health education and related services. When asked what she thinks works for Pacific People, she responded, "BBM works", by providing a psychologically, physically, and culturally safe space for people to engage with their health:

> *This programme embraces our differences. We are different, with different histories and different needs. Different responses… I do struggle… And this [the programme] has been good for me. I enjoy coming here. Yeah, so I'd do anything to support this programme because feel safe, you feel supported… Nobody looks at you, what shape you are.*

Lani spoke of wanting to give back to BBM after all they have given her. She felt that BBM had given her a new lease on life. In return she brings beautiful flowers to FTC graduations. She hands them out to the well-deserving graduates, bringing more life into this relational space.

RAWIRI IS 63 YEARS OF AGE AND OF MĀORI DESCENT

Rawiri is a great-grandfather who has spent the past 22 years housebound with the curtains closed, only venturing out of his home to go to the hospital. He has struggled with trauma, mental health complications, and a strong aversion to people seeing him at 263 kgs.

In 2018 he was hospitalised; this is when his mokopuna asked him to stay alive to meet his great-granddaughter. This instance motivated him to change his lifestyle and he was able to hold his great-granddaughter in 2019. Since starting with BBM, Rawiri has also started swimming and going for walks, is learning te reo Māori, and has more frequent contact with whānau from whom he had been estranged for years. He is now 178.9 kgs. Core themes for this case include Personal Mortality, Acts of Service, Mental and Physical Health, and Whānau.

Rawiri was initially exposed to BBM online and joined FTC in the final 2023 cohort. Since graduating, he has attended FTC 2.0 sessions three times a week and now considers himself *"part of the furniture"* and being *"here to stay"*. He talks about BBM as much more than a gym because "a normal gym doesn't have the wairua". Rawiri has delivered public speeches and now acts as a tuakana (mentor) to new FTC initiates. He also helps with cooking and nutrition sessions. Figure 4 depicts an example of Rawiri's culinary talents. He has started a herb garden in his backyard and uses these ingredients to cook for others. He also brings in healthy cooking books that he has accumulated over the years to create a mini library for BBM members. Rawiri does these things to give back to BBM and is often seen helping others in class, lending a hand and supporting his peers through their workouts.

While this is all life-changing for Rawiri, he still experiences challenges. He reported waking at 2 am most mornings to intrusive, negative voices that keep him awake until the sun rises. He said,

Figure 4
Stuffed Kumara for the FTC Cooking Class Rawiri Co-Led With a Nutritionist

"It's like having someone in your house everyday you don't want". The voices constantly tell him not to attend BBM, that he is *"useless"* and that *"no one wants to be around [him]"*. He has to use everything in him to push past these voices and get in the car. The whole car ride, similar voices try to defer him from attending. When he walks in those doors, he knows he is safe and can be in a place of solace for a short period.

It is at BBM that Rawiri experiences a sense of connection, kinship, and no judgment and feels enabled to works towards his goal to reach a state where he can undergo panniculectomy surgery. Rawiri remains devoted to improving his physical and psychological health and the THC team have been working collaboratively with him to achieve this goal of gaining access to surgery. The nurse had worked with Rawiri and his mental health support team to provide him with holistic support for his health, including tracking his progress towards surgery.

CASES DISCONTINUING THE PROGRAMME

ANA IS 46 YEARS OF AGE AND OF SAMOAN DESCENT

Ana was born and raised in South Auckland. She learned of BBM through social media and her cousin nudged her to register for the programme. Ana was working as an early childhood teacher, before being diagnosed a year ago with uterine cancer. She had a hysterectomy in August 2023, just before she started FTC. Unfortunately, the cancer had already spread and she required radiotherapy and chemotherapy, which she has been undergoing since September 2023. Ana kept her cancer therapies to herself initially. However, it was not long before the BBM staff picked up that she was struggling physically and rallied around to support and encourage her to continue and only do what she could. Core themes from this case include No Excuses, Health Complications, Anxiety, Service to Others, Whakamā, and other barriers to an active life after completing FTC. When reflecting on her participation in the programme, Ana initially spoke about the fitness and nutritional aspects of the programme. As the conversation progressed, Ana asserted that the biggest contribution of FTC was actually in supporting her shift to a more resilient and positive mentality and helping her work through the cancer treatment:

> *During my cancer journey, I felt like... cos I had 6 months of BBM, and when I started radiotherapy, I felt like... it helped me... It's hard to explain. I feel like if I didn't do BBM, the whole mindset of you know... "no excuses", "no judgement" and stuff like that, and as I was halfway through [radiotherapy] and everyone kept saying, "You're so upbeat about it", and I think BBM was a part of that, you know? Secretly, not knowing, umm... BBM was a part of my mindset at that stage.*

Cos it wasn't until I think my last week [of radiotherapy] and I didn't know it was my last week and I was flat by then. The nurse was like, "Are you okay?" And I was like, "Yeah, I've just had it". But I guess that could've been how I felt Week 1 of treatment.

Here, the BBM *"No Excuses"* and *"No Judgement"* mindset is presented as assisting Ana through some of the toughest moments of her life when she faced her own mortality and cancer treatment, whilst engaging in lifestyle change. Alongside the loss of her job and the physical impact of illness and treatment, Ana's cancer journey included the acceptance of not having children, which was something she had wanted in life.

After graduating FTC Ana attended a few FTC 2.0 sessions and found this to be a big step up from the initial programme in regard to the level of fitness required. Ana also found it hard when the chemotherapy restarted at this time. A close relative passed away and she slowly stopped attending the sessions. Ana has not been physically active since this time and appears to be caught in a cycle whereby she is exhausted from the chemotherapy and experiences severe insomnia. After going for a walk, Ana requires a nap afterwards and this exacerbates her insomnia and low energy throughout the day. Ana has also struggled to eat well, in part because of her medications impacting her bowels. Her circumstances pose series barriers to her reattending sessions with BBM.

In addition, Ana also reflected on an inner dialogue she has that keeps her from returning to the lifestyle change programme. In doing so, she speaks to the importance of feeling whakamā in this context:

I don't know if this is just me.... But, I get that kind of guilt. Like, I've gone for so long, you know like the programme's stopped and although it keeps going, umm... From the Couch 2.0's on, you know, I still get that sort of feeling of... man, I did the programme and did so well and stuff. And the guilt of like, you know, of leaving and not returning, sort of thing?

Ana is not totally disengaged from the programme and still watches BBM updates online from a distance and wants to return. She expressed feeling like it has been too long and feeling guilty for not being there with everyone. Her account also invokes feelings of anxiety and whakamā about re-entering the group:

I've had lots of opportunities to go with friends and family. To go to workouts and stuff. And if I see a video and I know someone, I'll be like, nah, I don't wanna go and I don't know what it is. But I always used to not like going places or to gyms, or to workout stuff when I've seen someone that I know and... then I'll be like, nah.

When probed about these thoughts, Ana stated that maybe it is because of the period of time since she last saw people and wondered if others will see her the same as they used to, particularly after all she has been through:

They're saying, *"Man, you havent changed one bit"*, but in my head I'm going, *"So much, sorry for the language but "So much shit has happened to bring me where I am at this stage, heaps has changed".*

Ana spoke about having very long curly hair, and now she has very short hair post-radiotherapy and finds it easier to just avoid all of the anticipated brief reunions with others. She spoke about these thoughts with curiosity and a sense of better

understanding the intrusive thoughts she has that also stop her from attending BBM again. In saying this, Ana is planning to take small steps to a more active lifestyle, signing up with a relative to a Siva Samoa class. Despite her not continuing the lifestyle sessions with BBM, the No Excuses mantra also flowed through this case. Ana remains a strong advocate for women's health and encouraging whānau to get regular health checks, such as those provided by THC staff.

SUNITA IS 59 YEARS OF AGE AND OF COOK ISLAND DESCENT

Sunita not only participated in FTC Cohort 3 in 2022 but was also awarded a prize as one of the most consistent participants. He attended every session and spoke fondly of his time with the programme and being able to meet new people. Sunita went on to attend FTC 2.0 for a further 2 months and then eventually stopped going. Sunita stated that he stopped attending because the later class time of 11 am did not work as well for him. He also felt that he was not as fit as some of the others in this new cohort and that FTC 2.0 was too advanced. Sunita stated that he struggled to keep up and, *"I'm not a person who likes to hold up a class like that, you know?"*. Key themes from this case include Developing Active Life After BBM, preexisting social connections, and Whakamā.

Sunita maintains a busy social life with whānau and friends: *"...you know Cook Islanders, they have events on every weekends... birthdays, weddings, unvielings..."*. This can raise issues regarding his ability to maintain a healthier lifestyle: *"... so when I eat, I eat"*. Sunita has not been to any other gyms to continue exercising since leaving BBM. Although he has a small "gym" setup in his garage, Sunita reported struggling to stay motivated to work out alone and has *"Slipped back a bit"* from the level of regular exercise and healthy lifestyle change that

he achieved when attending sessions with BBM. When discussing his possible return to a more healthy lifestyle, Sunita stated he might possibly go back to BBM, but did not elaborate much on this assertion. He has not kept in touch with anyone from the the programme as the messenger group stopped after he left. He expressed that he would have liked to have kept in touch with others and to see how people were doing *"after BBM life"*. This would have allowed him to engage with peers and gain inspiration from each other. He expressed some dissapointment in not having any communicaiton from the BBM team. *"I think sometimes their communication could have been better"*. Sunita had arranged to meet us in person, however asked to change to a telephone interview due to mobility issues and potential whakamā. It appeared Sunita had reached a state of contentment and reported enjoying his socially rich life that featured deep connections with whānau and friends. He also expressed the desire to be physically active again with no real plan to realise this stated intention. The physical and nutritional side of Sunita's hauora (wellbeing) have taken a back seat for now, but he did express a desire to get back on track with a healthier lifestyle. Sunita's case reflects how BBM can be conceptualised as a well of wellness for participants to draw from and gain social connections that support lifestyle change and maintenance. However, in this case because Sunita had strong preexisting social connections outside of BBM he does not feel as inclined to reengage for these reasons.

WENDY IS OF 40 YEARS OF AGE AND OF PAKEHA DESCENT

Wendy completed FTC Cohort 3 in 2022 but did not returned to BBM due to significant family challenges. These included her brother's death by suicide and Wendy taking on the role of caregiver for his children in the context of difficult interactions with Oranga Tamariki. Key themes from this case include No Excuses, and Transformation of Self and Service to Others. Wendy expressed disappointment in certain aspects of BBM, including a sense of division and exclusion between the first cohort, who appeared to know each other well, and the new cohort that she was part of, but which felt more estranged and less supported:

> *The first FTC [cohort], they had their group and they'd go on their walks and go to the pools, but that was just for them. Everyone else felt like outsiders. You wanted go, but then, when you're not feeling wanted…. you don't go.*

Wendy appreciated having THC available at BBM despite having to wait in the queue for her medical checks. This saved her the trouble of scheduling a separate appointment with her GP for blood pressure checks or blood tests. Wendy felt that BBM's strengths may also be their weaknesses, where many of the staff had their own lived experiences and relatable stories. However, these staff are now in leadership roles where they are tasked with helping a lot of people through their own unique challenges, perhaps without all the tools needed to do so effectively. *"They're going through their own struggles and trying to help everyone else, but they don't know how to"*. Wendy bought a unique perspective to our kōrero, which highlighted how FTC was an intensive 12-week wrap-around programme that aims to give people the tools they need to achieve and sustain a healthier lifestyle. Exiting the programme felt abrupt for Wendy because of the loss of intensive and personalised support from staff and other participants. Relatedly, Wendy also expressed dissapointment about not feeling part of the "whānau" once FTC finished:

Just because someone doesn't come back doesn't mean they're not interested. If they had of said, "Hey, how's it going?", "Hey, what's up?" When I got the kids back into school, I would have gone back. That would have been my escape from reality… What they do I think is amazing, but it's outside of it... when people have things going on in their life, there's not even a "Hey, how are you?" And you're meant to be whānau?

Although she did not return to BBM, Wendy held hope that someone from the service would reach out to check on her and follow up on why she had left and not maintained the relationships with this organisation.

She shared valuable lessons she took away from BBM, which included the "No Excuses" mantra that she had placed as signs around the house as daily reminders for the tamariki she cares for, who have trauma histories:

Yeah, we have signs around the house: "No Excuses". Cause we don't have hakas [tantrums], cos we can't do something. We gotta keep trying. I try to change their [tamariki] mindset.

Wendy also spoke about how she remained inspired through the BBM ethos to "do more". Reference to the "No Excuses" mantra, the desire to do more for one's own health, and to be of service to others are key positive outcomes from the programme for such participants. Wendy's case also highlighted the complex nature of engaging in the programme and raised a number of issues that should be considered by staff in terms of participant follow up. It is important to consider transitions from the 12 weeks of intensive support to sustaining engagement and support in the longer term.

Conclusions

The approach taken to this research involved the cultivation of professional collaborations between staff from BBM, THC, the project advisory group, and researchers. This report drew insights from the various quantitative measures and physiological data from participants, the experiential cases, and the expertise of BBM staff. Dave Letele, of BBM, expressed the view that his key indicator of satisfactory progress by programme participants was being able to tie their own shoelaces at the end of the 12 weeks. Most participants could. The average weight for participants at the start of the programme was 180kg; tasks that are simple for many people can be difficult for programme participants. Arguably the most stunning result from the programme, with largest single effect size (0.36), was the significantly lower depressive symptoms observed among those who completed the programme, as measured by the PHQ-9. At Week 1, 65% of participants showed signs of severe depression; by completion at Week 12, this had decreased to 20%.

The community-led FTC programme involving 2 days of exercise and 1 day of nutrition/dietary training per week over 12 weeks provided comprehensive benefits for the 55 individuals who completed all measures. The predominantly Māori and Pacific participants, whose initial average weight was 180 kg (379 lbs), lost 7 kg (15.4 lbs), on average. Those who attended more sessions lost more weight. These measured improvements are also supported by the qualitative cases that emphasised the importance of BBM and THC in providing a safe, welcoming, and supportive space for participants to thrive. Participants felt safe and supported enough to be open about their mental health struggles that were linked to their physical size. This finding is consistent with meta-analyses that have established that exercise has important ameliorative effects on depression (Rosenbaum et al., 2014; Schuch et al., 2016). Blood tests administered by THC nurses also indicated significant improvements in HbA1c and systolic blood pressure, but no significant changes to diastolic blood pressure or cholesterol. Finally, surveys indicated that participants were engaging in lifestyle change, self-reporting lower levels of consumption of sweets, carbohydrates, fast food, and soft drinks; and exercising on their own more. As stated earlier physiological information from clients is being tracked by BBM and Total Health Care for succeeding cohorts. Further analyses of this information with a larger sample size is recommended.

The 11 experiential cases revealed further positive impacts of the programme for participants. The thematic analysis revealed key themes such as intimate awareness of their own personal mortality and the need for change as key motivating factors in the success of the programme. Becoming healthier physically and psychologically was experienced as being entwined with a greater sense of self purpose as someone who was able to support others. Participants also appreciated how seamlessly integrated THC services were within the programme, and how accessible healthcare became for them as a result. The mantra of "No

Excuses" was consistently accepted by the case participants and recounted as a useful form of personal and relational accountability. For some, this mantra was linked to further personal initiatives such as growing their own healthy food. A key thematic issue that functioned as a barrier to continued engagement and a motivational factor for some participants was feeling whakamā. This was particularly the case for the three participants who later disengaged from BBM. Complexities also emerged around Tino Rangatiratanga and the transition from supported change through BBM to sustainable and self-driven change. This suggests that more can be done work with these cases to sustain their transitions to healthier lifestyles.

Central to the success of the programme was the culturally informed, relational approach to wellness and lifestyle change. This programme was not based on the individual attitudinal or behavioural change approaches to health promotion that have been questioned in terms of applicability of use within collectivist cultural settings (Hodgetts et al., 2020). BBM's approach is consistent with holistic, relational, and Indigenous understandings of health (Alefaio-Tugia, 2022; Durie, 2001; Durie et al., 2018) and appears to facilitate engagement by Māori and Pacific people in healthy lifestyle change (cf., Anderson et al., 2015; Brach & Fraserirector, 2000; Jaacks et al., 2019; Kaholokula et al., 2018; Pearce et al., 2019).

Finally, this research supports the view that the online and offline social ecologies of BBM that are supported by the medical and professional resources of THC are a powerful combination. This combination enables long-term connectedness for people living with obesity and seeking positive lifestyle change. Long-term lifestyle change is the holy grail of weight loss programmes; this research suggests that FTC can be effective towards this end.

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